



İSTANBUL AYDIN UNIVERSITY
SOFTWARE ENGINEERING

**DEVELOPMENT OF STORE MARKET FOR ANDROID
PHONE**

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DEVELOPMENT OF STORE MARKET FOR ANDROID PHONE

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ABSTRACT

This thesis firstly presents working principle of Google Play Store and other android-based third party application markets (including SlideMe, Amazon App Store, GetJar, Aptoide) and their differentiated features and then present how to make an application market on android platform for İstanbul Aydın University and manage it by preparing an admin panel.

First of all, Google Play Store and other third party application market stores were examined and compared each other in a detailed way on the basis of their functions, benefits, working principle and design, and security. In contrary to Third Party App Market, Google Play Market comes installed automatically on most android devices. Because of this, having Google Play Market only can be more convenient than having the Third Party App Market. Moreover, the Play Store has over 650.000 applications. Second most popular market named as Amazon App Store has only 75.000. This means if users search a not popular app, they most probably will find this app only in the Play Store. In addition to this, The Play Store present application recommendations based on the apps you downloaded. However, The Play Store still has important security problems such as low quality control process, and ambiguous and possible dangerous result of application permission before downloading. On the other hand, Amazon App Store try to differentiated themselves from the Play Store by offering “free app of a day” (installing a premium app as a free for a day) and “Test Drive Features” (trying out application on browser before purchasing). Other third-party application market that is SlideMe has a quality control team that provides high-quality apps. Moreover, SlideMe supports various payment alternatives including Paypal. GetJar App Market offers a reward system. As you download signified apps determined by GetJar Team, you win abstract money for downloading any premium applications you want. Lastly, Aptoide App Market provides only free application. Developers can upload the apps on their store. In the user side, applications can be

downloaded directly from server. Aptoide presents over 100.000 different apps. Additionally, there is no region limitation for applications.

Aydin App Market is especially important for developers in İstanbul Aydın University because even if there are many qualified developers, there is no any activity benefited from this qualification. Thanks to İstanbul Aydın App Store, Developers can easily upload their application through the support of BIM without paying any money. Users can download different type of applications on their phone.

Some steps were followed to make İstanbul Aydın App Market. Firstly, Requirements were determined after getting approval by advisor and prepare a task schedule. Software prototyping was started to prepared for android and admin panel sides .On the other hand, because the platform of application market (java) and the platform of admin panel (asp.net) is not same, a web service was highly needed. Rest Web service was used for interaction with resources and data. Coding part of admin panel and web service were simultaneously started and finished. Lastly, the mobile application was designed and coded in accordance with standards of current web service.

ÖZET

Bu tez çalışması başta Google Play Store ve üçüncü parti uygulama (Slideme, Amazon App Store , GetJar, Aptoide) marketlerinin fark yaratan özellikleri ile detaylı bir şekilde incelenmesi ve akabinde İstanbul Aydın Üniversitesi için uygulama marketi ve uygulama marketi yönetimi için yönetici paneli hazırlanmasından oluşmaktadır.

Öncelikle Google Play Marketi ve üçüncü parti uygulama marketleri özellikleri, faydaları, çalışma prensip ve tasarımları ve güvenlik konseptleri altında detaylı bir biçimde incelenmiştir. Üçüncü-parti uygulama marketlerinin aksine, Google Play Store birçok android işletim sistemli telefona kurulmuş haliyle gelir. Bu yüzden kullanıcılar için üçüncü-parti uygulama marketleri yerine Google Play Store kullanmak daha uygun hale gelmiş Olur. Google Market şuan da 650.000 nin üzerinde uygulamaya ev sahipliği yapmaktadır. İkinci en popüler market olan Amazon Marketinin sadece 75.000 uygulaması vardır. Bu durumda eğer bir kullanıcı popüler olmayan bir uygulamayı Google Market ve çeşitli üçüncü parti uygulama marketlerinde aradığında uygulama çokluğundan ötürü büyük ihtimalle Google Market de bulacaktır. Ayrıca, Google Marketin telefonunuza indirdiğiniz uygulamalarınızdan anlam çıkararak size benzer uygulamalar önerdiği bir hizmeti de vardır. Öte yandan, Google Marketin uygulama kalite kontrol işlemlerinin yetersiz kalması ve uygulama yüklenmeden önce istenen izinlerin tehlikeli sonuçlar doğurulabilmesi güvenlik ile ilgili durumların tam olarak çözülemediğini göstermektedir.

Amazon Marketi ücretli uygulamaları bir günlüğüne bedava indirip kullanma ve ücretli olan uygulamaları almadan önce tarayıcıda test edebilme gibi çözümler sunmaktadır. Bir diğer üçüncü parti marketi SlideMe yüksek kalitede uygulama sağlayan bir ekibe sahiptir. Uygulamalar tek tek ekip tarafından kontrol edilir. Ayrıca SlideMe farklı ödeme alternatiflerini sunmaktadır(Örneğin Paypal).Öte yandan GetJar Marketi ise ödüllendirme sistemi üzerinden çalışmaktadır. Kullanıcılar, GetJar takımı tarafından belirlenen ödüllü uygulamaları indirdikçe sanal para kazanır. Bu sanal paralar ile ücretli olan uygulamalar satın alına bilinir. Son olarak Aptoide Marketi tamamıyla ücretsiz uygulama sağlama prensibi üzerine çalışır. Uygulama geliştiricileri kendi uygulamalarını Aptoidin sağladığı

kişiy e ait market alanına yükleyebilirler. Kullanıcı tarafında ise uygulamalar direk serverdan indirilir. Aptoide 100.000 nin üzerinde uygulamaya sahiptir. Ayrıca uygulamalar için bölgesel bir kısıt bulunmamaktadır.

İstanbul Aydın Uygulama Marketi üniversitedeki uygulama geliştiricileri için büyük önem arz etmektedir. Çünkü çok sayıda geliştirici olmasına rağmen, bu geliştirici gücünden faydalanacak bir fikir yeteri anlamda çıkmamıştır. Uygulama geliştiricileri üniversitenin Bilgi İşlem Birimi yardımıyla kendi uygulamalarını para ödmeden servere yükleyebileceklerdir. Kullanıcılarda farklı kategorilerden uygulamaları tek tıkla telefonlarına indirebilecektir.

İstanbul Aydın Marketin yapımında bazı adımlar izlenmiştir. İlk olarak program ihtiyaçları danışman hocadan onay alındıktan sonra belirlenmiştir ve görev planlaması hazırlanmıştır. Ardından yönetici paneli ve uygulama marketi için yazılım prototipi çizilmiştir. Diğer taraftan uygulama marketi ve yönetim paneli aynı platformda hazırlanmadığı için web servis yazılması gerekmiştir. Web servis, datalarının ve kaynakların etkileşimi için önemlidir. Yönetici panelinin ve web servisinin kodlanmaya başlanılıp bitirilmesi eş zamanlı olmuştur. Mobil Uygulama, kullanılan web servisin standartlarına uygun tasarlanıp kodlanmıştır.

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1. INTRODUCTION

Development of network technologies, reforming of revenue-sharing pattern, decreasing of mobile data usage cost, increasing adoption of smartphones, and increase in application usability have contributed to the development of mobile application adoption in a global way. In addition to this, the mobile app. advertising opportunity has enabled publishers to partly (by giving discounts) or fully subsidize (make app. free) applications; this has resulted in increasing the adoption of mobile applications. The advent of 4G and high-tech content delivery technologies provide an opportunity for the mobile applications market. The global mobile applications market is expected to reach \$25.0 billion in 2015 from about \$7 billion in 2010. [10]

While the economic recession had a negative impact on the global markets; the global Mobile applications market was one of the very few markets that was not affected by universal meltdown. In 2008, mobile applications recorded 134% growth in terms of downloads, with 1 billion downloads compared to 500 million in 2007. In 2009 the mobile applications market again recorded high development by producing 7 billion downloads. [7]

In terms of technology and innovation, the mobile app industry can also be thought as an industry that attracts competitors and also increases profitability. It is a fact that an increase in the number of devices where apps can be distributed leads to the greater demand for the products and the more competitors in the market.

The mobile app industry has increased rapidly with the adaption of smart phones by consumers and the introduction of mobile app markets from other providers, especially the Google Play Store, iPhone AppStore, Windows Phone Store, Third-Party android-based application markets. In the thesis, only Google Play Store and Third-party android-based application markets will be reviewed because their existence is on android operating system.

2. BACKGROUND

2.1. GOOGLE PLAY STORE

Overall, Apple's App Store and the Google Play store have dominated the mobile app industry. There are other alternatives, but brand loyalty and accessibility forces smartphone owners to return their interest into App Store and Google Play Store.

Gartner revealed a information that Android account for 80% of the overall market share for smartphones at the end of 2013. [13]

1. The number of Android devices in market seems to be increasing continuously .Pichai Sundararajan who is a Senior Vice President at Google announced that 540 million Android devices were in use in 2013 at Google I/O 2014 Conference. That's up from 225 million in 2012 and 80 million in 2011. [4] That growth in devices means more Android users and more opportunities for developers to make money from apps sold through Google Play.

Google Play Market comes installed automatically on most android devices so people implicitly forced to use it for their apps. Play Store have a detailed collection of apps that can be paid or free. The Store let users to buy and download from every categories from games to finance and tools.

There are some drawbacks of using Google Play Store. Firstly, there is some region lock for some applications. Thus, other regions cannot benefit from this app because of limitation.

Secondly, Apps already on your device can now gain dangerous permissions with automatic updates. Google Play now categorizes app permissions into category of related permissions. For example, an app that wants to read your incoming Calls will require the “Call” permission when you download it through the Play Store. These app can abuse by

making phone call on background. With the permission of Photo/Media/Files, Malicious application can format users' entire external storage device.

2.1.1 WORKFLOWS OF GOOGLE PLAY STORE

To download and purchase application on the Google Play Store, you need to add a Google Account on your device.

Your account can be your Gmail address or username on a Google-hosted domain. You can add more than one Google Account on your device. After signing in, you can search any programs that you want to download. You can type in the name of the application you wish to install

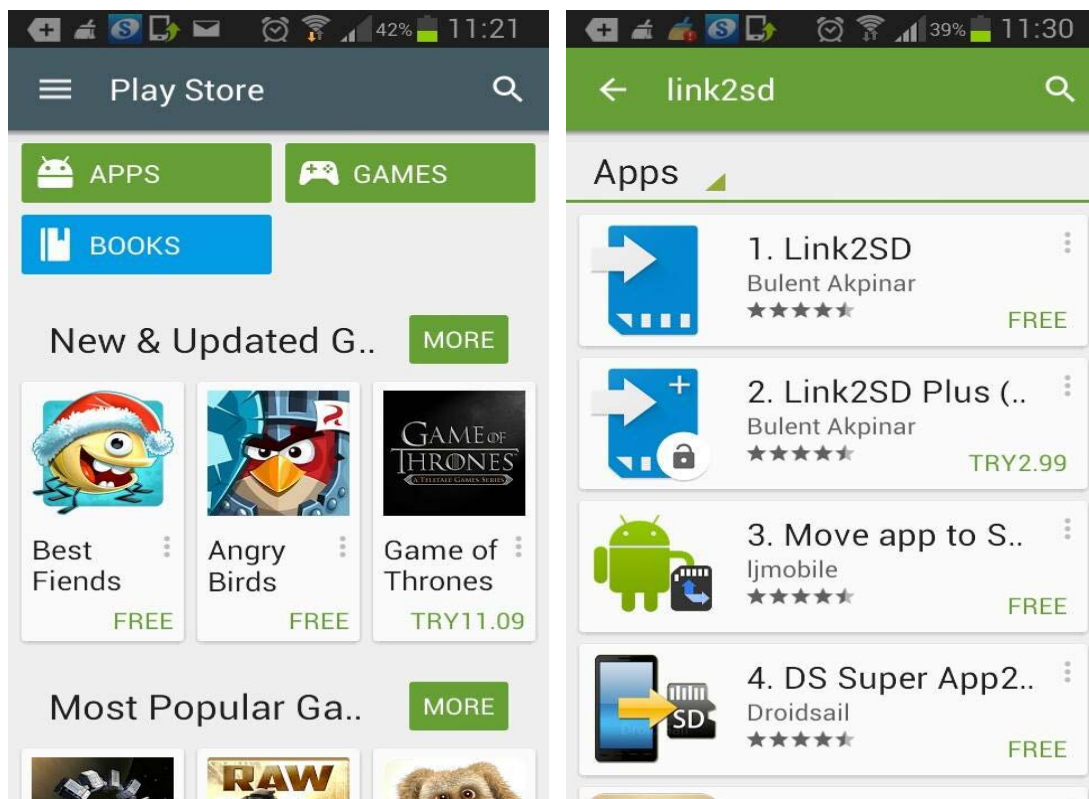


FIGURE 2.1 GOOGLE PLAY MAIN AND SEARCH SCREEN

Click on the icon of the application you wish to install. This will bring up the application description, screen-shots, and reviews.

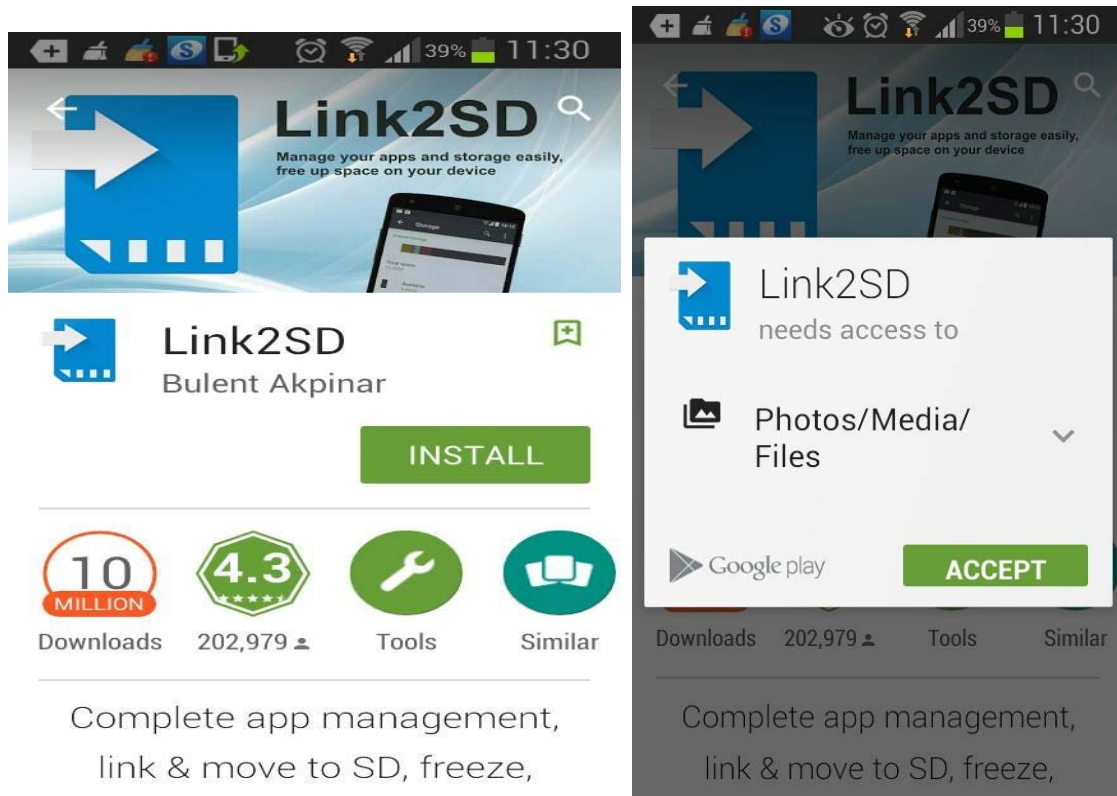


FIGURE 2.2 READY-TO-INSTALL AND PERMISSION SCREEN

You will now see a pop-up window; this window explains what the application can do to your device. If you trust the application, press “Accept” at the bottom, and your application will install.[3]

2.2 THIRD PARTY APPLICATION MARKETS

Android-Based Mobile Phone users think that Play Store is the only alternative for downloading apps but there are lots of alternatives such as Amazon App Store, SlideMe, F-Droid, Aptoide, GetJar and so on.

