İstanbul
Bilgi Üniversitesi
LAUREATE INTERNATIONAL UNIVERSITIES

CMPE 492

uClub (Web Application for Students Clubs in Universities)

By

Raşit Deniz Cansever (CE)

Supervised

By

Dr. Murat Orhun

Faculty of Engineering and Natural Sciences

Istanbul Bilgi University

December 2019

ABSTRACT

In this project, there is a android application and there will be website (or web panel). Android application designed for students and clubs in the beginning. In the Database Web Site section, administrators can control system and to view via firebase panel. The web application was designed for android apps After the project is finished, I aim to design for iOS users. The purpose of this project is to allow student clubs to make themselves known, plan activities and display their event schedules. Also, clubs will be able to share visual material from their previous activities, and a web platform will be created for all students to gather insight about clubs and their activities. I wanted to develop a User Interface system that is more efficient and more integrated. This project is designed available to use in many university campuses. As a demo I used our university as a point of use. The methods of use in our university, three real Club's owner makes their special pages. The visitors of the school to see what clubs in university have page in active on app, what events they made and information about next events as time, space and explaining. Teachers makes event schedule too in the future work. Users can make their profiles as info, photo, major and contact information. They can see the popular clubs and coming event on the main page. They can search for the specific clubs. An application developed for Bilgi University would be mobile friendly and thus iOS and Android users will have the chance to use it.

LIST OF FIGURES

TABLE OF CONTENTS

1. INTRODUCTION

There are many social media applications and web sites for events. The problem is there is not such a network between clubs in universities and students. Even there are web site for limited Universities for their clubs to show their information, events. Together with growing youth, after they go to university, they are not allowed to check the clubs properly. Clubs makes events, even they announce on campus, social medias, they can't clearly contact to student. This is because area and number of students are huge. Universities are hosted by many seminars too therefore I want to inform to user of my app about these seminars, not only from clubs. Students who just come to school, would not know about system of announcement, clubs and their social medias. After my web application promoted by university, these students just download the app and check for the events, clubs with a detail information. The application is not only for the students of same university. For example, person who comes from other university to Bilgi University, can download my application then check for events for that week as events and seminars. Many foreign guests come to the university too. I will make English option to uClub application for these guests. Instead of searching the event and the class of the seminar, going through a direct page or event list on the application will make easier and fast. My aim is to use potential in our campus lives more effectively and use that to making more social campus as a living one. Differences from today's web sites for university clubs is user friendly and collecting all clubs in the one app. I also aim for a more comfortable and free campus life by using android application.

Mobile phones have become an indispensable part of today. Almost every person goes out on the street, even in his home, he keeps his phone with him. For this reason, using web site only is not good opportunity for mobile phones users. That web application has huge impact for that sociability.

According to another example, there are nearly 130 clubs in Bilgi University. Bilgi eSports Club is one of these clubs. eSports Club makes 10 events in 1 Year period. That club gets members around the 150-200. The average number of members who participate in events is around the 15-20. Even eSports club announce on social medias which is followed by 1.000 users, hangs posters on 3 campuses. After one specific event, members who didn't attend the event, give feedback about unheard event in terms of them. This is the main reason to focus

on this project. The features are limitless for this project. There would be system for the clubs in the all universities in one app as uClub.

2. RESEARCH

I search for similar projects in my research and examined, used and analyzed the technologies I use, I made costumer and user research, I made market research to my project gives better results and become the most and our research process to minimize problems. In the process of research, I have used websites as the most resource. In this process I spent the most of my time in this semester.

2.1 Similar Projects

Firstly, similar projects as a result of our researches all the general web sites for the clubs in specific universities. I have not found any application for that. Most projects as a website have main pages for clubs. User who want to see all clubs which are in their universities, goes to that web sites. Some universities have supported pages for every clubs when user click on the club name on that main page. There is not mobile application or web application for that network. Some similar projects as web sites are below;

Bogaziçi University has effective system on their main web pages for student clubs. On the main page for clubs, there is a list to show all active student clubs with their names, contact info as an e-mail and phone number and office location if there any. When the user clicks on the student clubs' name, the new page is opened. In the page, there is a special web pages for every clubs. In these pages, user can find any information about the club, check the events which is done and photo and video galleries. There is a part as "contact us". In that part, user can send message to club.

Yeditepe University has main web page for student clubs. In that page, firstly there is a photo slide for events of university and clubs. Then membership conditions. In that part, there are rules to be member of clubs. Explanation for the time which member is kicked. There is a list for active student clubs in Yeditepe University. When the user clicks on the student clubs' name, the new page is opened. In the page, there is a special web pages for every clubs. The page is not huge. There is limited information about clubs as name of president, advisor, purpose of club in one sentence, social medias of club and a small photo gallery.

Işık University has main web pages for student clubs. On the main page for clubs, there is a list to show all active student clubs in Işık University. When the user clicked on the club, description below of the club and e-mail of club. Description is about purpose of club.

Kadirhas University has main web pages for student clubs. On the main page for clubs, there is a list to show all limited active student clubs in Kadirhas University. When the user clicks on the student clubs' name, the new page is opened. In the page, there is a special web pages for every clubs. There is a description for all clubs and social medias info.

2.2 Technology Research

Technology research is very important part of my research. In this part I research that what technology I need to use, what technology is most integrated for web application and why I should use. I have analyzed our research into six sub-titles that are web application technology, web services technology, backend API technology, database technologies, beacon technology, indoor map technologies.

2.2.1 Mobile Application Technology

The phones have become an indispensable part of people. People are annoyed when they are no longer with their phones so, I decided to write application for mobile phones.

