



Mobile Apps

Consideration: 30%

Using any Mobile App (Android or iOS, however preference is on iOS) you have developed (or are developing) as a reference, answer the following questions in relation to the Mobile Apps.

1. Provide a brief description of the Mobile App you developed (or, are developing). Please include the name of the App and where it can currently be accessed from (if publically accessible/operational)
____WishApp was to help business people do advertisement through the application by uploading images of product and details after signed up on the platform to users which were displayed on Page and send wishes like lunch, birthday, and public holiday to fellow clients [users] on platform but app didn't go public remained locally .

2. What challenges is a developer likely to encounter during the development for:
 - a. Android devices?
____Development environment reactiveness and language framework to choose_____
 - b. iOS devices?
____Charges for real app deploy and tool access to developer ____programming language__________
3. Did you develop your app as a native, web or hybrid application?
____Developed it as a native app.

4. What guided your decision to develop your app as native, web or hybrid in "2" above?
____Due to learning android studio development environment and java turn to be easy and fast to implement hence developing my app as a native

5. What tools, frameworks and, or languages did you use when developing your app in "2" above?

_ I used android studio, xml and java as the programming language.

6. What are your thoughts on the use of Flutter or React Native Frameworks as opposed to the use of Native code like Swift , Java or Kotlin?

_____Fast developing process and responsiveness like React Native frameworks easy to develop under.

7. What are 4 of the most valuable lessons you have learned during the testing of your mobile app(s)?

1. ___Devices sizes effect on real testing _____

2. ___User authentication mechanism _____

3. ___Image resolution and resizing on the app _____

4. ___Color and fonts _____

8. In Android development why would you choose Kotlin over Java?

_____Organized code and developed features done under kotlin _____

9. Between MVP and MVVM android patterns, which pattern would you prefer and why?

_____MVP due to its traditional way of using methods for business logic in the presenter

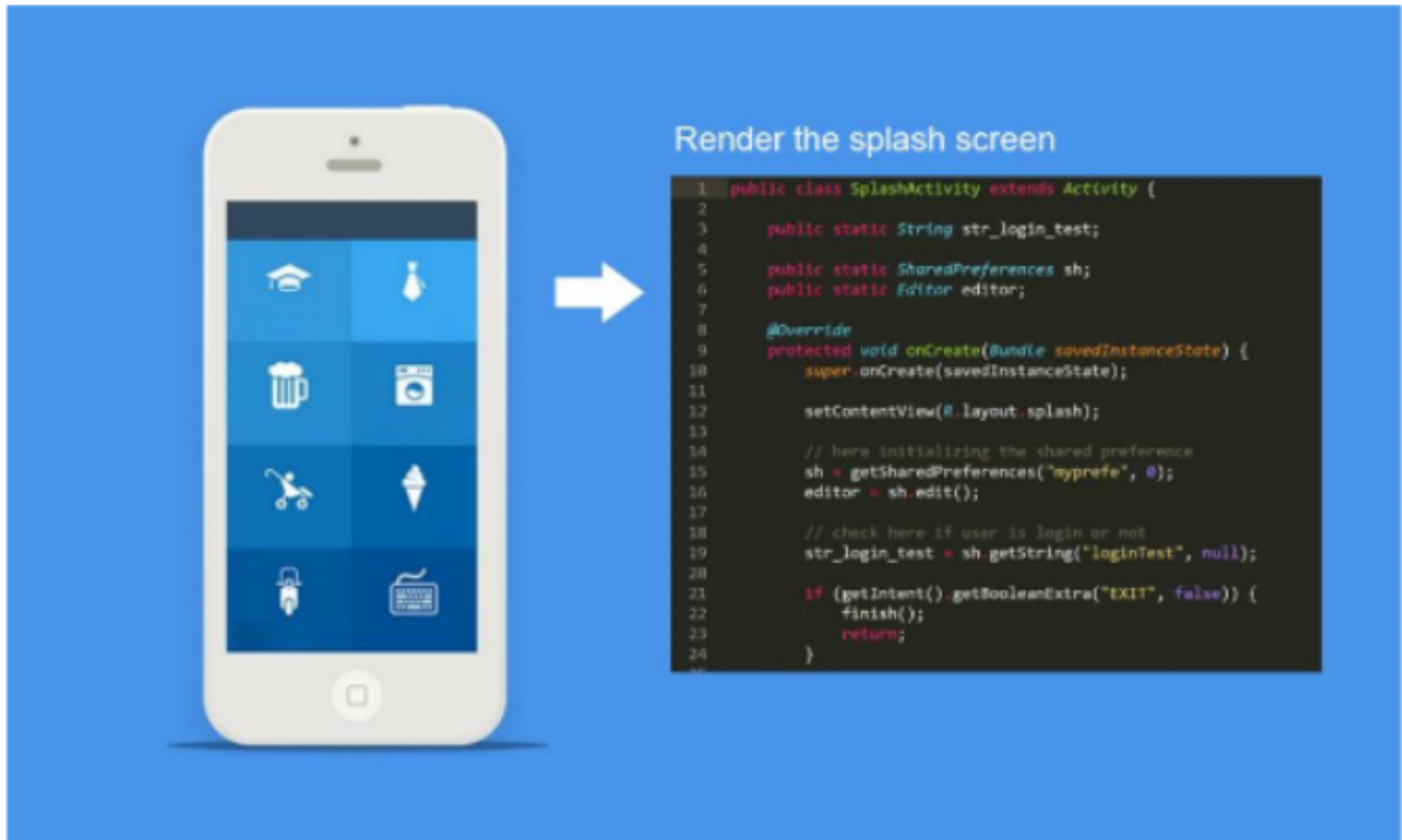
10. What steps did you undertake when performing sanity tests on your mobile app in "2" above?