2.2.1 AMAZON APPLICATION STORE

On contrary to the Play Store, the Amazon AppStore must be installed from Amazon's website. Amazon App Store differentiated themselves from the Play Store offers a “free app of the day” and ” Test Drive Feature” .These are paid apps available free for a day. On the other hand, with Test Drive feature, users can try out application on their browser before they buy. Amazon Appstore has about 75.000 applications now. Amazon AppStore offers a smaller selection of application in relative to Google Play Store.[6]

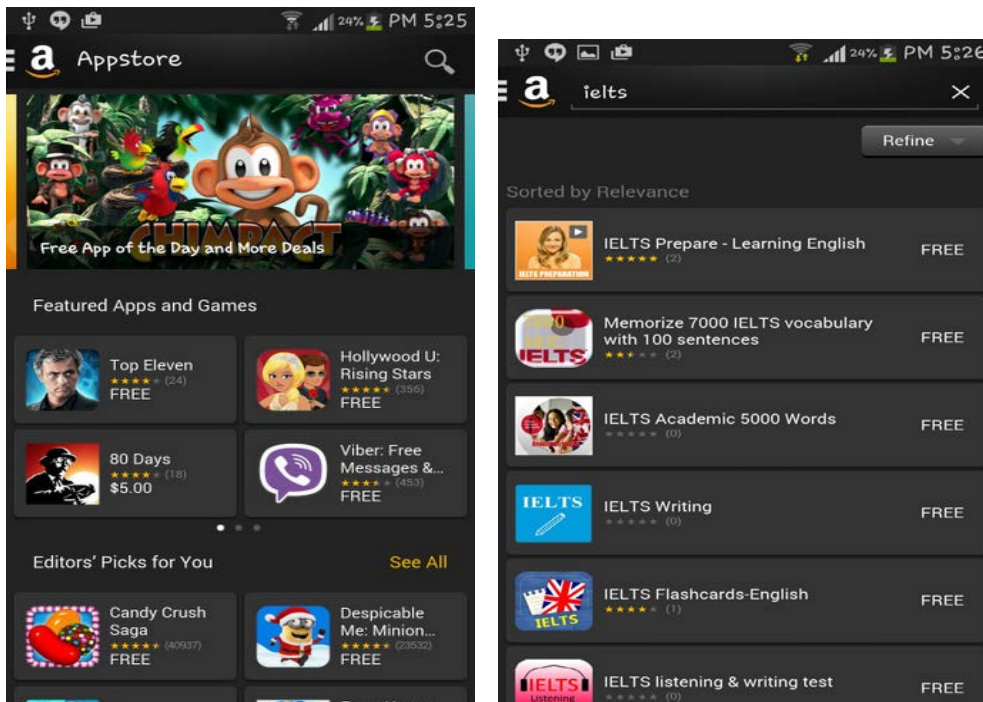


FIGURE 2.3 AMAZON MARKET MAIN AND SEARCH SCREEN

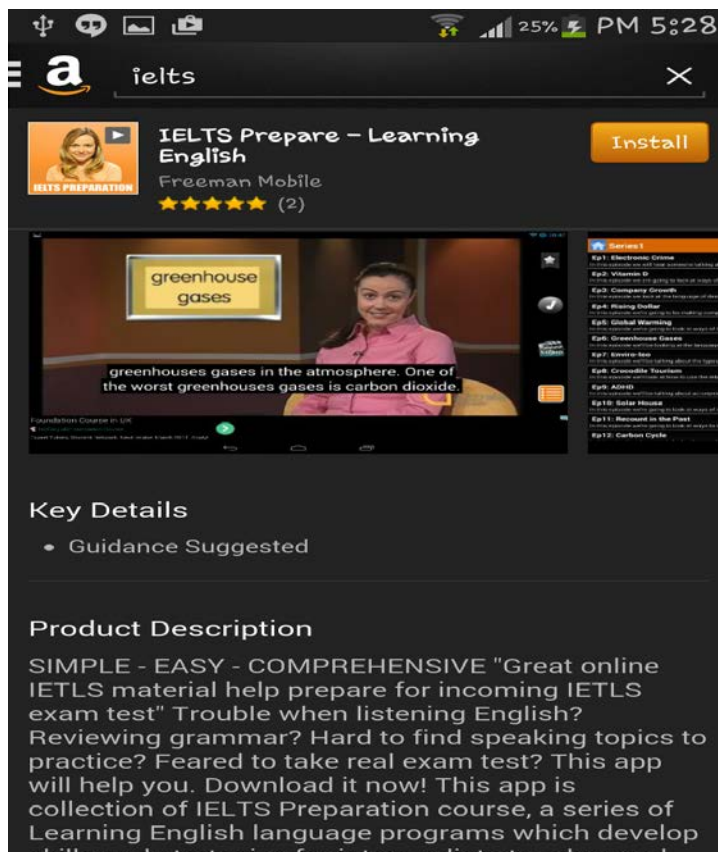


FIGURE 2.4 AMAZON APP DETAIL SCREEN

WorkFlows of Amazon AppStore

To download and purchase application on the Amazon App Market, you need to add a Amazon Account .After signing in, you can search any programs that you want to download. Clicking on the icon of the application the user had searched to install brings up the application description, screen-shots, and reviews.

2.2.2 SLIDE ME APPLICATION MARKET

SlideMe application Market has a global presence. It presents free and non-free application in various categories. Each of the apps that come in is passed through quality control process of the SlideMe team. This assured that there are relatively high-quality apps. It supports various payment alternatives including PayPal.

Developers have a chance that they get a greater percentage of the revenue generated by the application.[2]

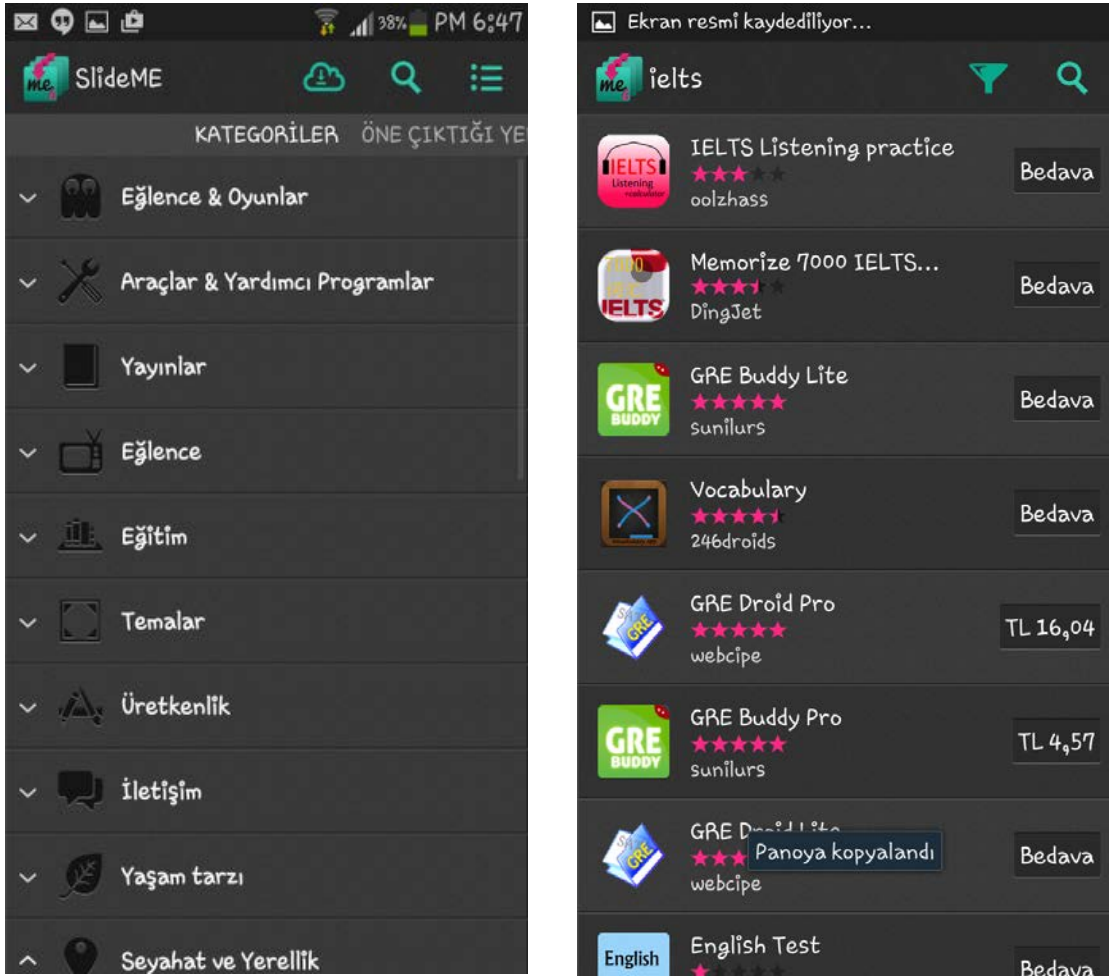


FIGURE 2.5 SLIDEME MARKET CATEGORY AND LIST APP SCREEN

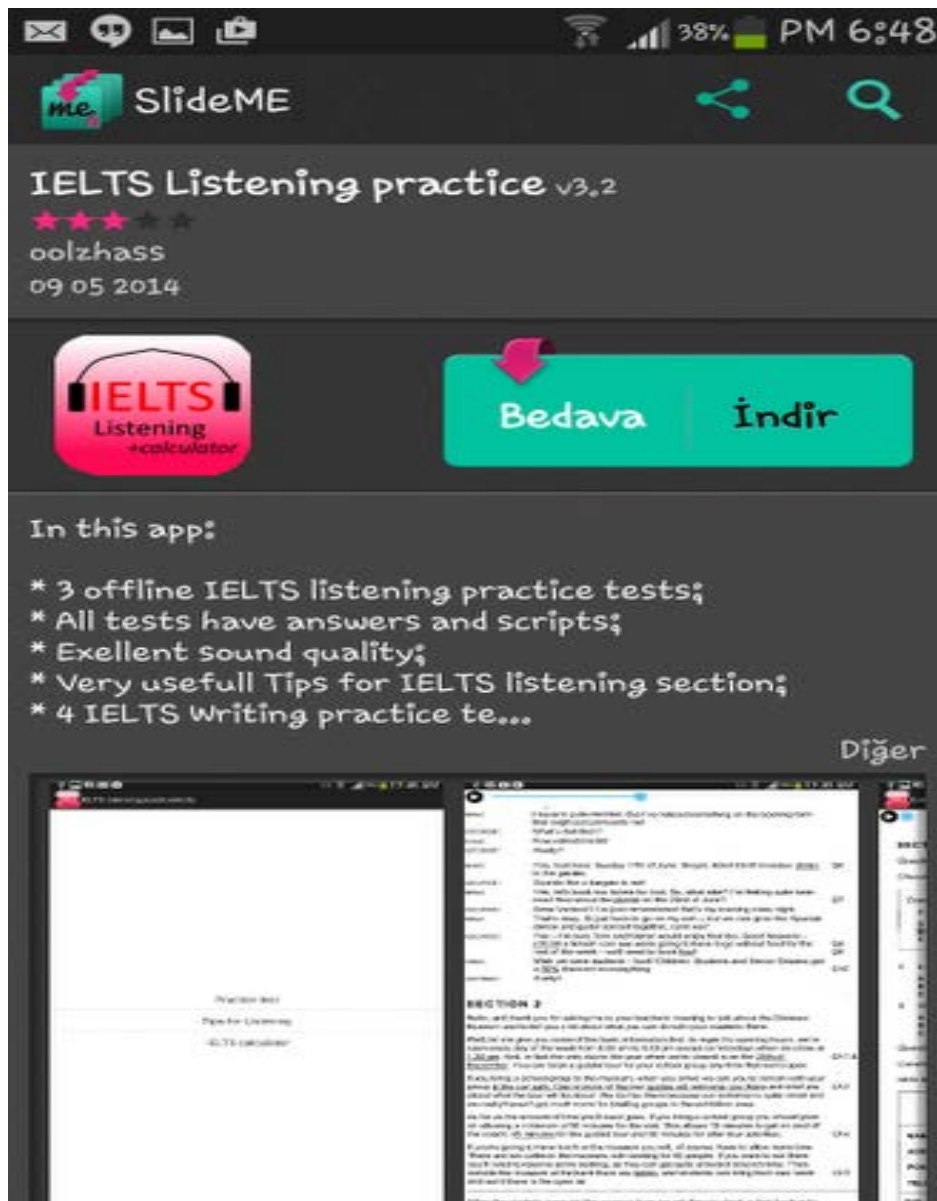


FIGURE 2.6 SLIDEME APP DETAIL SCREEN

Workflows of SlideMe AppStore

To download and purchase application on the SlideMe App Market, you need to add a Slide Account .After signing in, you can search any programs that you want to download. Clicking on the icon of the application the user had searched to install brings up the application description, screen-shots, and reviews.