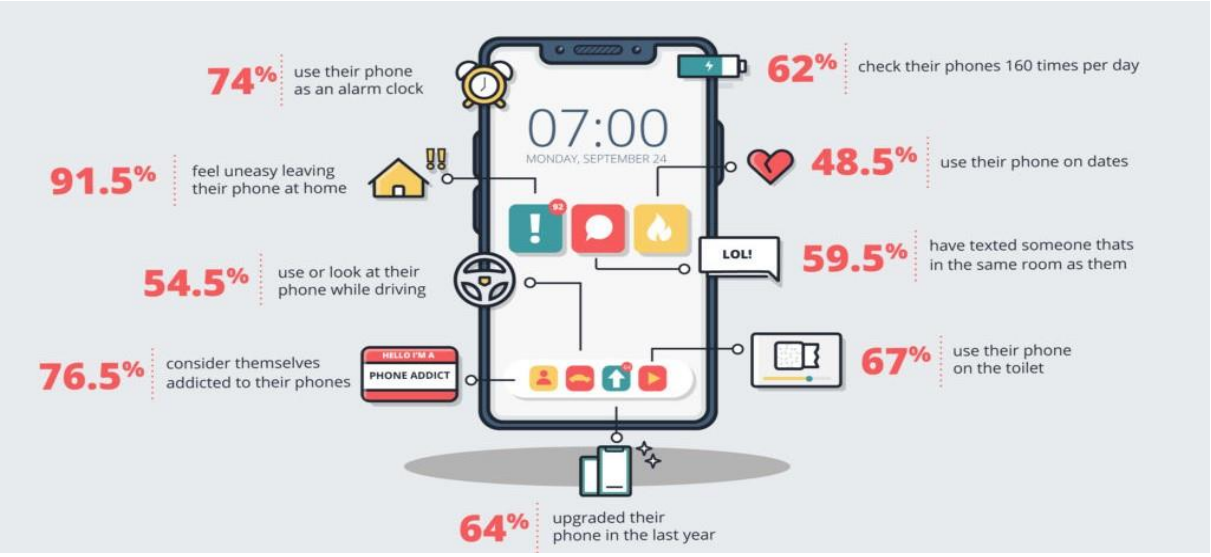

Figure 1 mobile phone's information rates

Mobile phones as shown in the following figure are high rate to use android phone or iOS phone. Most used phone and most matching phone of our project is Android phones so, we decided to use it for our project.

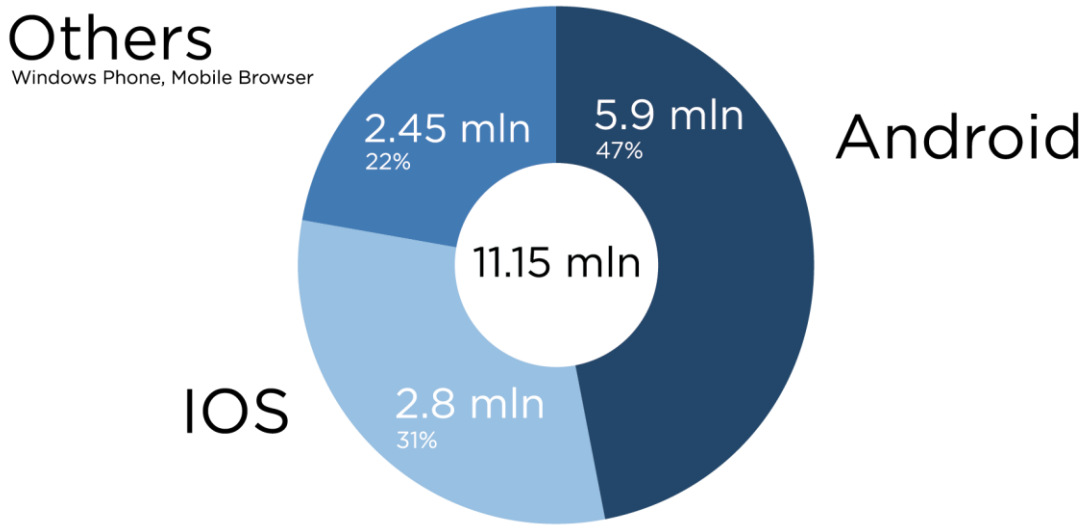

Figure 2 mobile phones' usage rate

As a result, I write and develop code in android studio for mobile phone parts. The reason I used it that most integrated platform and open source platform. I can develop backend part and forentend part in it. I am planning to develop into iOS phones after my project is finished.

2.2.2 Web Services Technology

I plan to control our project through the web panel. A lot of programming language in the web part. I use Html5, Css3 and JavaScript for web panel part and frontend. I write a web panel for control the all system that admin is add class or delete, change clubs' presidents and members who are allowed to change or add pictures, info. In the end of the semester admin determines which clubs inactive, determine to which clubs be in which state. In shortly, all actions will be over web panel, so it is very important part for ours project and extra control mechanism for the system.

2.2.3 Backend Technologies

In order to make my applications and panels for working efficient and sustainable, I am going to build my own backend to serve our end-user devices. Backend systems work a service for requests. In backend side I will handle requests which are send and then return something meaningful according to that requests. My database will do jobs like calculations, verification, data checking, simply the things that the user does not need to know or see. While doing that my database should be fast and sustainable to handle and respond back to requirements. Before that there I had to choose which language, I should use. In order to create our backend, I discussed and chose .net as our backend language. It is because this is the best for me to develop and code. Also, .net has the one of the most improved infrastructure and development tools for developing. Besides apart from platform independence, the main advantage of server-side .net development is the wide selection of standardized frameworks.