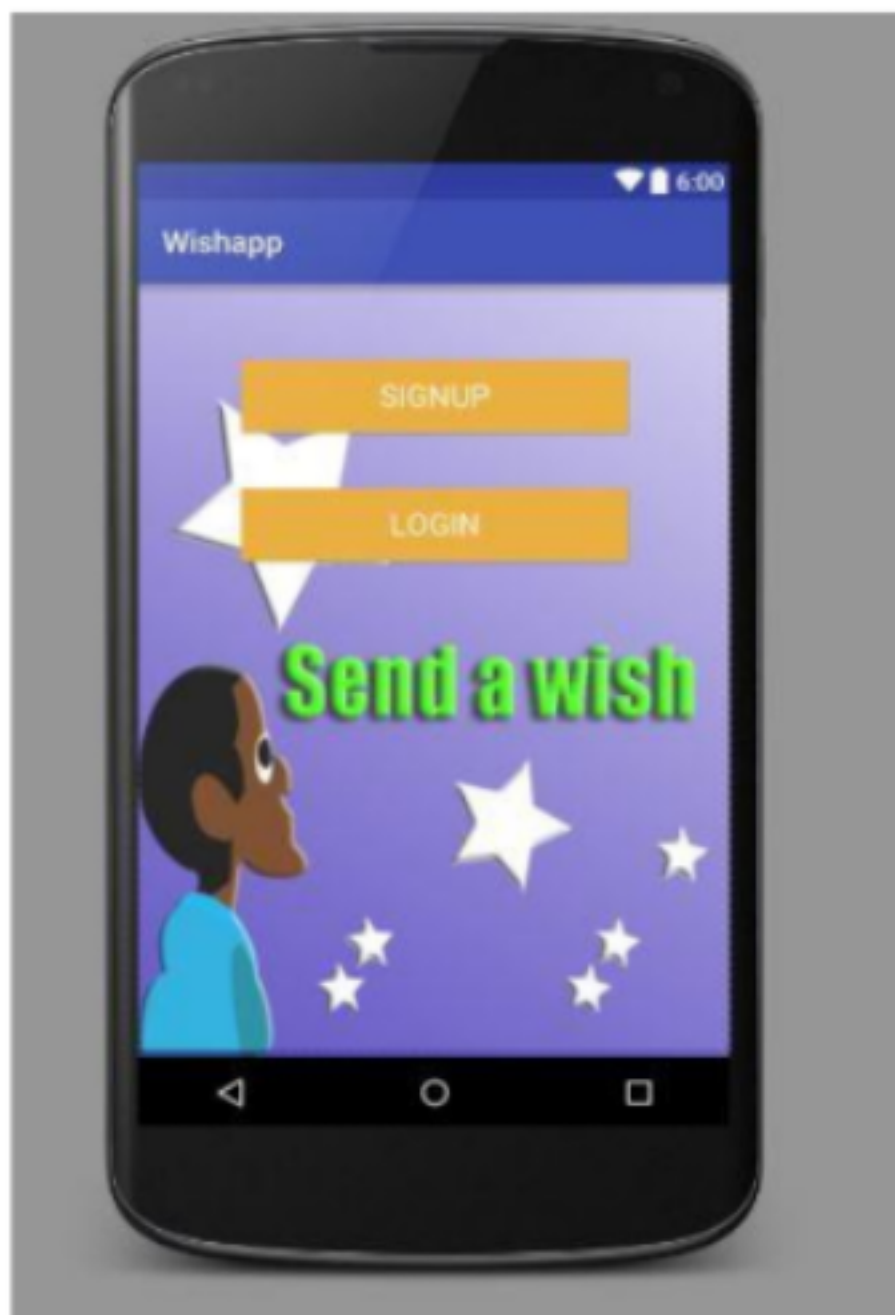
_____Real devices deploy of the app and database,