2.2.3 GETJAR APPLICATION MARKET

Users can find a great repository of free apps for various platforms such as Android, iPhone, and Blackberry. Applications are categorized for make it easier to find. User can find apps that is mostly suitable for them and can earn rewards by downloading signified apps that will give users non-free application as free. Offering premium apps for free results in great traffic. Traffic brings advertising dollars. Virtual currency affects developers positively in uploading their application on Getjar server. [9]

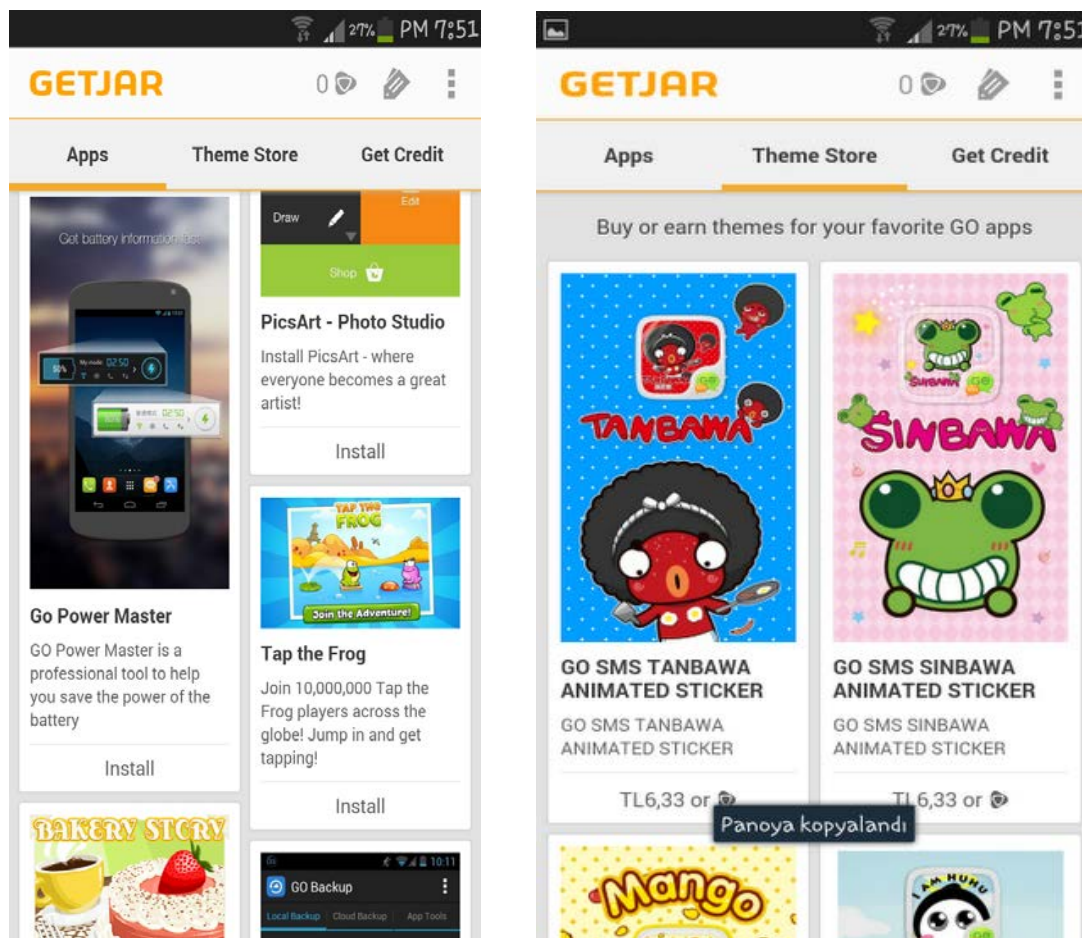


FIGURE 2.7 GETJAR APP LIST AND THEME STORE SCREEN

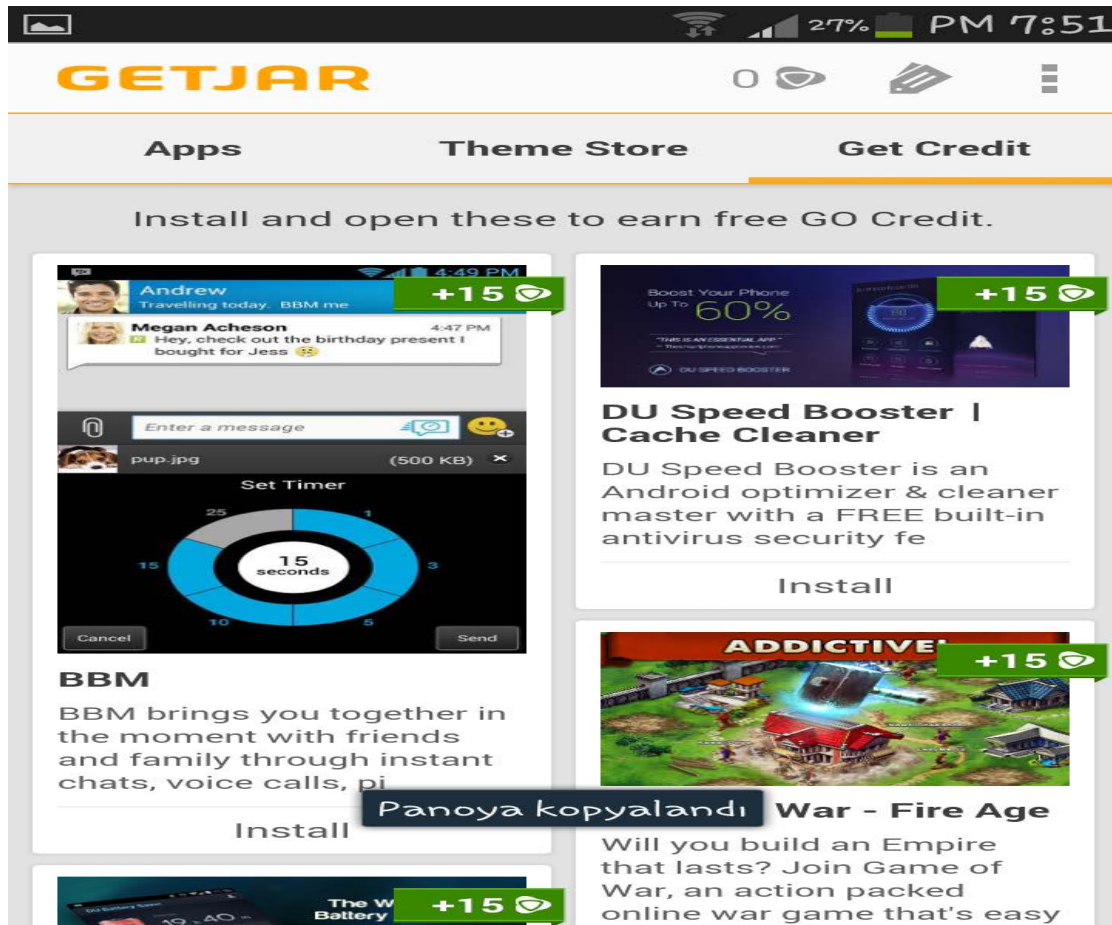


FIGURE 2.8 GETJAR GETCREDIT SCREEN

WorkFlows of GetJar AppStore

Users can download GetJar on Google Play Market, you don't need to have a GetJar account .After signing in, and you can search any programs that you want to download. If user click on the icon of the application, s/he will be redirected Google Play Store for downloading. With "GetCredit" Tabs,s/he can get abstract money in return of downloading each of them. S/he can use these abstract money for downloading premium application.

2.2.4 APTOIDE APP MARKET

Aptoide is an alternative Android App Market that only provides free applications. Developers have right to distribute their apps via their own app stores. Developers can upload the apps on their store .In the user side, applications can be downloaded directly from server by accessing the stores that is created by developers. Users can find many applications as free that are not available or are premium in Google Play .Aptoide presents over 100.00 different apps, through over 50.000 independent stores, having reached over 250 million downloads .In Aptoide, there is no region limitation for applications.[5]

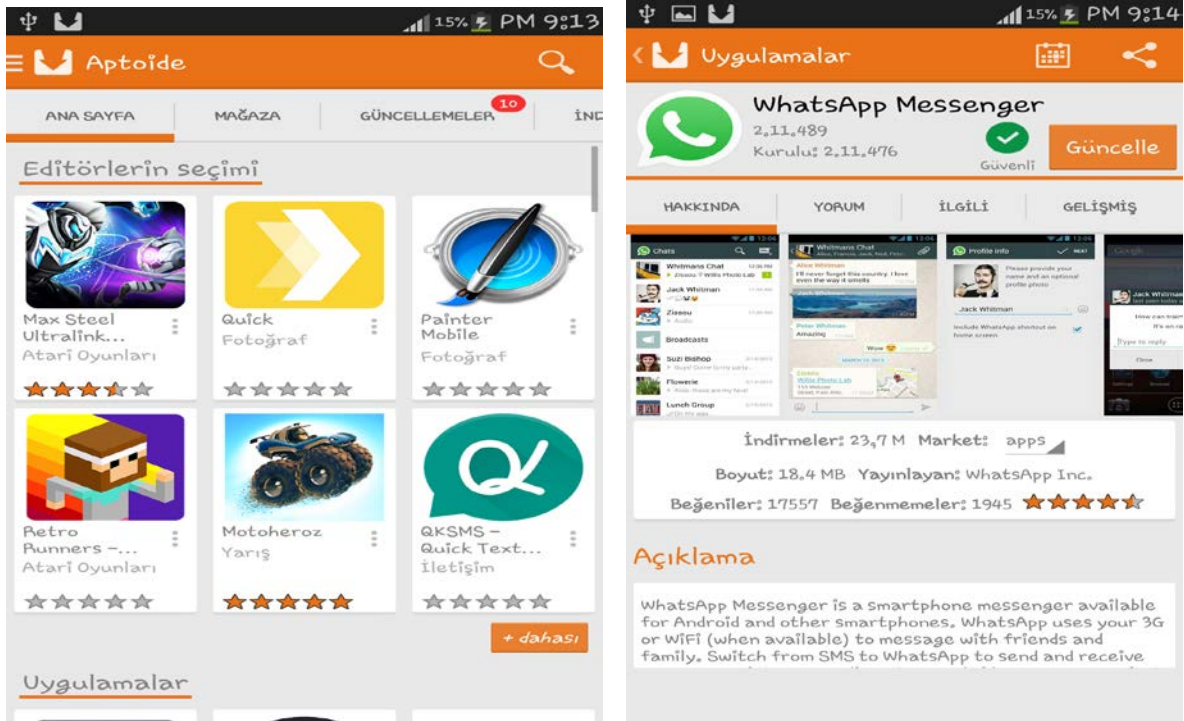


FIGURE 2.9 APTOIDE MAIN AND APP DETAIL SCREEN

Third-party app markets can provide a high repository of apps and offer some paid apps for free or at a discount. Moreover, they seem more suitable to developers because they are less restricted than Google Play Store. Also these third-party stores allow developers to download Apk files directly in contrast to Google Play Store.

3. ISTANBULAYDIN APP STORE

3.1 MISSION

The project is aimed at delivering high quality android application market for developers in İstanbulAydın University those who will publish their applications on it without paying money, everybody those who want to download free application published by student developers. The project will facilitate process of mobile application deployment.

3.2 VISION

We do not just facilitate process of mobile application deployment We are aimed at inspiring all android developers in İstanbul Aydın University to make usable and useful application during their educational life ,as well as to increase brand value of İstanbul Aydın University via users those who will download and become pleasant

3.3 GOALS

- To increase brand value of İstanbul Aydın University over other Universities
- To assist and prepare high level developers in İstanbul Aydın for software sector
- To prepare same Application market for iPhone and window phone.
- To prepare a dynamic Application Market to sell other universities and associations

3.4 STRATEGIC PLAN

We have short and long term plans. In the short term, We encourage developers to create applications to publish our Market. We use İstanbul Aydın University server for saving all data.

In the long term, We transform İstanbulAydın Market into a dynamic form so we can customize it to sell to other universities .All of these can contribute brand value of İstanbul Aydın University.

3.5 WEB SERVER (RESTFUL WEBAPI)

Representational state transfer (REST) is an abstraction of the architecture of the web. In other words, Rest is an architecture that is related to client-server communication all services that use rest architecture can be named as Restful Services. Its main idea is to perform data exchange between client-server instead of complex architecture such as Soap and RPC over HTTP protocol. Restful service is simpler and usable than SOAP and RPC.

Addition to being simpler, Restful Services also is more flexible and creative. You can do everything that other web services provide. Rest and Soap services have same differences in that Rest does not force user to use proxy. One of the most significant point in Rest Architecture is that each aim with Http Request is signified with HTTP methods like post, put, delete, get so that there is no need for proxy and enable to have a platform that work independence from platform. Restful services can have different type of response type such as Json, Xml, Csv and Html. [14]

Client-Server:

Separation of concerns is the core principle of the client-server constraints. Client and servers have distinct parts to play .The separation of concerns means that each component can be evolved, developed and implemented independently if they conform the common interface relationship. [14]

Stateless

This constraint means that a web server is not forced to memorize the state of client. Thus, clients must hold all information that is related to interaction with webserver. This is important for visibility. Web Servers do not have to keep any state between requests. This increases management of resources. [14]

Cache

Cache is one of most important constraints.

It dictates that the data within a response to a request be signified as cacheable or not. If a response is cacheable, then a client cache is can reuse that response data for later. Caching response data can reduce client latency and increase reliability of an application. [14]

Uniform Interface

The uniform interface constraint is basic concepts to the design of any REST service. Clients and servers depend on uniformed interfaces which enables each part to evolve independently. [14]

Layered System

Client can not reach the server with direct connection. There is hardware and software intermediaries between client and server that improve scalability by enabling load-balancing and enabling shared caches. All layers are forced to be harmony with security policies. [14]

Code-On-Demand

A client can download a javaapplet or javascript in order to keeping communication private, so servers are not aware of any encryption event used in the process. Downloading permission of features after deployment increases system extensibility. However, it also reduces visibility, and thus is only an optional constraint within REST. [14]

3.6 ARCHITECTURAL DESIGN AND TECHNICAL ISSUES

The platforms, programming language and design tools that we are going to use as follows;

1. For Web Side

- First of all, I am going to use HTML for the main structure of website of admin panel.
- I will use Microsoft SQL Server 2008 R2 for database processes.
- For design part, we will use CSS which is a style sheet language used for describing the look and formatting of the document written in HTML. Moreover, we also going to use JavaScript that is most commonly used as a part of web browsers, whose implementations allow client-side scripts to interact with the user. Furthermore, JQuery that is JavaScript library also will be used for make it possible to create animations and visual effects in our project.
- For performing basic functions of website of admin panel ,I am going to use .NET,

2. For Android Side

- I am going to use Java Eclipse Android Sdk for preparing an İstanbulAydın App Market.