On my mobile side, firstly application sends the data entered by user to verify that the user is valid in database. The backend then checks the data from database and returns appropriate answer to mobile app back. This means that mobile app continues according to responds from server. This makes the app faster because heavy operations are being handled in backend side. So basically, every heavy processes or processes that needs to access database will be handled in backend. This part includes creating pages for club and also adding new parts as events, info. Mobile app will send the data that contains given information, user information and other adding the system that info. Backend will respond the changing parts by checking database to know which users are in that position and his access position. For testing purposes of my requests and backend side I am using Postman desktop application.

2.2.4 Database Technologies

Just like every store has a warehouse database is data storage for every software project. Database is the main part that stores all the data to be used. So that this part is the primal section of my project I must store all the user, club and teacher. Before getting started to coding the first thing must be choosing which database should be used since once the project started working it is difficult to change the database because moving all data entered into another database, readjusting all the settings and making changes in backend code is a troublesome work for developer.

My database decision was based on what I need, what I may need in future and how that database is good and easy for us to implement. Since I want my database to be high performance, high scalability, flexible and easy integration I use Firebase as my database. Firebase is a NoSQL database which will bring me the benefits of being able to handle the changes over the time, elastic scalability, quick iteration and frequent code pushes, multiple data structures, large volumes of structured and unstructured data. Also, Firebase has advantages like;

- Document oriented, high availability
- field addition/deletion have less or no impact on the application
- Finding relevant data from specific locations is fast and accurate
- Maintaining location-based data — Geospatial data

2.3 Costumer Research

The customer and user profile are important in planning the front-end of mobile application web panel and usage of the program. Another reason, the costumer community in our project is very important to me because my project is for network between clubs, students and teachers and to make the lives of users better. Every person who uses smart mobile phone is a customer for me. All people may need app for clubs anywhere. There are 3 main areas of my project that are shopping malls, cafes and the university campuses. Every people being in these areas is a potential customer so, my customer range is very wide. My application area is on the university campus so, my potential customers are students, teachers, university employees, visitors. My program shown the active student club, their events, contact info and teacher, university events as place, time, in detail. Clubs' presidents and members who have access to sending things, can send notify before they started events. Visitors may not very familiar school because they maybe come for the first time ore more than one but not much so, I am planning to navigation system for app. Even navigation system would be hard, I want to add campus map, so clubs' employees can mark the place on the campus map. I will make a separate front end for each student, so that I will have an easier and more convenient interface.

2.4 Marketing research

Suitable areas of my project generally are cafes and campuses. Many similar web site projects like my project are used for their campuses. I will use in university campus, my project is very suitable for this and there is not such a similar university campus project like my project across in Turkey therefore only I will be in the Turkey clubs network which I will make. Very few universities have web sites for their clubs. In fact, I will have big marketing places in the European continent. Android smart phone is very common in Europe so, I can reach people easily because I will do my project in Android studio.

2.4.1 Project Budget

Project budget calculation is one of the most important parts for a project making process. I don't have that much budget. My project need advertisement to announce itself. I will buy hosting serves and domain name to make my backend and web panel’s services working.

	TOTAL
Advertisement	30$
Services	8$
TOTAL	38 $

In this field, to minimalize the cost is very important, so I try to create this project with the minimum cost as possible as I can do. For that reason, I trend to open source applications, servers and developer tools. It provided to us to decrease our cost almost %60 percent.

Requirements directly affect to project budget, as a first step I align our requirements and searched how I can make my project better and with the minimal cost. On this process, I determine our requirements and sort them with their priorities. In that case, we discover we need;

-A PS program which I can draw drafts for UI part them as I can design (has to be)

-A development environment which I can make an android application and test them easily. (has to be)

-A communication application like a cloud I can share a large amount of file and discuss the process on it. (nice to have)

-A platform which I can write our HTML, CSS and JavaScript codes and test them quickly. (must be)

-Domain for our Website (nice to have)

-Database service for any case (nice to have)

As a result, I find some application as a free I can use and arrange my cost.

3.REQUIREMENTS & METHODOLOGY

To create/make something whichever field, I need requirements and methodology. As an easy example, to make a cake, you need a recipe, ingredients and tools to cook. In similar way, to solve problems which I discover; I will need a recipe which is a schedule I can split myself my jobs and follow the progress and some tools to build my system.

3.1. Helper Tools/Application

3.1.1. Trello

Application I used is Trello to make my schedule and split my project and manage my program and progress. Trello helped to me arrange my schedule and split it week by week, by this way it provided to see progress of my project.

3.1.2. Android Studio

To develop the system and transform my system to proper working application I was need an environment which is free and have a huge library we can use and test our codes easily. So, I choose as a develop platform Android Studio and for tasting process and try it with emulator we worked with Genymotion.

3.1.3. Codepen.io

Codepen is a social development environment for front-end designers and developers. There is three separate panel, you can work on CSS, HTML and JavaScript and test your code and animate it.