_____Having images test and fonts_



11. Provide at least 3 sample screenshots from your mobile app in "2" above, and for each screenshot, provide a brief explanation on what the interface does and a snippet of the code. Consider the illustration below as a guide.





```
private static Button btn_sign;
tableBD tb;
Context context = MainActivity.this;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    tb = new tableBD(context); //takes argument context
    tb.getWritableDatabase();

    log();
    sign();
}

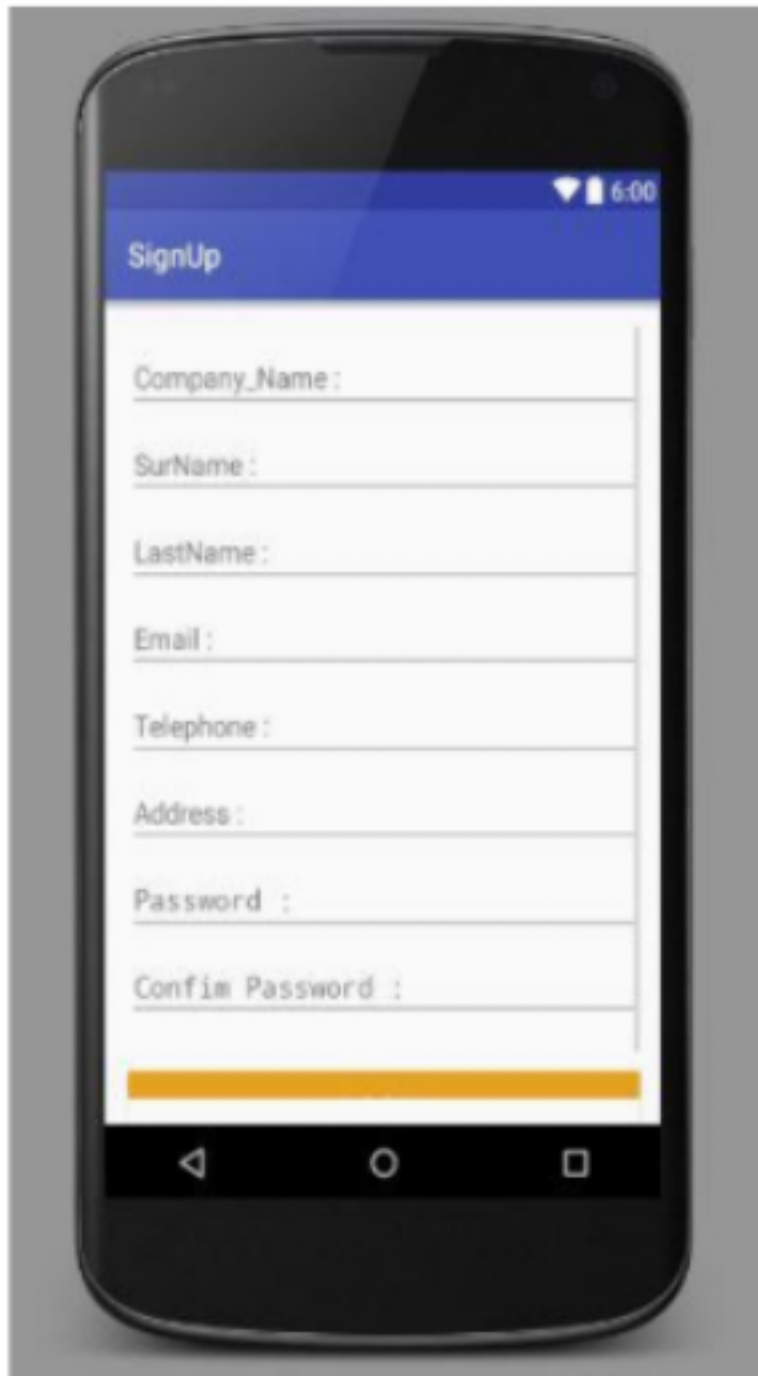
public void log()
{
    btn_log = (Button)findViewById(R.id.login);
    btn_log.setOnClickListener(
        (v) -> {
            Intent I = new Intent("com.minzani.wishapp.LoginActivity");
            startActivity(I);
        }
    );
}

public void sign() {
    btn_sign = (Button)findViewById(R.id.signup);
    btn_sign.setOnClickListener(
        (v) -> {
            Intent I = new Intent("com.minzani.wishapp.SignUpActivity");
            startActivity(I);
        }
    );
}
```

This index page of WishApp that welcomes User to platform telling them to do one of the options displayed to them. Signup for new clients who are supposed to have ultimate business due to requirements collected on the signup page as shown below next page .

Other Option is the Login button for already registered user who accepted terms of the platform and the idea of the application as problem solving to boom business around the world where business clients(customers) will feel attached whenever a wish comes from their business partner and company around sending wishes anytime of business hour and need times .