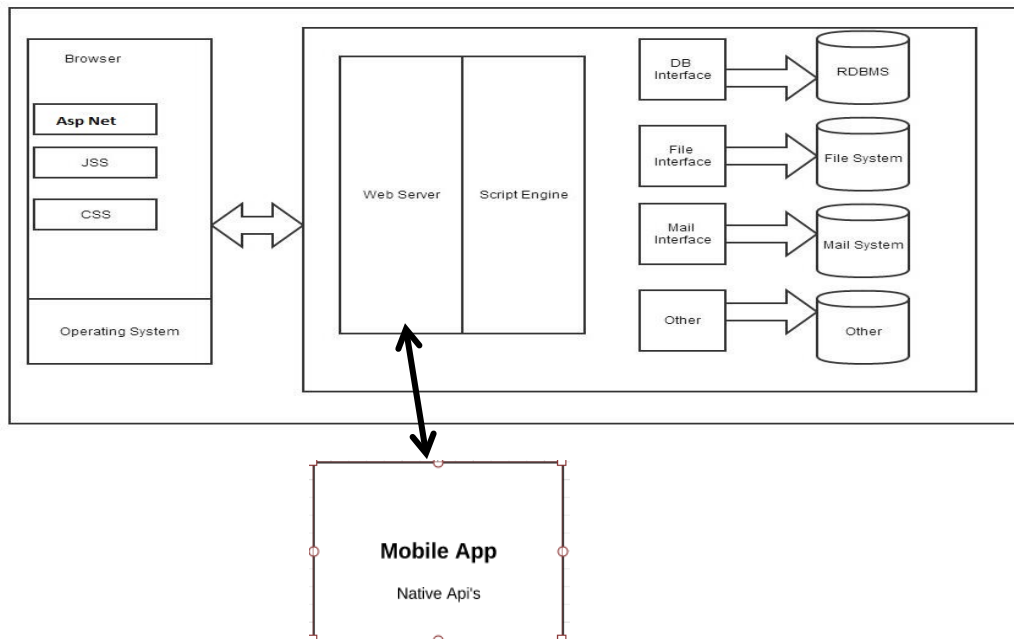


FIGURE 3.1 ARTCITECTURAL DESIGN

This diagram shows how the application architecture works .The Web server follows some steps in this architecture.

- 1.** For both Android and web application part, the browser sends a request for a resource of some kind to the web server.
- 2.** The web server decides what to do with the request.
 - a.** Static resources such as images, CSS and static web pages are read from disk and returned directly to the browser.
 - b.** Requests for dynamic resources such as an Edit screen are forwarded to an application server.
- 3.** The application server passes the request to the correct web application.
- 4.** The web application constructs a response using data from the database server when necessary.
- 5.** The response is passed back up the chain to the browser.
- 6.** The browser displays the response.

3.7 DATA DESIGN

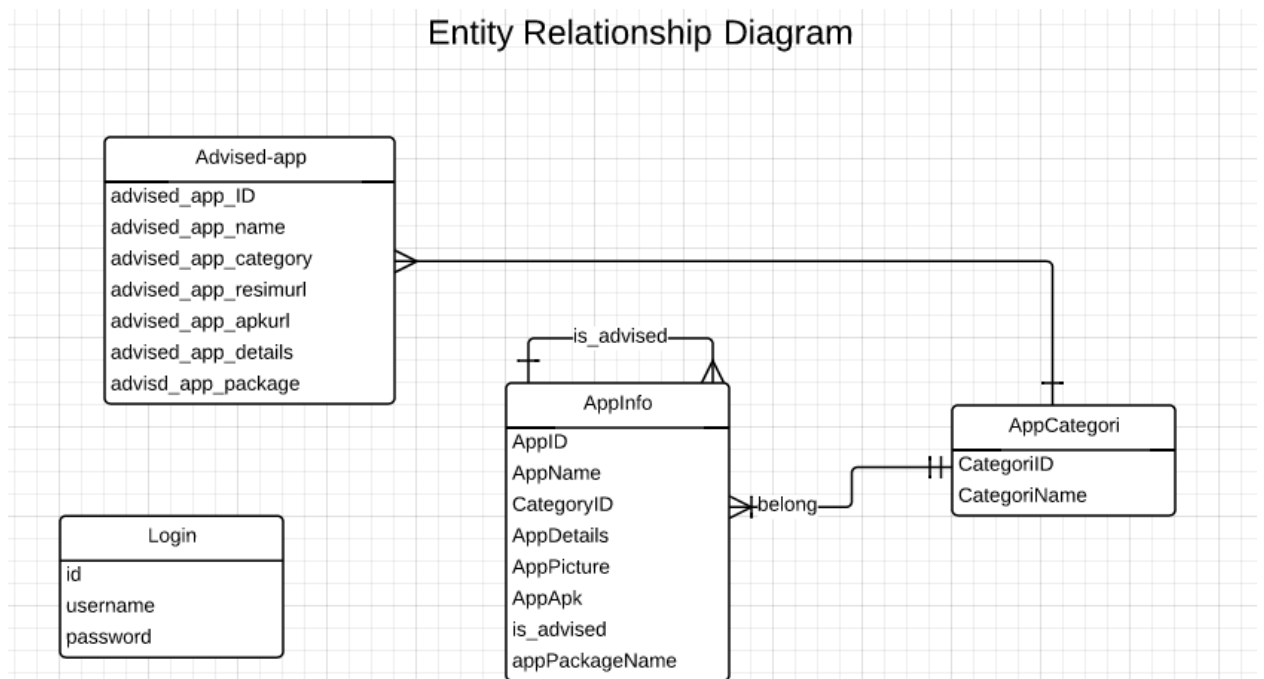
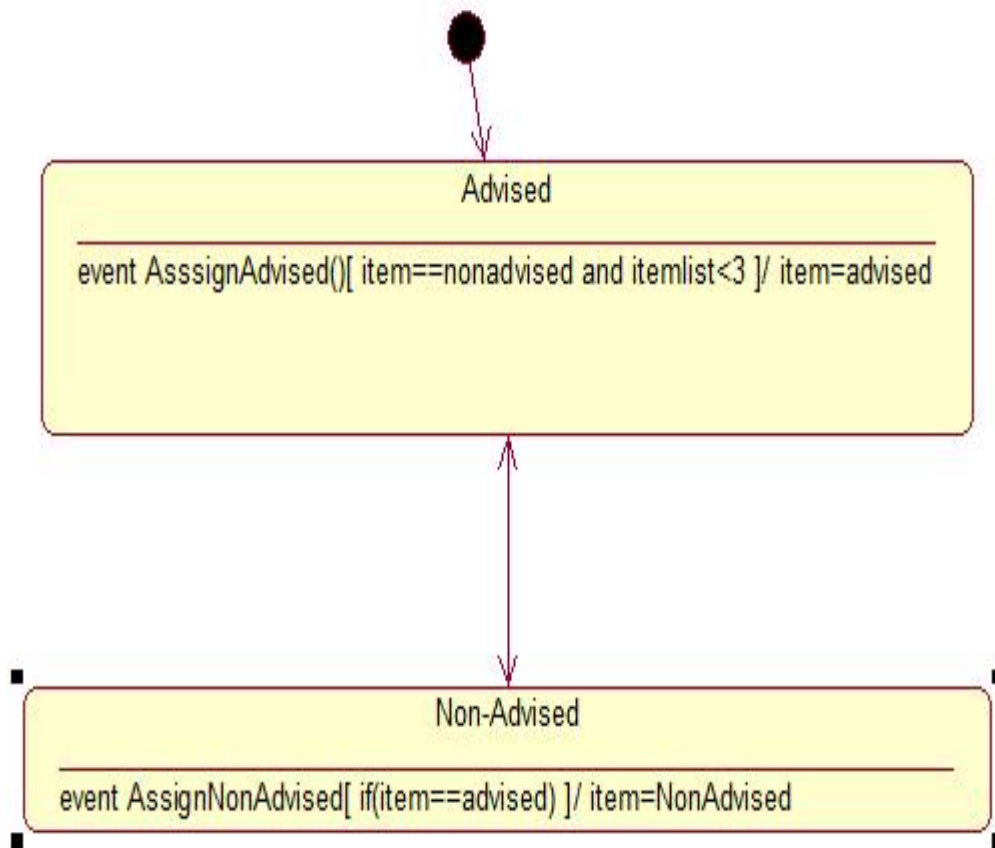


FIGURE 3.2 ENTITY RELATIONSHIP DIAGRAM

The database was partitioned into three relational tables and non-relational table. AppInfo table have several entities including AppID, AppName, CategoryID, AppDetails, AppPicture, AppNapk, is_advised, appPackageName. Advised-App table has same functional entities with different names. AppCategori table has one-many relationship with AppInfo and Advised-app tables. Advised-app includes advised_app_category as a foreign key. AppInfo similarly includes CategoryId as a foreign key.

3.8 STATE DESIGN



3.3 STATE DIAGRAM

If an application is in a non-advised state and “AssignAdvised” event is called, the system will check advised item list. If advised item list is less than three, this application state will be advised.

3.9 CLASS DIAGRAM

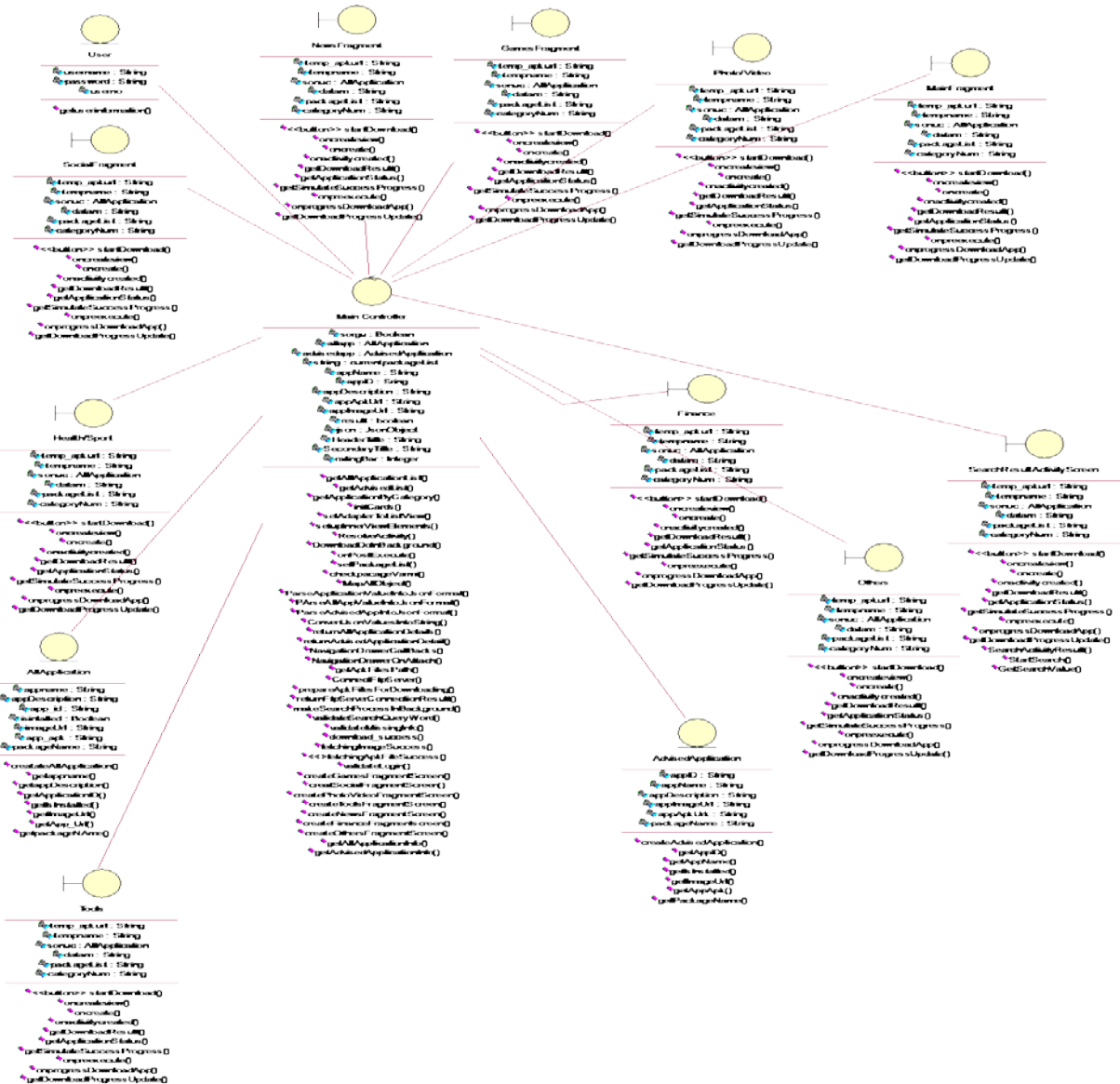


FIGURE 3.4 CLASS DIAGRAM

Three entity ,nine boundary and one main controller classes is composed of Aydın App Store.Entity Classes names are AdvisedApplication, AllApplication and Category. On the other, the names of boundary classes are Social, Finance, MainPage, Tools, Others, Games, Health, Sport, SearchActivity classes.

3.10 TARGET USER PROFILE

Our target user profile will be developers in İstanbulAydın University and all citizens with the need of a mobile application.

3.11 WORKFLOWS PROTOTYPING(MOCKUP)

A Web Page
http://www.aydinappmarket.somee.tr

Application Upload Wizard

Upload Application | Advised AppList | Manage Application

Application Name

Select Category

Application Detailed Info

File | APK File Path

Select Image

Send

FIGURE 3.5 UPLOAD APPLICATION PROTOTYPING

On main screen of admin panel, there are three tabs that are named as Upload Application, Advised Application and Manage Application. In the Upload Application Tabs, The admin can upload an application they want by fulfilling the required information above.



FIGURE 3.6 ADVISED LIST PROTOTYPING

In the advised application list tab, admin can see advised list that will be appear on main screen of İstanbul Aydın Application Market. Each record was shown with Image, App Name, Category and Description .This allows Admin track easily advised application list.



Figure 3.7 Main screen Prototyping

For the side of phones, the process starts when the user clicks the application icon on the application menu. At this point, the program lists advised application in specified category..

3.12 ISTANBULAYDIN APP MARKET USER INTERFACES

Admin users can publish developers' applications on İstanbul Aydın Application Market by following the steps below.