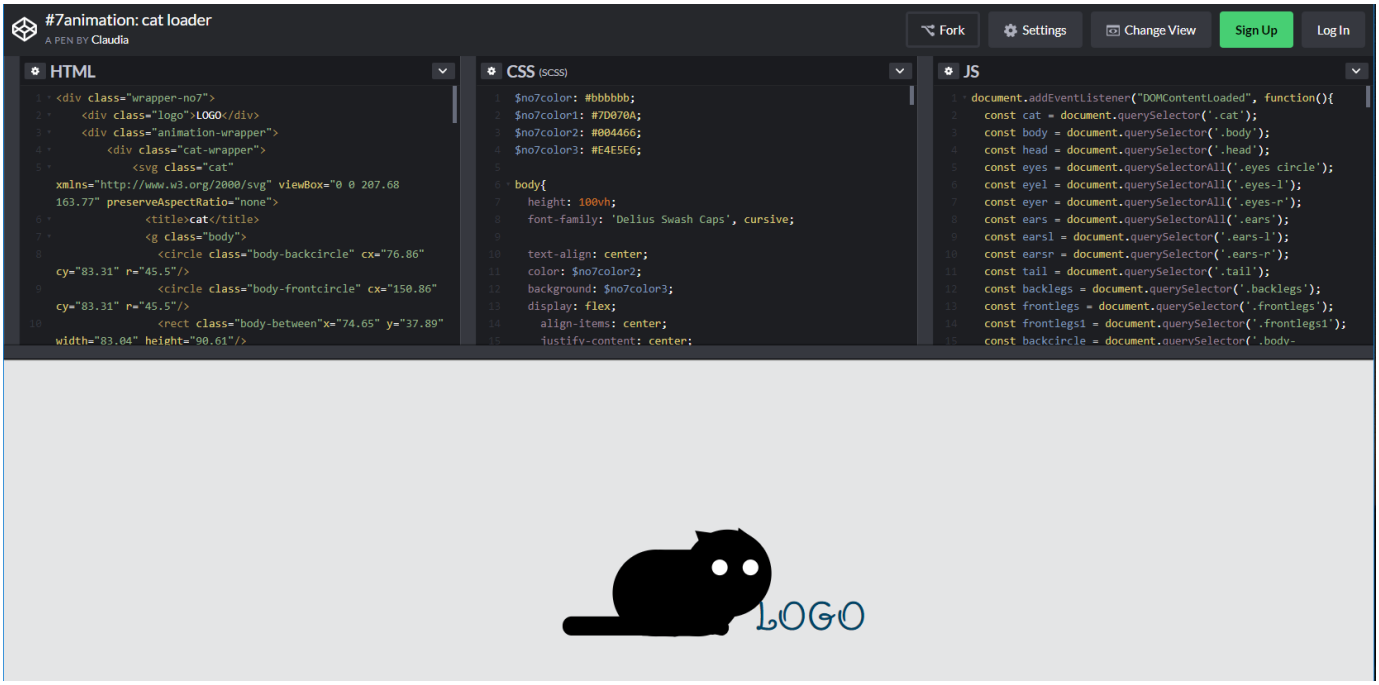

Figure 3 Codepen.io Interface

3.1.4. Picasso from Library

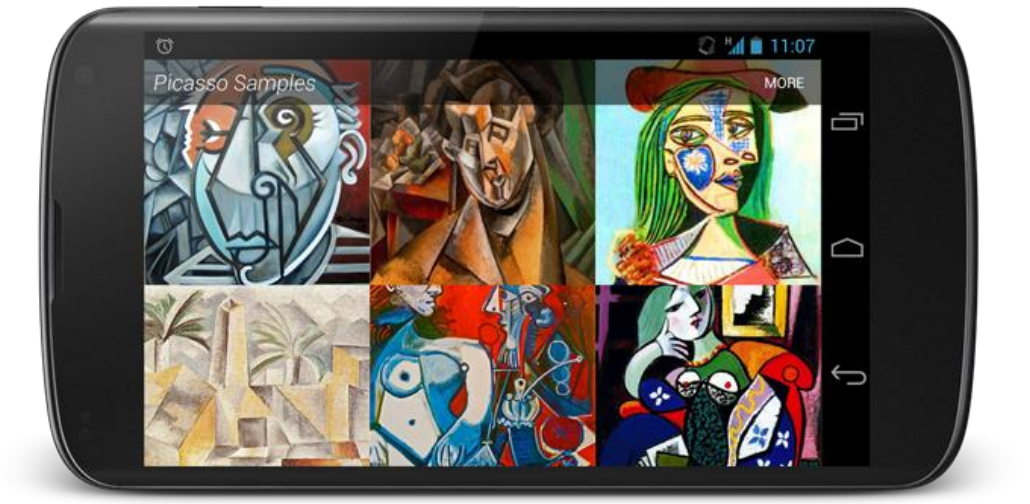

Figure 4 Picasso

Images add much-needed context and visual flair to Android applications. Picasso allows for hassle-free image loading in your application—often in one line of code.

3.2. Backend

In backend side, I will build a restful web service. REST (Representational State Transfer) is a service structure which runs between server and client in a smooth way. Rest structure processes with HTTP methods which are “GET”, “POST”, “PUT”, “DELETE”. When requesting an information from backend is needed, “GET” method is used. “POST” and “PUT” methods are used when sending data to backend to be processed. Finally, “DELETE” is used when data needed to be deleted from database. Benefits which we gain from building Restful API:

Restful applications run much faster.

Transferred data is smaller since JSON is used as response type.

REST structure is flexible, responsive, and light unlike SOAP.

Rest is more convenient for developers because it is simple and light. Also, integration is easier. In Rest, data is tied to any methods this means that it can handle lots of request and return more than one format type. Depending to the purpose HTML and XML can be selected as response types. Unlike complicated architectures likes SOAP or RPC, Rest architecture provides the client-server communication in a simpler way over HTTP protocol.