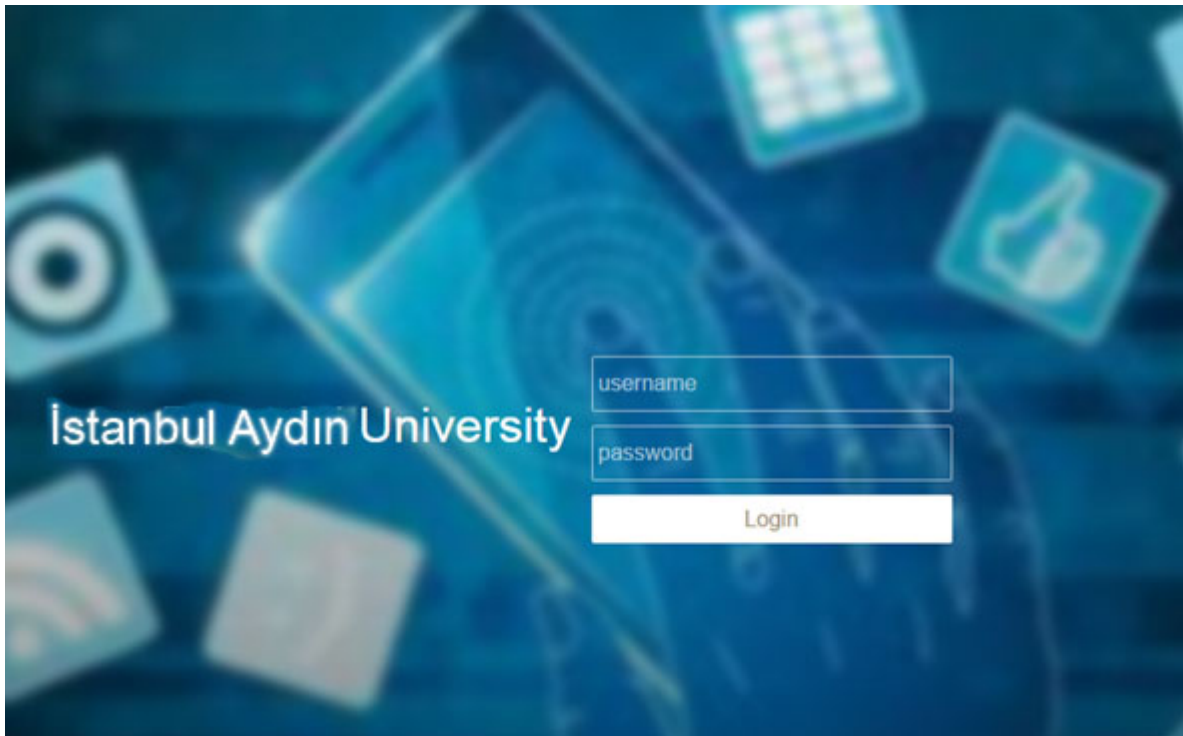


FIGURE 3.8 LOGIN SCREEN

The Admin user must enter his/her username and password for passing into Admin Panel Main Screen.

APPLICATION UPLOAD WIZARD

ISTANBUL AYDIN APPLICATION MARKET STORE

Logout

Upload Application | Advised Application List | Organize Application

App Name: [Text Field]

Package Name: [Text Field]

Category: Seçiniz [Dropdown Menu]

App/Detail: [Text Area]

0 karakter yazıldı, 250 karakter kaldı.

Is Advised? ☐

Images: Dosya Seç | Dosya seçilmedi

Apk Files: Dosya Seç | Dosya seçilmedi

Kaydet

The site was prepared for MIS 492 THESIS BY Yılmaz Alagöz

FIGURE 3.9 UPLOAD APPLICATION

On main screen of admin panel, there are three tabs that are named as Upload Application, Advised Application and Manage Application. In the Upload Application Tabs, The admin can upload an application they want by fulfilling the required information above.

ISTANBUL AYDIN UNIVERSITY

APPLICATION UPLOAD WIZARD

ISTANBUL AYDIN APPLICATION MARKET STORE

Logout

Upload Application | Advised Application List | Organize Application

Kaydınız Başarıyla Alınmıştır

App Name: En Yakın Cilingir

Package Name: com.example.restfulapiclient

Category: Tools

App/Detail: En Yakın Cilingiri Bulmanızı Sağlar.

36 karakter yazıldı. 214 karakter kaldı.

Is Advised? ☐

Images: Dosya Seç ic_launcher.png

Apk Files: Dosya Seç RestfulAPIClient.apk

Kaydet

The site was prepared for MIS 492 THESIS BY Yılmaz Alagöz

FIGURE 3.10 AFTER UPLOADING AN APP

If the process of uploading is finished correctly, system will give a message that “Kaydınız Başarıyla Alınmıştır”. You can check whether the application is uploaded or not on Organize Application Tabs by selecting current uploaded application category.






APPLICATION UPLOAD WIZARD

İSTANBUL AYDIN APPLICATION MARKET STORE

[Logout](#)

[Upload Application](#) | [Advised Application List](#) | [Organize Application](#)

Image	App Name	Category	Description
	Oyundeneme	Game	deneme oyun
	Yahoo Finance	Game	finance destination to track the markets and the economy.
	dene	Game	dene f
	VINE	Social	Vine is the best way to see and share life in motion. Create short, beautiful looping videos in a simple and fun way for your friends and family to see
	SGK Hizmet	Social	Kişisel hizmet bilgilerinin, ait olduğu sigortalı tarafından sorgulanabilmesi amacıyla bazı Nüfus bilgilerinin doğrulanması talep edilmektedir. Girdiğini bilgiler kayıt altına alınmamaktadır.
	SnapChat	Social	Enjoy fast and fun mobile conversation! Snap a photo or a video, add a caption and send it to a friend. They'll view it, laugh, and then the Snap disappears from the screen - unless they take a screenshot!
	Photo Editor Pro	Photo/Video	Photo Editor Pro is a powerful photo editor with many amazing effects and filters!
	SlideShowMaker	Photo/Video	Select photos and instantly get an awesome video slideshow.
	PickArtPhotoStudio	Photo/Video	With 200 million installs across all platforms, PicsArt is the go-to photo editing and drawing app with a rapidly growing community of creatives.
	MyNet Haber	News	on dakika haberler, gündem, magazin, tüm gazeteler ve tüm en son haber Mynet Haber ile Android cihazınızda.

Diğer Sayfalar: 1 << < > >>

The site was prepared for MIS 492 T140515 BY Yılmaz Alagöz

FIGURE 3.11 ADVISED LIST

In the advised application list tab, admin user can see advised list that will be appear on main screen of İstanbul Aydın Application Market on mobile phone .Each record was shown with Image, App Name, Category and Description fields. This allows the Admin user track easily advised application list.

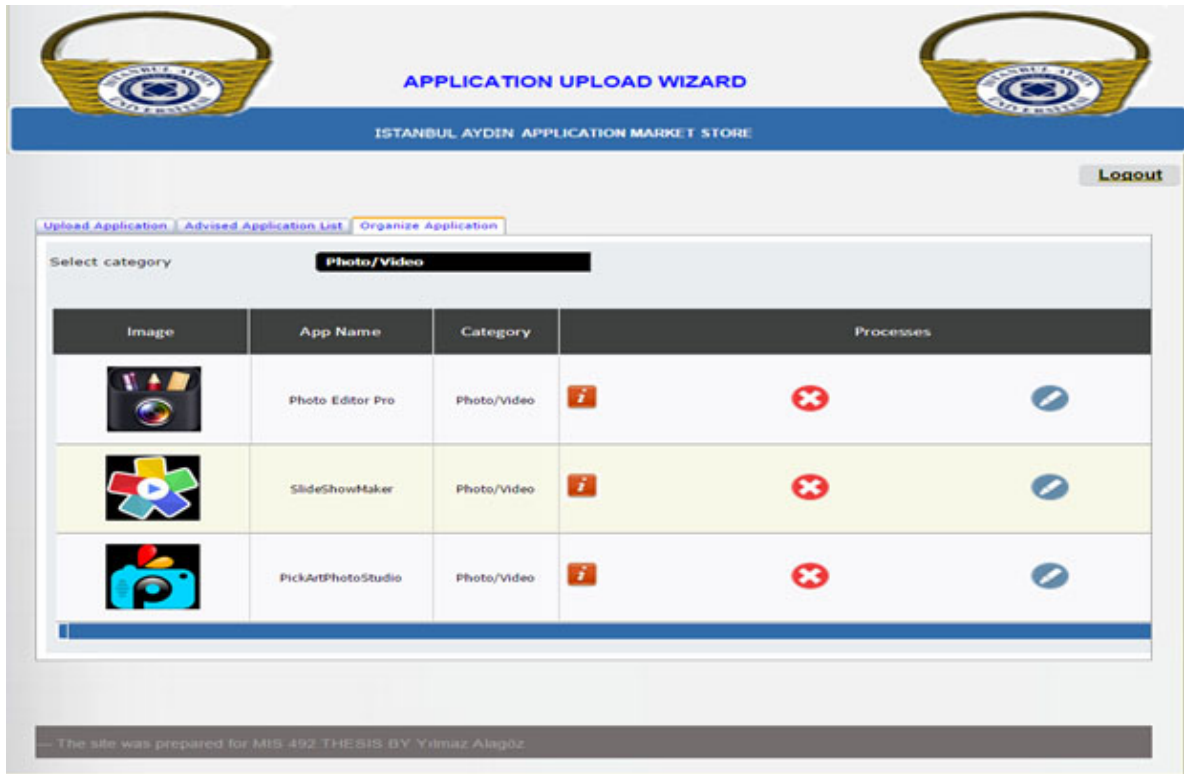


FIGURE 3.12 ORGANIZE APPLICATION

In the Organize Application tab, admin user can list applications categorically. Each record was shown with Image, App Name, Category and Processes fields. There are three actions in Processes field. When the admin user clicks info image button on the left side of processes field, the application detail will be shown on the popup below.

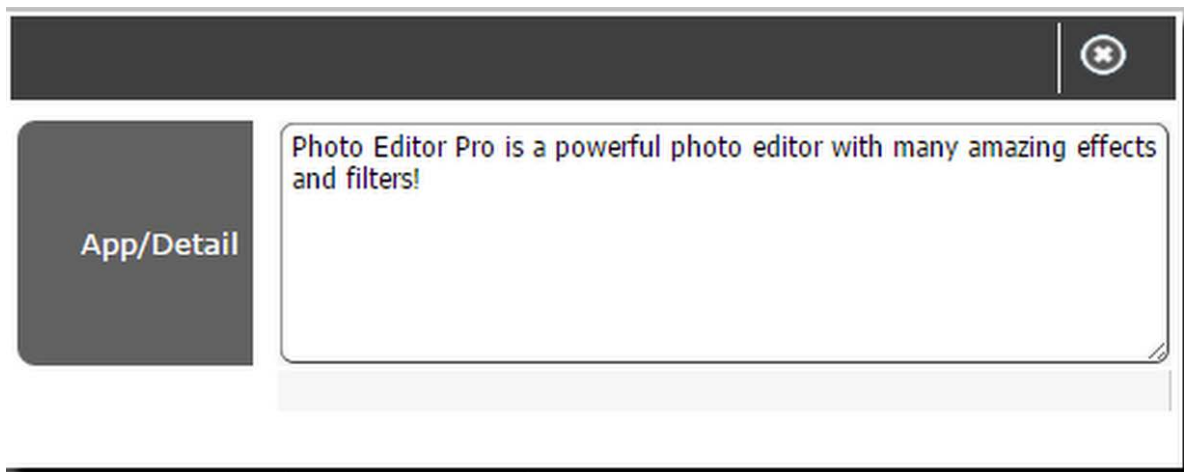


FIGURE 3.13 DETAIL INFORMATION

The user can delete any application s/he wants .In order to perform delete action, user click delete image button then the system shows a popup below. If the user clicks deny button, delete action will be cancelled. Whereas, if the user clicks approve button, the application data will be deleted.



FIGURE 3.14 DELETE APP SCREEN

The Admin User can update any application's information by clicking edit image button on the right side of the Processes field. For example, assume that an application normally is advised app but mistakenly saved as non-advised app. The user can easily change it by making checkbox checked below.

A screenshot of a mobile application's edit screen. It has a dark grey header bar with the text "Make Necessary Changes" and a close button. The screen is divided into several sections: "App Name" with a text input field containing "Photo Editor Pro"; "Package Name" with a text input field containing "com.zentertain.photoeditor"; "Category" with a dropdown menu showing "Photo/Video"; "App/Detail" with a text area containing "Photo Editor Pro is a powerful photo editor with many amazing effects and filters!"; "Is Advised?" with a checked checkbox; "Images" with a "Dosya Seç" button and the text "Dosya seçilmedi"; and "Apk Files" with a "Dosya Seç" button and the text "Dosya seçilmedi". At the bottom is a blue "Save" button. A character count "83 karakter yazıldı. 167 karakter kaldı." is visible below the text area.

FIGURE 3.15 EDIT SCREEN



FIGURE 3.16 MAIN SCREEN OF PHONE

It is a note that Mobile side is only prepared for market users not developers' .For the side of phones, the process starts when the user clicks the application icon on the application menu.

First of all, it is important that the market does not require users to login on system for the android side. This can increase user satisfaction by decreasing waiting time on Login phase.

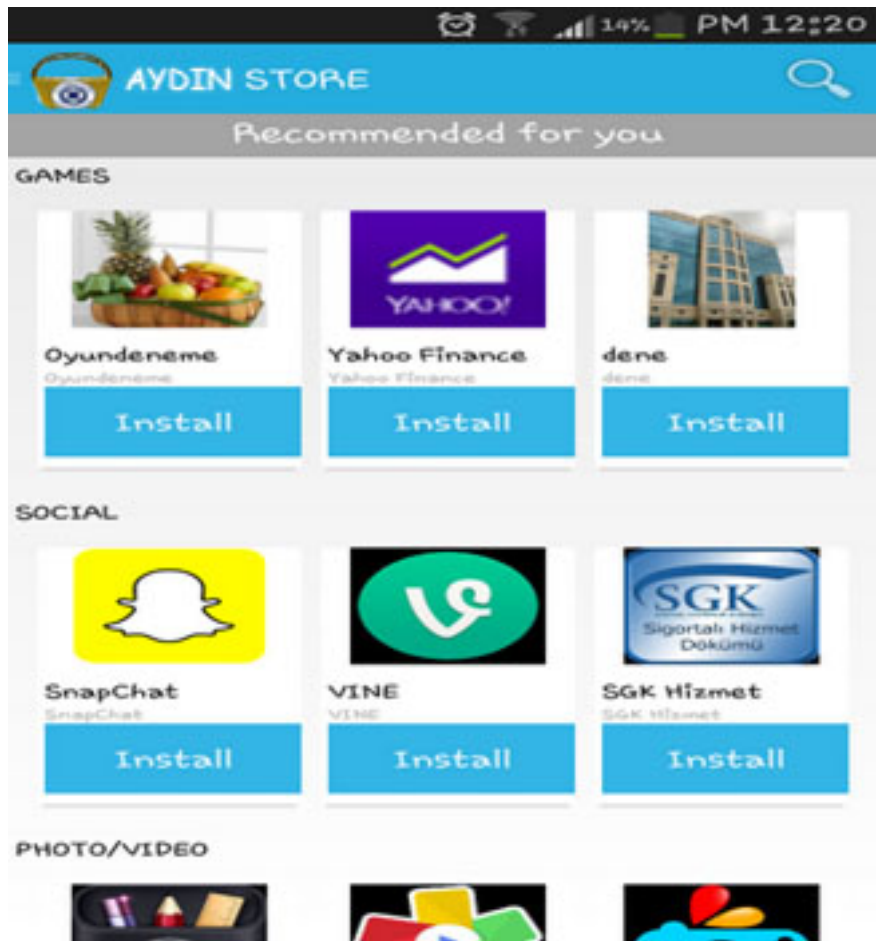


FIGURE 3.17 MAIN SCREEN OF AYDIN STORE

At this point, the program lists advised application in specified category. Each one is determined by Market Developer Team. On main page, User can open navigation menu that contains categories listed namely 'Games' , 'Social' , 'News' , 'Tools', 'Finance' Photo/Video' , 'Education' , 'About Us'.

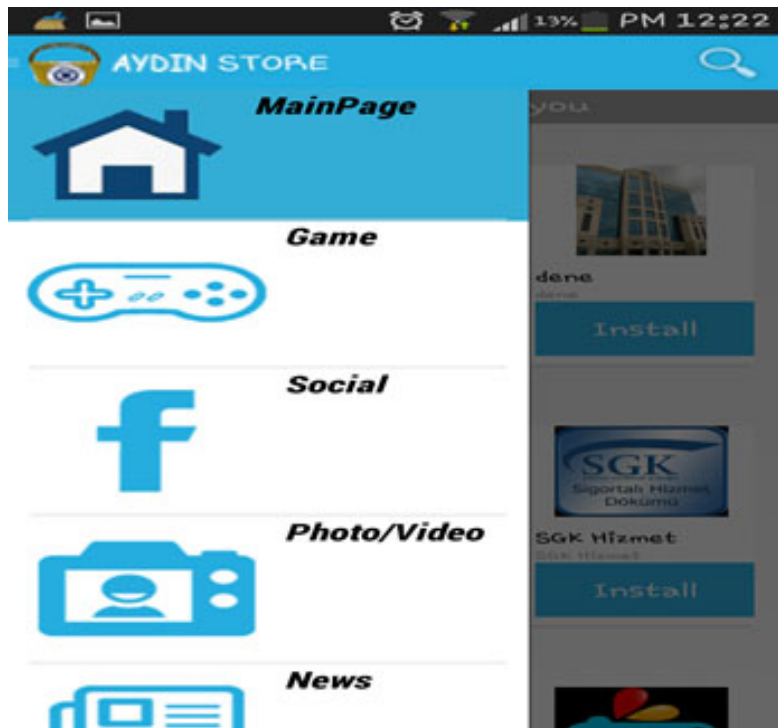


FIGURE 3.18 BOGAICI APP CATEGORY SCREEN

We can select any category from navigation menu. For example, If we click Photo/Video, system lists all application related to it. It is same for each category.

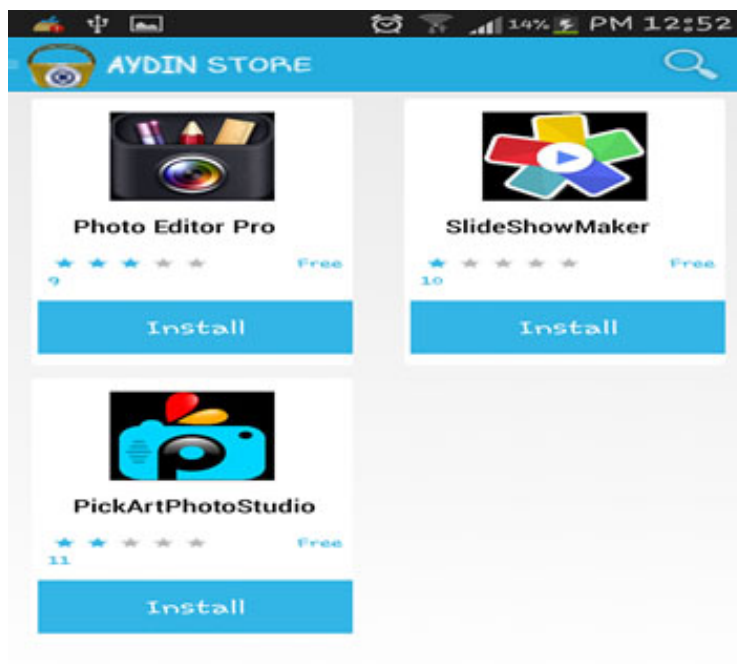


FIGURE 3.19 ISTANBULAYDIN APP PHOTO CATEGORY LIST

After clicking install button, the application starts to be installed on mobile device. Dialog popup will be shown to inform users about how fast the application is downloaded and what percentage of application is downloaded currently.

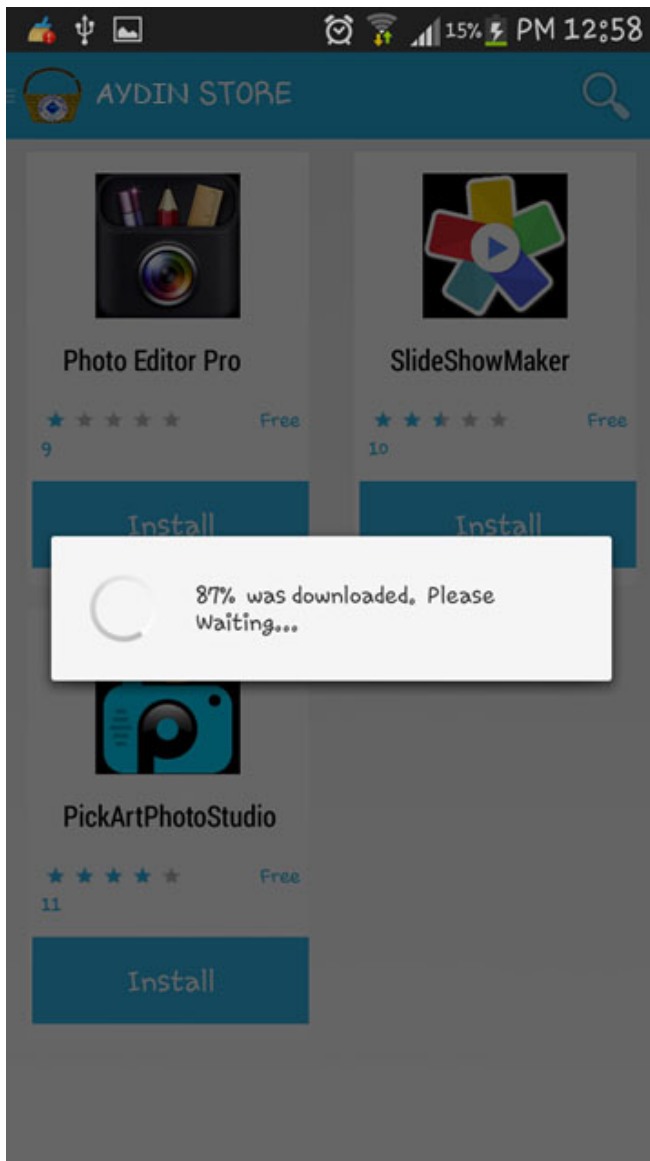


FIGURE 3.20 DOWNLOAD AN APP SCREEN

After downloading process,Users can open application to use by clicking open button below.

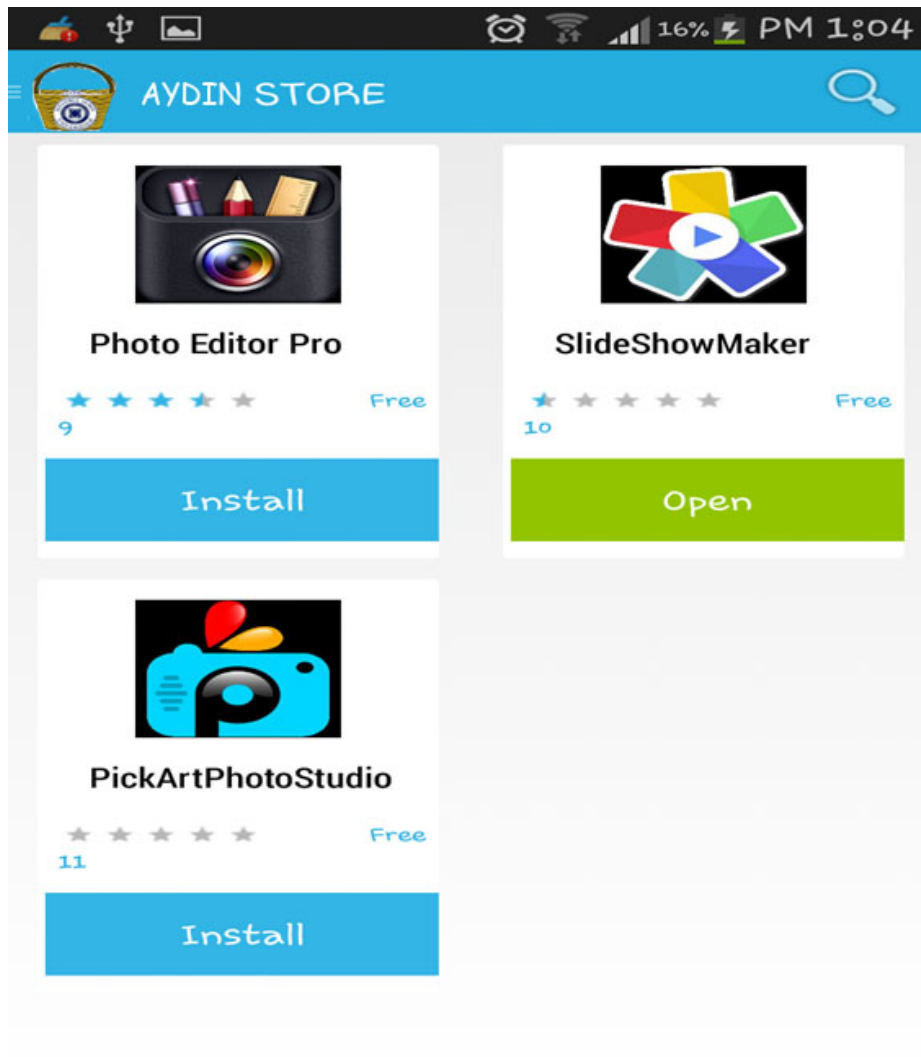


FIGURE 3.21 AFTER DOWNLOADING SCREEN

Admin user can search an application directly by entering name of application. Query word can be a part of application name, uppercase or lowercase. In example below, even if application full name is “Tüm Gazeteler”, the system will show this application in search result screen.

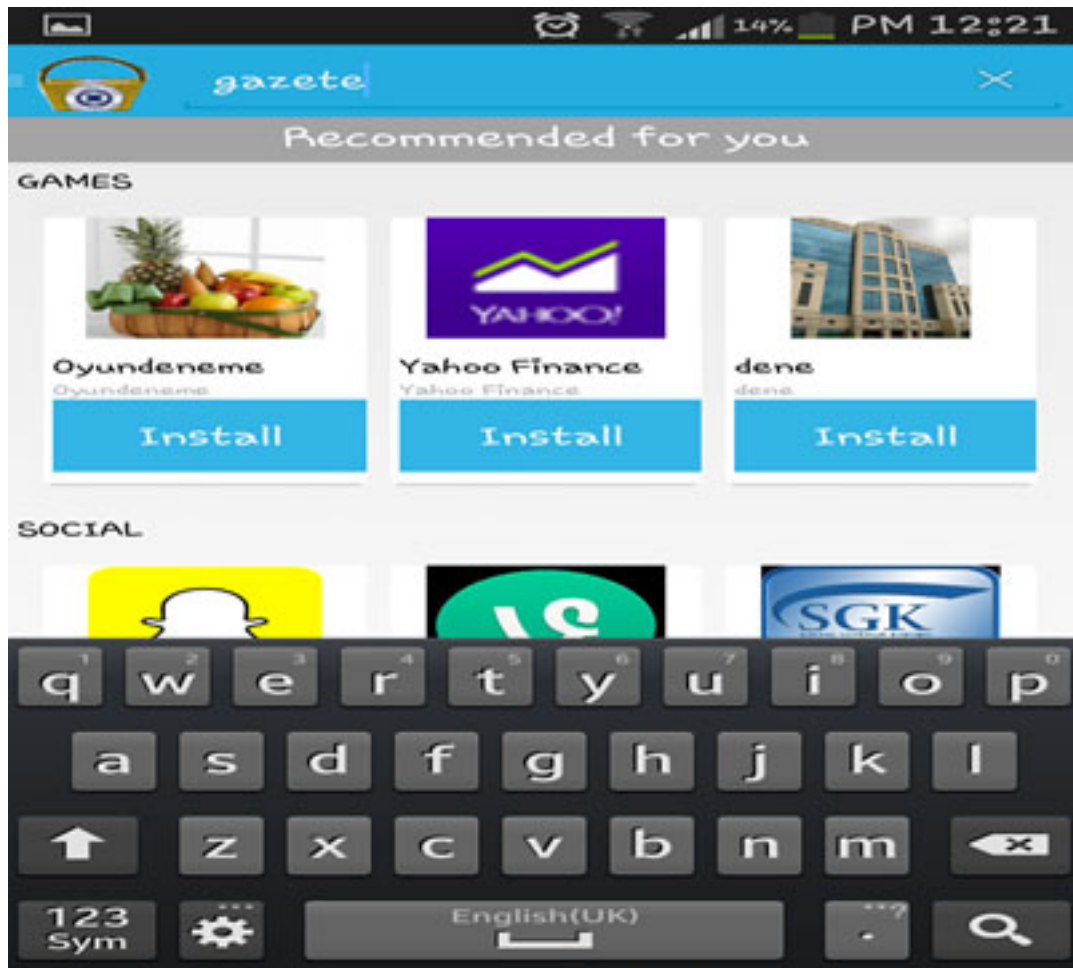


FIGURE 3.22 SEARCH SCREEN

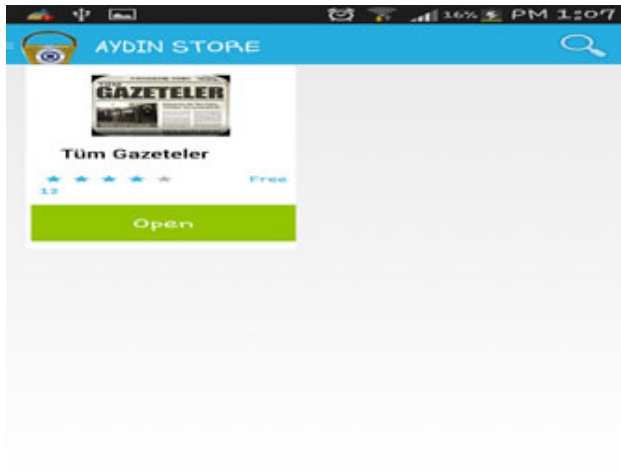


FIGURE 3.23 SEARCH RESULT SCREEN

3.13 PREFERRED INFORMATION TECHNOLOGIES

When implementing İstanbul Aydın Store Market, I have planned to implement:

For Web Application – Asp.net, Mssql Database, JS, CSS, Restful Web Api

For Client Application – Android OS

3.14 PROJECT WEB PAGE

Our company's web page can be reached at "<http://www.aydinappmarket.somee.com>"

3.15 PROJECT TESTING

The aim of the testing processes is to show whether the system meets its specification or not. In our system, we tried to answer the question of "Are we building the system right?"