My API serves the whole systems as responsive service. Mobile applications and web panels will use our RESTful API in order to communicate with. Responsive type of our backend is JSON for responses because the data gets much smaller. Thus, some communications problems might be prevented, like package lost in bigger data packages.

In the creation of my backend, I will use .net or Java. When creating a REST API, developers does not require to install additional libraries or software. However, with frameworks it can be very useful in the developing process and when it comes to Java there plenty of frameworks. With its wide range assistance and lots of support Spring Framework is one of the most used frameworks. It provides comprehensive infrastructure support for developing Java based applications.

4.CODING

ANDROID MANIFEST FOR MY APPLICATION

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.apps.uclup">

    <uses-permission android:name="android.permission.INTERNET" />
    <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE"
/>
    <uses-permission android:name="android.permission.ACCESS_WIFI_STATE" />
    <uses-permission
android:name="android.permission.READ_EXTERNAL_STORAGE" />
    <uses-permission
android:name="android.permission.WRITE_EXTERNAL_STORAGE" />

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity
            android:name=".activity.Splash"
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@style/AppTheme.NoActionBar">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER"
/>
            </intent-filter>
        </activity>
        <activity
            android:name=".activity.LoginActivity"
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@style/AppTheme.NoActionBar" />
        <activity
            android:name=".activity.EditProfileActivity"
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@style/AppTheme.NoActionBar" />
        <activity
            android:name=".activity.MainActivity"
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@style/AppTheme.NoActionBar" />
        <activity
            android:name=".activity.EventDetailActivity"
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@style/AppTheme.NoActionBar" />
        <activity
            android:name=".activity.ClupDetailActivity"
```

```
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@style/AppTheme.NoActionBar" />
        <activity
            android:name=".activity.AdminLogin"
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@style/AppTheme.NoActionBar" />
        <activity
            android:name=".activity.AdminActivity"
            android:label="@string/label_admin"
            android:screenOrientation="portrait" />
        <activity
            android:name=".activity.SearchActivity"
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@style/AppTheme.NoActionBar"/>

        <meta-data
            android:name="preloaded_fonts"
            android:resource="@array/preloaded_fonts" />
    </application>

</manifest>
```

Every app project must have an AndroidManifest.xml file (with precisely that name) at the root of the project source set. The manifest file describes essential information about your app to the Android build tools, the Android operating system, and Google Play.

Among many other things, the manifest file is required to declare the following:

· The app's package name, which usually matches your code's namespace. The Android build tools use this to determine the location of code entities when building your project. When packaging the app, the build tools replace this value with the application ID from the Gradle build files, which is used as the unique app identifier on the system and on Google Play.

· The components of the app, which include all activities, services, broadcast receivers, and content providers. Each component must define basic properties such as the name of its Kotlin or Java class. It can also declare capabilities such as which device configurations it can handle, and intent filters that describe how the component can be started.

· The permissions that the app needs in order to access protected parts of the system or other apps. It also declares any permissions that other apps must have if they want to access content from this app.

· The hardware and software features the app requires, which affects which devices can install the app from Google Play.

If you're using Android Studio to build your app, the manifest file is created for you, and most of the essential manifest elements are added as you build your app

App components

For each app component that you create in your app, you must declare a corresponding XML element in the manifest file:

· <activity> for each subclass of Activity. · <service> for each subclass of Service. · <receiver> for each subclass of BroadcastReceiver. · <provider> for each subclass of ContentProvider.

If you subclass any of these components without declaring it in the manifest file, the system cannot start it.

PERMISSION

Android apps must request permission to access sensitive user data (such as contacts and SMS) or certain system features (such as the camera and internet access). Each permission is identified by a unique label. For example, an app that needs to send SMS messages must have the following line in the manifest:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest...>

    <uses-permission android:name="android.permission.INTERNET" />
    <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE"
/>
    <uses-permission android:name="android.permission.ACCESS_WIFI_STATE" />
    <uses-permission
android:name="android.permission.READ_EXTERNAL_STORAGE" />
    <uses-permission
android:name="android.permission.WRITE_EXTERNAL_STORAGE" />


</manifest>
```

Beginning with Android 6.0 (API level 23), the user can approve or reject some app permisions at runtime. But no matter which Android version your app supports, you must declare all permission requests with a <uses-permission> element in the manifest. If the permission is granted, the app is able to use the protected features. If not, its attempts to access those features fail.

Your app can also protect its own components with permissions. It can use any of the permissions that are defined by Android, as listed in android.Manifest.permission, or a permission that's declared in another app. Your app can also define its own permissions. A new permission is declared with the <permission> element.

MODELS

A)CLUP

I used clup model for the clubs' special pages.

```
package com.apps.uclup.model;

public class Clup {

    String name,shortName,dest,image,id,facebook,instagram,whatsapp;

    public Clup(){

    }

    public Clup(String name, String shortName, String dest, String image,
String id, String facebook, String instagram, String whatsapp) {
        this.name = name;
        this.shortName = shortName;
        this.dest = dest;
        this.image = image;
        this.id = id;
        this.facebook = facebook;
        this.instagram = instagram;
        this.whatsapp = whatsapp;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getShortName() {
        return shortName;
    }

    public void setShortName(String shortName) {
        this.shortName = shortName;
    }

    public String getDest() {
        return dest;
    }

    public void setDest(String dest) {
        this.dest = dest;
    }

    public String getImage() {
        return image;
    }

    public void setImage(String image) {
        this.image = image;
    }
```

```
    public String getId() {
        return id;
    }

    public void setId(String id) {
        this.id = id;
    }

    public String getFacebook() {
        return facebook;
    }

    public void setFacebook(String facebook) {
        this.facebook = facebook;
    }

    public String getInstagram() {
        return instagram;
    }

    public void setInstagram(String instagram) {
        this.instagram = instagram;
    }

    public String getWhatsapp() {
        return whatsapp;
    }

    public void setWhatsapp(String whatsapp) {
        this.whatsapp = whatsapp;
    }
}
```