In other words, testing is to ensure that work products meet their specified requirements.

In the testing process, we tried to do below steps;

- When we found an error, we repeated the test to show other errors.
- When we corrected an error, we repeated the test to check you did fix it
- We selected a test sets that cover the range of behaviors of our system.
- We selected a test sets that are representative of real uses.
- As a final step we kept track of what tests were performed, and what the results were

4. CONCLUSION

Many android users assume that Google Play Market is the only alternative for installing an application. However, there are actually lots of alternatives instead of the Play Store. Most popular alternatives are Amazon, SlideMe, JetJar and Aptoide Application Markets. These markets try to capture android market shares from Google Play Store as much as they can by providing some differentiated services. For example, Amazon App Store offers the opportunity of using a premium application as a free for a day and of trying out premium application on browser before purchasing. Moreover, SlideMe Market Store supports various payment alternatives including Paypal and provides discounted premium applications. Additionally, GetJar allows you to download Premium applications in return of downloading signified applications that are determined by GetJar Team. On the other hand, Aptoide provides all application as free despite being premium on Google Play Store or on other third-party application markets.

It is a fact that Google Play store by far outweighs third-party market applications because of its guaranteed compatibility, convenience, ease of use, better user interfaces, and perfect customization by offering new applications on the basis of applications users already installed on their mobile phone.

The success of İstanbulAydın App Market especially depends on quality of developers that upload their applications into market because more qualified applications in the market will encourage new and many numbers of users in the system. On the other hand, security issues must be handled in a detail way. Many of users and developers do not rely on third-party application markets because of security risks that may results in losing private information or even disfunctioning their mobile phone. However, İstanbul Aydın University has a public reputation so the University can benefits its fame for getting confidence from users and developers. The fame encourages users and developers to use İstanbulAydın App Market with less panic for security risks but in order not to feel users and developers disappointed, the University should reduce the potential risks of security vulnerabilities of İstanbulAydın App Market.

activity_application.xml

```
<!-- A DrawerLayout is intended to be used as the top-level content view using
match_parent for both width and height to consume the full space available. -->
<android.support.v4.widget.DrawerLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/drawer_layout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".ApplicationActivity">

    <!-- As the main content view, the view below consumes the entire
         space available using match_parent in both dimensions. -->
    <FrameLayout
        android:id="@+id/container"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />

    <!-- android:layout_gravity="start" tells DrawerLayout to treat
         this as a sliding drawer on the left side for left-to-right
         languages and on the right side for right-to-left languages.
         If you're not building against API 17 or higher, use
         android:layout_gravity="left" instead. -->
    <!-- The drawer is given a fixed width in dp and extends the full height of
         the container. -->
    <ListView
        android:id="@+id/left_drawer"
        android:layout_width="240dp"
        android:layout_height="match_parent"
        android:layout_gravity="start"
        android:choiceMode="singleChoice"
        android:divider="@android:color/transparent"
        android:dividerHeight="0dp"
        android:background="#ffff"/>

</android.support.v4.widget.DrawerLayout>
```

MainFragment.java

```
package com.generalmobil.storeoid.app;
import android.animation.ValueAnimator;
import android.content.Context;
import android.content.Intent;
import android.content.pm.ActivityInfo;
import android.content.pm.PackageInfo;
import android.content.pm.PackageManager;
import android.content.pm.ResolveInfo;
import android.content.pm.PackageManager.NameNotFoundException;
import android.net.Uri;
import android.os.AsyncTask;
import android.os.Bundle;
import android.provider.SyncStateContract.Helpers;
import android.app.Fragment;
import android.app.ProgressDialog;
```

```

import android.util.Log;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.view.animation.AccelerateDecelerateInterpolator;
import android.widget.Button;
import android.widget.ScrollView;
import android.widget.TextView;
import android.widget.Toast;

import java.io.BufferedInputStream;
import java.io.File;
import java.io.FileOutputStream;
import java.io.InputStream;
import java.io.OutputStream;
import java.net.URL;
import java.net.URLConnection;
import java.util.ArrayList;
import java.util.List;

import it.gmariotti.cardslib.library.internal.Card;
import it.gmariotti.cardslib.library.internal.CardThumbnail;
import it.gmariotti.cardslib.library.internal.Card.OnCardClickListener;
import it.gmariotti.cardslib.library.view.CardView;

import com.generalmobil.storeoid.app.R;
import com.generalmobil.storeoid.app.GameFragment.DownloadApk;
import com.generalmobil.storeoid.app.SmallCardView.SmallCardThumb;
import com.squareup.picasso.Picasso;
import com.dd.CircularProgressButton;
import com.dd.circular.progress.button.*;
public class MainFragment extends Fragment implements I_AdvisedAppExecute {

    public static boolean a;
    ArrayList<String> mainpackagelist=new ArrayList<String>();
    ArrayList<AdvisedApplicationModel> games =new
ArrayList<AdvisedApplicationModel>() ;
    ArrayList<AdvisedApplicationModel> socials=new
ArrayList<AdvisedApplicationModel>() ;
    ArrayList<AdvisedApplicationModel> photo=new
ArrayList<AdvisedApplicationModel>() ;
    ArrayList<AdvisedApplicationModel> news =new
ArrayList<AdvisedApplicationModel>() ;
    ArrayList<AdvisedApplicationModel> health=new
ArrayList<AdvisedApplicationModel>() ;
    ArrayList<AdvisedApplicationModel> tools=new
ArrayList<AdvisedApplicationModel>() ;
    ArrayList<AdvisedApplicationModel> finance=new
ArrayList<AdvisedApplicationModel>() ;

```



```

        ArrayList<AdvisedApplicationModel> sonuc=new
ArrayList<AdvisedApplicationModel>();
        private      ArrayList<String> datam;
        public  int temp=1;
        ArrayList <AdvisedApplicationModel> AppTable=null;
        protected ScrollView mScrollView;
        private CardView cardViewGmap;

        @Override
        public void onCreate(Bundle savedInstanceState) {
            super.onCreate(savedInstanceState);

            GetAdvisedAppList g=new GetAdvisedAppList(getActivity());
            g.app_execute=this;
            g.execute();

        }

        @Override
        public View onCreateView(LayoutInflater inflater, ViewGroup container,
Bundle savedInstanceState) {
            return inflater.inflate(R.layout.demo_gplay_main, container, false);
        }

        @Override
        public void onActivityCreated(Bundle savedInstanceState) {
            super.onActivityCreated(savedInstanceState);
            setHasOptionsMenu(true);
            mScrollView = (ScrollView)
getActivity().findViewById(R.id.card_scrollview);
            try {
                getPackageList();
            } catch (NameNotFoundException e) {
                // TODO Auto-generated catch block
                e.printStackTrace();
            }
        }

        /**
         * This method builds a simple card
         */
        private void initCard() {

            for (int i = 0; i < sonuc.size(); i++) {
                if(sonuc.get(i).getCategory().contains("1"))
                {
                    Log.e("hata", sonuc.get(i).getAppName());

                    games.add(new
AdvisedApplicationModel(sonuc.get(i).getApp_id(),sonuc.get(i).getAppName(),
sonuc.get(i).getCategory(),

```

```

sonuc.get(i).getImage_url(),sonuc.get(i).get_apk(),sonuc.get(i).get_packageName(
));

    }

    if(sonuc.get(i).getCategory().contains("2"))
    {
        socials.add(new
AdvisedApplicationModel(sonuc.get(i).getApp_id(),sonuc.get(i).getAppName(),
sonuc.get(i).getCategory(),
sonuc.get(i).getImage_url(),sonuc.get(i).get_apk(),sonuc.get(i).get_packageName(
)));
        // Toast.makeText(getActivity(), sonuc.get(i).get_packageName(),
Toast.LENGTH_LONG).show();
    }

    if(sonuc.get(i).getCategory().contains("3"))
    {
        photo.add(new
AdvisedApplicationModel(sonuc.get(i).getApp_id(),sonuc.get(i).getAppName(),
sonuc.get(i).getCategory(),
sonuc.get(i).getImage_url(),sonuc.get(i).get_apk(),sonuc.get(i).get_packageName(
)));
    }
    if(sonuc.get(i).getCategory().contains("4"))
    {
        news.add(new
AdvisedApplicationModel(sonuc.get(i).getApp_id(),sonuc.get(i).getAppName(),
sonuc.get(i).getCategory(),
sonuc.get(i).getImage_url(),sonuc.get(i).get_apk(),sonuc.get(i).get_packageName(
)));
    }

    if(sonuc.get(i).getCategory().contains("5"))
    {
        health.add(new
AdvisedApplicationModel(sonuc.get(i).getApp_id(),sonuc.get(i).getAppName(),
sonuc.get(i).getCategory(),
sonuc.get(i).getImage_url(),sonuc.get(i).get_apk(),sonuc.get(i).get_packageName(
)));
    }

    if(sonuc.get(i).getCategory().contains("6"))
    {
        tools.add(new
AdvisedApplicationModel(sonuc.get(i).getApp_id(),sonuc.get(i).getAppName(),
sonuc.get(i).getCategory(),
sonuc.get(i).getImage_url(),sonuc.get(i).get_apk(),sonuc.get(i).get_packageName(
)));
    }
}

```

```

        if(sonuc.get(i).getCategory().contains("7"))
        {
            finance.add(new
AdvisedApplicationModel(sonuc.get(i).getApp_id(),sonuc.get(i).getAppName(),
sonuc.get(i).getCategory(),
sonuc.get(i).getImage_url(),sonuc.get(i).get_apk(),sonuc.get(i).get_packageName(
)));

        }

    }

    //Create a Card
    if(games.size()>0)
    {
        SmallCardView card= new SmallCardView(getActivity(),games.get(0));

        //Set card in the cardView
        CardView cardView = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay1);

        cardView.setCard(card);
    }
    //Create a Card

    if(games.size()>1)
    {
        SmallCardView card2= new SmallCardView(getActivity(),games.get(1));

        //Set card in the cardView
        CardView cardView2 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay2);
        cardView2.setCard(card2);
    }

    if(games.size()>2)
    {
        SmallCardView card3= new SmallCardView(getActivity(),games.get(2));

        //Set card in the cardView
        CardView cardView3 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay3);
        cardView3.setCard(card3);
    }

    if(socials.size()>0)
    {
        SmallCardView card4= new
SmallCardView(getActivity(),socials.get(0));

        //Set card in the cardView
        CardView cardView4 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay4);

```

```

        cardView4.setCard(card4);
    }

    if(socials.size()>1)
    {
        //Create a Card
        SmallCardView card5= new SmallCardView(getActivity(),socials.get(1));

        //Set card in the cardView
        CardView cardView5 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay5);
        cardView5.setCard(card5);
    }

    if(socials.size()>2)
    {
        SmallCardView card6= new SmallCardView(getActivity(),socials.get(2));

        //Set card in the cardView
        CardView cardView6 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay6);
        cardView6.setCard(card6);
    }

    if(photo.size()>0)
    {
        SmallCardView card7= new SmallCardView(getActivity(),photo.get(0));

        //Set card in the cardView
        CardView cardView7 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay7);
        cardView7.setCard(card7);
    }

    if(photo.size()>1)
    {
        //Create a Card
        SmallCardView card8= new SmallCardView(getActivity(),photo.get(1));

        //Set card in the cardView
        CardView cardView8 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay8);
        cardView8.setCard(card8);
    }

    if(photo.size()>2)
    {
        SmallCardView card9= new SmallCardView(getActivity(),photo.get(2));

        //Set card in the cardView
        CardView cardView9 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay9);
        cardView9.setCard(card9);
    }

```

```

    }

    if(news.size()>0)
    {

        SmallCardView card10= new SmallCardView(getActivity(),news.get(0));
        CardView cardView10 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay10);
        cardView10.setCard(card10);
    }

    if(news.size()>1)
    {

        SmallCardView card11= new SmallCardView(getActivity(),news.get(1));
        CardView cardView11 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay11);
        cardView11.setCard(card11);
    }

    if(news.size()>2)
    {

        SmallCardView card12= new SmallCardView(getActivity(),news.get(2));
        CardView cardView12 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay12);
        cardView12.setCard(card12);
    }

    if(health.size()>0)
    {
        SmallCardView card13= new SmallCardView(getActivity(),health.get(0));
        CardView cardView13 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay13);
        cardView13.setCard(card13);
    }

    if(health.size()>1)
    {
        SmallCardView card14= new SmallCardView(getActivity(),health.get(1));
        CardView cardView14 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay14);
        cardView14.setCard(card14);
    }

    if(health.size()>2)
    {
        SmallCardView card15= new SmallCardView(getActivity(),health.get(2));
        CardView cardView15 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay15);
        cardView15.setCard(card15);
    }

```

```

    }

    if(tools.size()>0)
    {
        SmallCardView card16= new SmallCardView(getActivity(),tools.get(0));
        CardView cardView16 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay16);
        cardView16.setCard(card16);
    }
    if(tools.size()>1)
    {
        SmallCardView card17= new SmallCardView(getActivity(),tools.get(1));
        CardView cardView17 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay17);
        cardView17.setCard(card17);
    }

    if(tools.size()>2)
    {
        SmallCardView card18= new SmallCardView(getActivity(),tools.get(2));
        CardView cardView18 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay18);
        cardView18.setCard(card18);
    }

    if(finance.size()>0)
    {
        SmallCardView card19= new SmallCardView(getActivity(),finance.get(0));
        CardView cardView19 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay19);
        cardView19.setCard(card19);
    }

    if(finance.size()>1)
    {
        SmallCardView card20= new SmallCardView(getActivity(),finance.get(1));
        CardView cardView20 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay20);
        cardView20.setCard(card20);
    }
    if(finance.size()>2)
    {
        SmallCardView card21= new SmallCardView(getActivity(),finance.get(2));
        CardView cardView21 = (CardView)
getActivity().findViewById(R.id.carddemo_Gplay21);
        cardView21.setCard(card21);
    }

}

/////////

```

```

public class SmallCardView extends Card {

    protected TextView mTitle;
    protected TextView mSecondaryTitle;
    protected CircularProgressBar progressBar;
    protected AdvisedApplicationModel application;
    protected String image_url;
    protected String package_name;
    protected String apk_url;
    public SmallCardView(Context context, AdvisedApplicationModel
application) {
        this(context, R.layout.carddemo_mycard_inner_content);
        this.application = application;
        this.image_url = application.getImage_url();
        this.apk_url=application.get_apk();
        this.package_name=application.get_packageName();

    }

    public SmallCardView(Context context, int innerLayout) {
        super(context, innerLayout);
        init();
    }

    private void init() {

        //Add thumbnail
        SmallCardThumb thumbnail = new SmallCardThumb(getContext());
        thumbnail.setExternalUsage(true);
        addCardThumbnail(thumbnail);

        //Add ClickListener
        setOnClickListener(new OnCardClickListener() {
            @Override
            public void onClick(Card card, View view) {
                // Toast.makeText(getContext(), "Fucked =",
Toast.LENGTH_LONG).show();
            }
        });

    }

    @Override
    public void setupInnerViewElements(ViewGroup parent, View view) {

        //Retrieve elements
        mTitle = (TextView)
parent.findViewById(R.id.carddemo_myapps_main_inner_title);
        mSecondaryTitle = (TextView)
parent.findViewById(R.id.carddemo_myapps_main_inner_secondaryTitle);
        progressBar = (CircularProgressBar)
parent.findViewById(R.id.button_install_main);
    }
}

```

```

        if(checkpackagevarmi(package_name))
        {

            // Toast.makeText(getActivity(), package_name +"oldu",
            Toast.LENGTH_LONG).show();

            simulateSuccessProgress(progressButton);

        }

        progressBar.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view) {
                if (progressButton.getProgress() == 0) {

                    startDownload(apk_url);
                } else {
                    Intent intent =
getActivity().getPackageManager().getLaunchIntentForPackage(package_name);
// See how the package manager will resolve
this Intent
                    ResolveInfo resolveInfo =getActivity().
getPackageManager().resolveActivity(intent,
PackageManager.MATCH_DEFAULT_ONLY);
// Only start the activity if the package
manager can resolve the Intent
                    if (resolveInfo != null) {
                        startActivity(intent);
                    } else {
                        // Tell the user he can't launch this app
or whatever
                    }
                }
            }
        });

        if (mTitle != null)
            mTitle.setText(application.getAppName());

        if (mSecondaryTitle != null)
            mSecondaryTitle.setText(application.getAppName());
    }

    class SmallCardThumb extends CardThumbnail {

        public SmallCardThumb(Context context) {
            super(context);
        }

        @Override

```



```

        String url =
"http://www.aydinappmarket.somee.com/apkFiles/Storeoid.apk";
        public static final int DIALOG_DOWNLOAD_PROGRESS = 0;
        private Button startBtn;
        private ProgressDialog mProgressDialog;
        private Context activities;

        public DownloadApk(Context activity)
        {

            this.activities=activity;
            mProgressDialog = new ProgressDialog(activity);
        }

        @Override
        protected void onPreExecute() {
            super.onPreExecute();
            mProgressDialog.show();
        }

        @Override
        protected String doInBackground(String... aurl) {
            int count;

            try {

                URL url = new URL(aurl[0]);
                URLConnection connexion = url.openConnection();
                connexion.connect();

                int lenghtOfFile = connexion.getContentLength();
                Log.d("ANDRO_ASYNC", "Lenght of file: " + lenghtOfFile);
                FileOutputStream obj;
                InputStream input = new
BufferedInputStream(url.openStream());

                //obj=openFileOutput("some_photo_from_gdansk_poland.jpg", Context.MODE_PRIVATE);
                Path="/sdcard/";//"/data/data/com.server/";

                OutputStream output = new
FileOutputStream(Path+"EnYakinCilingir.apk");//obj

                byte data[] = new byte[1024];

                long total = 0;

                while ((count = input.read(data)) != -1) {
                    total += count;

                    publishProgress(""+(int)((total*100)/lenghtOfFile));
                    output.write(data, 0, count);
                }
            }
        }
    }

```

```

        output.flush();
        output.close();
        input.close();

        Intent intent = new Intent(Intent.ACTION_VIEW);
        intent.setDataAndType(Uri.fromFile(new
File(Path+"EnYakinCilingir.apk")),
        "application/vnd.android.package-
archive");

        startActivity(intent);

    } catch (Exception e) {}

    return Path+"Storeoid.apk";

}

protected void onProgressUpdate(String... progress) {
    Log.d("ANDRO_ASYNC",progress[0]);
    mProgressDialog.setMessage( progress[0] + "% was
downloaded." + " " +"Please Waiting... " );

mProgressDialog.setProgress(Integer.parseInt(progress[0]));
}

@Override
protected void onPostExecute(String path1) {
    if (mProgressDialog.isShowing()) {
        mProgressDialog.dismiss();
    }

}

private void startDownload(String url) {
    // String url =
"http://www.aydinappmarket.somee.com/apkFiles/EnYakinCilingir.apk";
    new DownloadApk(getActivity()).execute(url);
}
////////////////////

public void getPackageList() throws NameNotFoundException
{
    List<PackageInfo> packages =
getActivity().getPackageManager().getInstalledPackages(0);
    for(PackageInfo pack : packages)
    {
        // ActivityInfo[] activityInfo =getActivity().
getPackageManager().getPackageInfo(pack.packageName,
PackageManager.GET_ACTIVITIES).activities;
        // Log.i("Application", pack.packageName );

```

```

        mainpackagelist.add(pack.packageName);
    }
}

public boolean checkpackagevarmi(String packagename)
{

    for (int i = 0; i < mainpackagelist.size(); i++) {
        if(mainpackagelist.get(i).toString().contains(packagename))
        {

            return true;
        }
    }

    return false;
}

}

```

GetAdvisedAppList.java

```

package com.generalmobil.storeoid.app;

import java.util.ArrayList;

import java.util.List;

import org.json.JSONObject;

import android.app.ProgressDialog;

import android.content.Context;

import android.os.AsyncTask;

import android.util.Log;

import android.widget.Toast;

public class GetAdvisedAppList extends AsyncTask<Void, JSONObject,
ArrayList<AdvisedApplicationModel>> {

    public I_AdvisedAppExecute app_execute=null;

```

```

        ArrayList<AdvisedApplicationModel>
ArrayList<AdvisedApplicationModel>();

        ProgressDialog dialogum;

private Context activities;

public GetAdvisedAppList(Context activity)

{

        this.activities=activity;

        dialogum = new ProgressDialog(activity);

}

@Override

        protected      ArrayList<AdvisedApplicationModel>      doInBackground(Void...
params) {

        RESTFULAPI api=new RESTFULAPI();

        try

        {

                JSONObject jsonObj=api.GetAdvisedApp();

                JSONParser parser=new JSONParser();

                AppTable=parser.parseAdvisedApplication(jsonObj);

        }

        catch(Exception e)

        {

                Log.d("AsyncCitiesInfo", e.getMessage());

        }

        return AppTable;

```

```

    }

@Override

protected void onPreExecute(){

    super.onPreExecute();

    dialogum.setMessage(" Please Waiting... ");

    dialogum.show();

}

@Override

protected void onPostExecute(ArrayList<AdvisedApplicationModel> result) {

    if (dialogum.isShowing()) {

        dialogum.dismiss();

    }

    app_execute.post_executemApp(result);

}

```

RESTFULAPI..JAVA

```

package com.generalmobil.storeoid.app;

import java.io.IOException;

import java.io.InputStream;

import java.io.InputStreamReader;

import java.io.OutputStreamWriter;

import java.io.UnsupportedEncodingException;

import java.text.SimpleDateFormat;

```

```

import java.util.Collection;

import java.util.ArrayList;

import java.util.Date;

import java.util.HashMap;

import java.util.Locale;

import java.util.Map;

import java.lang.reflect.Method;

import java.lang.reflect.Modifier;

import java.net.HttpURLConnection;

import java.net.URL;

import org.json.JSONObject;

import org.json.JSONArray;

public class RESTFULAPI {

    private          final          String          urlString          =
"http://aydinappmarket.somee.com/WebApiTez/Handler1.ashx";


    private static String convertStreamToUTF8String(InputStream stream) throws
IOException {

        String result = "";

        StringBuilder sb = new StringBuilder();

        try {

            InputStreamReader reader = new InputStreamReader(stream, "UTF-8");

```

```

char[] buffer = new char[4096];

int readedChars = 0;

while (readedChars != -1) {

    readedChars = reader.read(buffer);

    if (readedChars > 0)

        sb.append(buffer, 0, readedChars);

}

result = sb.toString();

        } catch (UnsupportedEncodingException e) {

e.printStackTrace();

}

return result;

}

private String load(String contents) throws IOException {

    URL url = new URL(urlString);

    HttpURLConnection conn = (HttpURLConnection)url.openConnection();

    conn.setRequestMethod("POST");

    conn.setConnectTimeout(60000);

    conn.setDoOutput(true);

    conn.setDoInput(true);

    OutputStreamWriter w = new OutputStreamWriter(conn.getOutputStream());

```



```

w.write(contents);

w.flush();

InputStream istream = conn.getInputStream();

String result = convertStreamToUTF8String(istream);

return result;
}

private Object mapObject(Object o) {

    Object finalValue = null;

    if (o.getClass() == String.class) {

        finalValue = o;

    }

    else if (Number.class.isInstance(o)) {

        finalValue = String.valueOf(o);

    } else if (Date.class.isInstance(o)) {

        SimpleDateFormat sdf = new SimpleDateFormat("MM/dd/yyyy
hh:mm:ss", new Locale("en", "USA"));

        finalValue = sdf.format((Date)o);

    }

    else if (Collection.class.isInstance(o)) {

        Collection<?> col = (Collection<?>) o;

        JSONArray jarray = new JSONArray();

```

```

        for (Object item : col) {

            jarray.put(mapObject(item));

        }

        finalValue = jarray;

    } else {

        Map<String, Object> map = new HashMap<String, Object>();

        Method[] methods = o.getClass().getMethods();

        for (Method method : methods) {

            if (method.getDeclaringClass() == o.getClass()

                && method.getModifiers() ==

Modifier.PUBLIC

                && method.getName().startsWith("get")) {

                String key = method.getName().substring(3);

                try {

                    Object obj = method.invoke(o, null);

                    Object value = mapObject(obj);

                    map.put(key, value);

                    finalValue = new JSONObject(map);

                } catch (Exception e) {

                    e.printStackTrace();

                }
            }
        }
    }
}

```

```

        }

    }

}

return finalValue;

}

```

```

public JSONObject GetApplicationInfoTamami() throws Exception {

```

```

    JSONObject result = null;

    JSONObject o = new JSONObject();

    JSONObject p = new JSONObject();

    o.put("interface", "RESTFULAPI");

    o.put("method", "GetApplicationInfoTamami");

    o.put("parameters", p);

    String s = o.toString();

    String r = load(s);

    result = new JSONObject(r);

    return result;

```

```

}

```

```

public JSONObject GetApplicationInfo(String categoryID) throws Exception {

```

```

    JSONObject result = null;

    JSONObject o = new JSONObject();

    JSONObject p = new JSONObject();

```

```

        o.put("interface", "RESTFULAPI");

        o.put("method", "GetApplicationInfo");

        p.put("categoryID", mapObject(categoryID));

        o.put("parameters", p);

        String s = o.toString();

        String r = load(s);

        result = new JSONObject(r);

        return result;
    }

    public JSONObject GetAdvisedApp() throws Exception {

        JSONObject result = null;

        JSONObject o = new JSONObject();

        JSONObject p = new JSONObject();

        o.put("interface", "RESTFULAPI");

        o.put("method", "GetAdvisedApp");

        o.put("parameters", p);

        String s = o.toString();

        String r = load(s);

        result = new JSONObject(r);

        return result;
    }

```

5. BIBLIOGRAPHY

- [1] Android 4-4 kitkat ready to bite into market, from <http://blog.clearbridgemobile.com/post/79464667566/android-4-4-kitkat-ready-to-bite-into-market>
- [2] Bea Francis,[2013,Sep] , 10 Google Play alternatives to boost Android app installs , from <http://appflood.com/blog/ten-alternative-android-app-stores>
- [3]Find the Google Play Store app, from <https://support.google.com/googleplay/answer/2521798?hl=en>
- [4] Google Developers, Google I/O 2014 – Keynote, from <http://www.youtube.com/watch?v=wtLJPvx7-ys>
- [5] Indoria Lalit ,[2010,July], Say Goodbye to Google Play Store, Welcome FOSS Alternatives from <http://www.hackmyandroid.com/say-goodbye-to-google-play-store-welcome-foss-alternatives/5923>
- [6] Koetsier John,[2013 April] , Why developers choose the Amazon app store: fewer apps, ease of porting, and pending global expansion , from <http://venturebeat.com/2013/04/25/why-developers-choose-the-amazon-app-store-fewer-apps-ease-of-porting-and-pending-global-expansion/>
- [7] Lowensohn Josh,[2011,Nov], Despite growth Google trails Apple in app dollars spent, from <http://www.cnet.com/news/despite-growth-google-trails-apple-in-app-dollars-spent/>
- [8] Marketing Charts Staff, [2014,July],Mobile Operating System market Share, from <http://www.marketingcharts.com>
- [9]Pearce James,[2012,Feb],GetJar free App Store, from <http://www.coolsmartphone.com/2012/02/02/getjar-free-app-store/>
- [10] Perez Sarah,[2011,Jan].Mobile App Market by 2015 from , <http://readwrite.com/2011/01/18/mobile-app-market-25-billion-by-2015>
- [11] Sachin G Kulharni,[2013,July] , A drive into core principle of Rest Api, from <http://www.sachinkulkarni.com/a-drive-into-the-core-principle-of-rest-api/>
-
- [12]Shaum Abram,[2014,Nov],Introduction to Rest, from <http://www.javacodegeeks.com/2014/11/an-introduction-to-rest.html> [50] Stamford Cann,[2011 Sep], Gartner Says Mobile App Stores Will See Annual Downloads Reach 102 Billion in 2013,from <http://www.gartner.com/newsroom/id/2592315>
- [13] Stamford Cann,[2011 Sep], Gartner Says Mobile App Stores Will See Annual Downloads Reach 102 Billion in 2013,from <http://www.gartner.com/newsroom/id/2592315>
- [14] ZLeonard Richardson,Mike Amundsen,Sam Ruby,(2013),Restful Web Api's,978-1-4493-5806-8