B)POST

I use post model for the postes, sliders and etc.

```
package com.apps.uclup.model;

public class Post {

    String title,subtitle,image,date,id,desct,logo;

    public Post(){

    }

    public Post(String title, String subtitle, String image, String date,
String id, String desct, String logo) {
        this.title = title;
        this.subtitle = subtitle;
        this.image = image;
        this.date = date;
        this.id = id;
        this.desct = desct;
        this.logo = logo;
    }

    public String getTitle() {
        return title;
    }

    public void setTitle(String title) {
        this.title = title;
    }

    public String getSubtitle() {
        return subtitle;
    }

    public void setSubtitle(String subtitle) {
        this.subtitle = subtitle;
    }

    public String getImage() {
        return image;
    }

    public void setImage(String image) {
        this.image = image;
    }

    public String getDate() {
        return date;
    }

    public void setDate(String date) {
        this.date = date;
    }

    public String getId() {
        return id;
    }
```

```
    public void setId(String id) {
        this.id = id;
    }

    public String getDesct() {
        return desct;
    }

    public void setDesct(String desct) {
        this.desct = desct;
    }

    public String getLogo() {
        return logo;
    }

    public void setLogo(String logo) {
        this.logo = logo;
    }


}
```

ADAPTERS

I use adapters for getting or updating datas from or to the database. Firstly I took datas from DB. Then I used adapters to do segmentation to use the correct data into correct part. Before that, I show the adapter to correct places which it will fill with order.

Example of one adapter.
POST ADAPTER

```
package com.apps.uclup.adapter;

import android.content.Context;
import android.content.Intent;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ImageView;
import android.widget.TextView;

import com.apps.uclup.R;
import com.apps.uclup.activity.EventDetailActivity;
import com.apps.uclup.model.Post;
import com.squareup.picasso.Picasso;

import java.util.List;

import androidx.recyclerview.widget.RecyclerView;
import de.hdodenhof.circleimageview.CircleImageView;

public class PostAdapter extends
RecyclerView.Adapter<PostAdapter.ViewHolder> {

    private List<Post> explore;
    private Context context;

    public PostAdapter(Context applicationContext, List<Post> exploreList)
{
        this.context = applicationContext;
        this.explore = exploreList;
        notifyDataSetChanged();
    }

    @Override
    public PostAdapter.ViewHolder onCreateViewHolder(ViewGroup viewGroup,
int i) {
        View view =
LayoutInflater.from(viewGroup.getContext()).inflate(R.layout.item_post,
viewGroup, false);
        return new PostAdapter.ViewHolder(view);
    }

    @Override
    public void onBindViewHolder(PostAdapter.ViewHolder viewHolder, int
pos) {

        viewHolder.title.setText( explore.get(pos).getTitle());
        viewHolder.subtitle.setText( explore.get(pos).getSubtitle());
        viewHolder.date.setText( explore.get(pos).getDate());
```

```
Picasso.with(context).load(explore.get(pos).getImage()).into(viewHolder.ima
ge);

Picasso.with(context).load(explore.get(pos).getLogo()).into(viewHolder.logo
);

    }

    @Override
    public int getItemCount() {
        return explore.size();
    }

    public class ViewHolder extends RecyclerView.ViewHolder {

        private TextView title,subtitle,date;
        private ImageView image;
        private CircleImageView logo;

        public ViewHolder(View view) {
            super(view);

            title = (TextView) view.findViewById(R.id.tv_title);
            subtitle = (TextView) view.findViewById(R.id.tv_subtitle);
            date = (TextView) view.findViewById(R.id.tv_date);
            image=(ImageView) view.findViewById(R.id.imageView);
            logo=(CircleImageView) view.findViewById(R.id.profile_image);

            itemView.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View v) {
                    final int pos = getAdapterPosition();

                    if (pos != RecyclerView.NO_POSITION) {
                        Post clickedDataItem = explore.get(pos);

                        Intent intent = new Intent(context,
EventDetailActivity.class);
                        intent.putExtra("title",
clickedDataItem.getTitle());
                        intent.putExtra("subtitle",
clickedDataItem.getSubtitle());
                        intent.putExtra("dest",
clickedDataItem.getDesct());
                        intent.putExtra("date", clickedDataItem.getDate());
                        intent.putExtra("image",
clickedDataItem.getImage());
                        intent.putExtra("logo", clickedDataItem.getLogo());
                        intent.putExtra("id", clickedDataItem.getId());
                        intent.addFlags(Intent.FLAG_ACTIVITY_NEW_TASK);
                        context.startActivity(intent);
                    }
                }
            });
        }
    }

}
```

LOADING DATA CODING PART

```
private void loadData(){

    vData = mRoot.child("Post");
    vData.addChildEventListener(new ChildEventListener() {
        @Override
        public void onChildAdded(DataSnapshot dataSnapshot, String s) {

            try {
                Post model = dataSnapshot.getValue(Post.class);
                model.setId(dataSnapshot.getKey());
                listPost.add(model);
                recyclerView2.setAdapter(new
PostAdapter(getApplicationContext(),listPost));
            }
            catch (Exception e){
                Toasty.error(getApplicationContext(), "Sunucu bağlantı
hatası.",
                        Toast.LENGTH_SHORT, true).show();
            }
        }

        @Override
        public void onChildChanged(DataSnapshot dataSnapshot, String s) {

        }

        @Override
        public void onChildRemoved(DataSnapshot dataSnapshot) {

        }

        @Override
        public void onChildMoved(DataSnapshot dataSnapshot, String s) {

        }

        @Override
        public void onCancelled(DatabaseError databaseError) {

        }
    });

}
```

EVENT DETAIL ACTIVITY CODING PART

Getting the datas to fill the club's event detail part.

```
package com.apps.uclup.activity;

import androidx.appcompat.app.AppCompatActivity;
import butterknife.BindView;
import butterknife.ButterKnife;
import butterknife.OnClick;
import de.hdodenhof.circleimageview.CircleImageView;

import android.os.Bundle;
import android.widget.ImageView;
import android.widget.TextView;

import com.apps.uclup.R;
import com.squareup.picasso.Picasso;

public class EventDetailActivity extends AppCompatActivity {

    @BindView(R.id.tv_title)
    TextView title;

    @BindView(R.id.tv_subtitle)
    TextView subtitle;

    @BindView(R.id.tv_dest)
    TextView dest;

    @BindView(R.id.tv_date)
    TextView date;

    @BindView(R.id.img_banner)
    ImageView image;

    @BindView(R.id.profile_image)
    CircleImageView logo;

    @OnClick(R.id.img_back)
    void onclickBack(){
        onBackPressed();
    }

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_event_detail);
        ButterKnife.bind(this);

        title.setText(getIntent().getExtras().getString("title"));
        subtitle.setText(getIntent().getExtras().getString("subtitle"));
        dest.setText(getIntent().getExtras().getString("dest"));
        date.setText(getIntent().getExtras().getString("date"));

        Picasso.with(getApplicationContext())
                .load(getIntent().getExtras().getString("image"))
                .into(image);

        Picasso.with(getApplicationContext())
                .load(getIntent().getExtras().getString("logo"))
```

LOADING CLUP CODING PART

Connection to database then creating adapter and showing the which part that adapter will take from.

```
private void loadClup(){

    mData = mRoot.child("Clup");
    mData.addChildEventListener(new ChildEventListener() {
        @Override
        public void onChildAdded(DataSnapshot dataSnapshot, String s) {

            try {
                Clup model = dataSnapshot.getValue(Clup.class);
                listClup.add(model);
                recyclerView.setAdapter(new
ClupAdapter(getApplicationContext(),listClup));
            }
            catch (Exception e){
                Toasty.error(getApplicationContext(), "Sunucu bağlantı
hatası.",
                        Toast.LENGTH_SHORT, true).show();
            }
        }

        @Override
        public void onChildChanged(DataSnapshot dataSnapshot, String s) {

        }

        @Override
        public void onChildRemoved(DataSnapshot dataSnapshot) {

        }

        @Override
        public void onChildMoved(DataSnapshot dataSnapshot, String s) {

        }

        @Override
        public void onCancelled(DatabaseError databaseError) {

        }
    });


}
```

SEARCH ACTIVITY CODING PART

This is the how to search with input from the user part.

```
 private void initView(String temp){

        listTemp=new ArrayList<>();
        temp=uppercase(temp);

        for(int i =0;i<listClup.size();i++){

            if(listClup.get(i).getName().contains(temp) ||
listClup.get(i).getShortName().contains(temp.toUpperCase())){
                listTemp.add(listClup.get(i));

            }
            recyclerView.setAdapter(new
ClupAdapter(getApplicationContext(),listTemp));

        }

    }

    String uppercase(String str) {

        char c = Character . toUpperCase ( str . charAt ( 0 ));
        str = c + str . substring ( 1 );
        String x=" ";

        for (int i = 1 ; i<str.length();i++) {
            if (str.charAt(i)==' ') {
                c=Character.toUpperCase(str.charAt (i+1));
                str = str.substring(0,i)+x +c  + str.substring(i+2);
            }
        }
        return str;
    }
}
```

SPLASH PART

Checking the internet connection, if there is an internet connection, changing the GUI screen to the login screen. If there is an internet connection problem, showing the toast message.

```
public class Splash extends AppCompatActivity {

    @Override
    public void onCreate(Bundle icicle) {
        super.onCreate(icicle);
        setContentView(R.layout.activity_splash);

        if (Build.VERSION.SDK_INT >= 21) {

getWindow().setFlags(WindowManager.LayoutParams.FLAG_TRANSLUCENT_STATUS,
                    WindowManager.LayoutParams.FLAG_TRANSLUCENT_STATUS);
        }

        if(!internetErisimi()) {
            Toasty.warning(getApplicationContext(), "İnternet bağlantınızda
bir problem var!",
                    Toast.LENGTH_SHORT, true).show();
        }
        else {
            new Handler().postDelayed(new Runnable() {
                @Override
                public void run() {

                    Intent mainIntent = new Intent(Splash.this,
LoginActivity.class);
                    Splash.this.startActivity(mainIntent);
                    Splash.this.finish();
                }
            }, 2000);

        }
    }
    public boolean internetErisimi() {

        ConnectivityManager conMgr = (ConnectivityManager)
getSystemService(Context.CONNECTIVITY_SERVICE);
        if (conMgr.getActiveNetworkInfo() != null
                && conMgr.getActiveNetworkInfo().isAvailable()
                && conMgr.getActiveNetworkInfo().isConnected()) {
            return true;
        } else {
            return false;
        }

    }
}
```

LOGIN PART

This is the login part with the google mail. And also checking the database, if it is right or not. And let the user make a new profil.

```
private void firebaseAuthWithGoogle(GoogleSignInAccount acct) {
    AuthCredential credential =
GoogleAuthProvider.getCredential(acct.getIdToken(), null);
    auth.signInWithCredential(credential)
            .addOnCompleteListener(this, new
OnCompleteListener<AuthResult>() {
                @Override
                public void onComplete(@NonNull Task<AuthResult> task) {

                    if (!task.isSuccessful()) {
                        Toast.makeText(LoginActivity.this, "Error",
                                Toast.LENGTH_SHORT).show();
                    } else {


data.child(auth.getCurrentUser().getUid()).addValueEventListener(new
ValueEventListener() {
                            @Override
                            public void onDataChange(DataSnapshot
dataSnapshot) {

                                try {
                                    String
temp=dataSnapshot.getValue().toString();
                                    if(!temp.equals("") ||
!temp.equals(null)){
                                        startActivity(new
Intent(LoginActivity.this, MainActivity.class));
                                    }
                                }
                                catch (Exception e){
                                    mDatabase =
FirebaseDatabase.getInstance().getReference("Users");

mDatabase.child(auth.getCurrentUser().getUid()).setValue(" ; ; ");
                                    startActivity(new
Intent(LoginActivity.this, EditProfileActivity.class));
                                    finish();
                                }

                            }

                            @Override
                            public void onCancelled(DatabaseError
databaseError) {

                            }
                        });

                    }

                }

            });
}
```

VALIDATION PART FOR ADMIN

```
private boolean validateForm() {

    boolean result = true;

    if (TextUtils.isEmpty(edtTitle.getText().toString())) {
        edtTitle.getBackground().setColorFilter(Color.RED,
PorterDuff.Mode.SRC_ATOP);
        result = false;
    }

    if (TextUtils.isEmpty(edtSubTitle.getText().toString())) {
        edtSubTitle.getBackground().setColorFilter(Color.RED,
PorterDuff.Mode.SRC_ATOP);
        result = false;
    }

    if (TextUtils.isEmpty(edtDest.getText().toString())) {
        edtDest.getBackground().setColorFilter(Color.RED,
PorterDuff.Mode.SRC_ATOP);
        result = false;
    }

    if (TextUtils.isEmpty(edtDate.getText().toString())) {
        edtDate.getBackground().setColorFilter(Color.RED,
PorterDuff.Mode.SRC_ATOP);
        result = false;
    }

    if (edtImage.getText().toString().equals("Paylaşıma ait resim seçiniz
>")) {
        edtImage.getBackground().setColorFilter(Color.RED,
PorterDuff.Mode.SRC_ATOP);
        image.setVisibility(View.GONE);
        result = false;
    }

    return result;
}
```

UPLOADING IMAGE FROM PHONE CODING PART

```
private void uploadImage(){

    if(sayac.equals("0")){
        dataUp();
    }
    else{

        final ProgressDialog progressDialog = new ProgressDialog(this);
        progressDialog.setTitle("Yükleniyor");
        progressDialog.show();

        StorageReference riversRef =
storageReference.child("images/"+edtTitle.getText().toString().replace("
","")+".jpg");
        riversRef.putFile(filePath)
                .addOnSuccessListener(new
OnSuccessListener<UploadTask.TaskSnapshot>() {
                    @Override
                    public void onSuccess(UploadTask.TaskSnapshot
taskSnapshot) {
                        progressDialog.dismiss();
                        dataUp();
                    }
                })
                .addOnFailureListener(new OnFailureListener() {
                    @Override
                    public void onFailure(@NonNull Exception exception) {
                        progressDialog.dismiss();

                        Toast.makeText(getApplicationContext(),
exception.getMessage(), Toast.LENGTH_LONG).show();
                    }
                })
                .addOnProgressListener(new
OnProgressListener<UploadTask.TaskSnapshot>() {
                    @Override
                    public void onProgress(UploadTask.TaskSnapshot
taskSnapshot) {
                        double progress = (100.0 *
taskSnapshot.getBytesTransferred()) / taskSnapshot.getTotalByteCount();

                        progressDialog.setMessage("Resim yükleniyor " +
((int) progress) + "%...");
                    }
                });


    }
}
```

5. Conclusion

In conclusion, uClub is designed and developed for the purpose of assisting clubs in need of events, students about their student clubs in their campuses and to events, meeting on the app system. My target customers are the organizations that held our target users in their areas. On the other hand, my project's target users are students and teachers, this makes our main customers universities. However, like I discussed this does not designed only to be used in universities. With a little modification our project is compatible to be used in other campuses too.

With the specific role of each actors; the actors of the system are students, clubs, visitors and teachers. Aim of such a project is to inform, notify and direct people to prevent the problems caused by lack of communication and instructions. Although the project has only android mobile application, it can support the IOS mobile applications in the future when they are developed. System stores every data provided by users and returns them to the appropriate user.

Finally, uClub includes many features to provide services to every user efficiently. The project has the goal to help and improve the current system with new features and technologies. With the satisfied requirements project can achieve the goal. Designing such a project is to create university campuses more compatible with the technology, by doing this, project also opens a new path to many various projects applicable with areas like university campuses.

REFERENCES

Figure1 https://www.reviews.org/trends/cell-phone-addiction/ (last seen 19 December 2018)

Figure2 https://scand.com/company/blog/mobile-world-turning-toward-android-ios-vs-android-development-statistics/ (last seen 12 December 2018)