Behind is application brand log telling want the platform is meant to business promotions, advertisement and customer attachment bring business closer to their clients.



```

lname =(EditText)findViewById(R.id.lname);
Email =(EditText)findViewById(R.id.Email);
tel =(EditText)findViewById(R.id.phone);
Addr =(EditText)findViewById(R.id.adree);
pwd =(EditText)findViewById(R.id.pwd);
cpwd =(EditText)findViewById(R.id.cpwd);

//-----
singup();
}

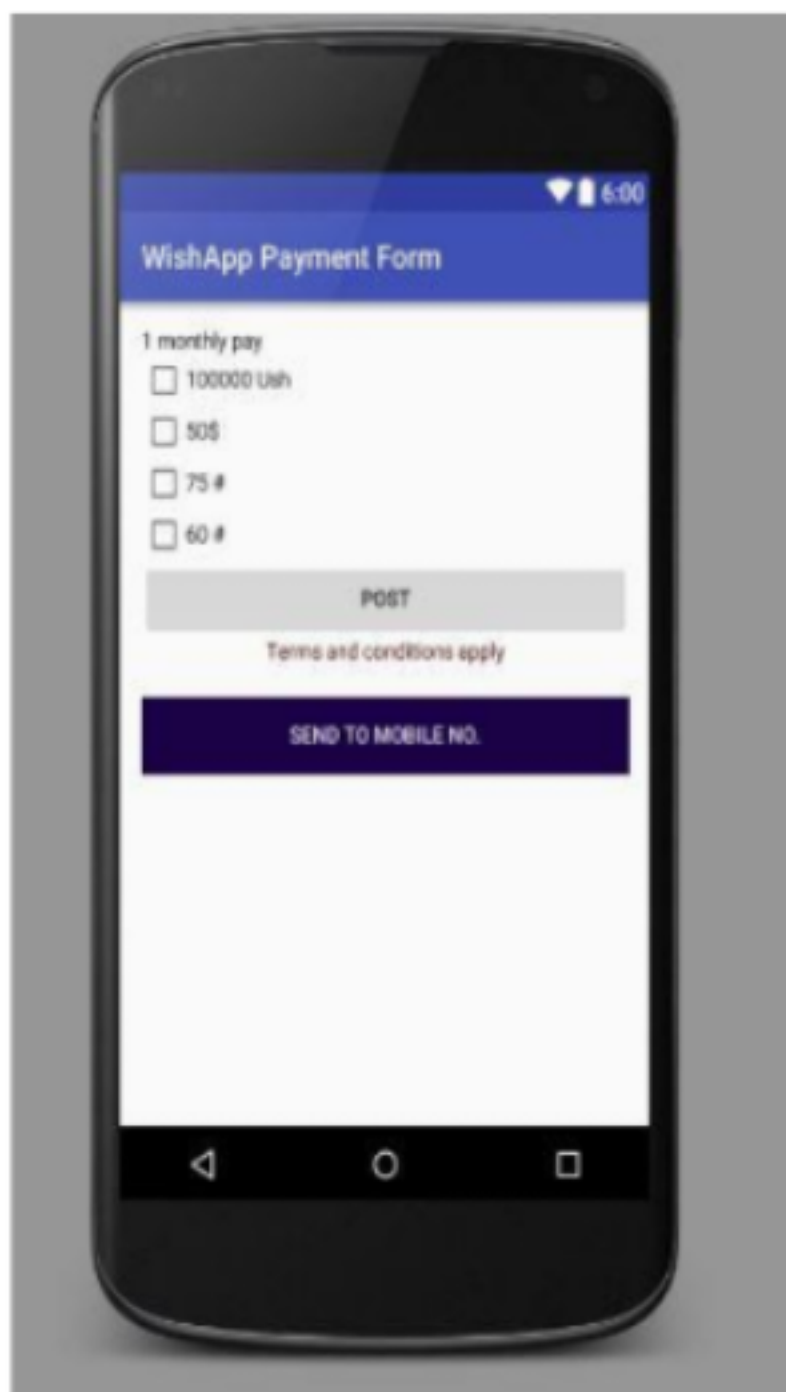
public void singup()
{
    String a = co.getText().toString();
    String b = Fname.getText().toString();
    String c = lname.getText().toString();
    String d = Email.getText().toString();
    String e = tel.getText().toString();
    String g = Addr.getText().toString();
    String f = pwd.getText().toString();
    String h = cpwd.getText().toString();

    tableBD tbd = new tableBD(SignUpActivity.this);
    long tr = tbd.createIn(a,b,c,d,e,g,f,h);
    tbd.close();

    if(tr > 0 )
    {
        singup = (Button) findViewById(R.id.singup);
        singup.setOnClickListener(
            (v) -> {
                Intent I = new Intent("com.winsami.wishapp.LoginActivity");
                startActivity(I);
            }
        );
    }
}

```

Shows signup form for new entry as member with application, all fields required and stored to database for next authentication on the login form page and Identification to client of businesses on the platform like during displaying business on the home page and sending of wishes to business clients[customer]



```

android:layout_width="match_parent"
android:layout_height="match_parent"
android:paddingBottom="16dp"
android:paddingLeft="16dp"
android:paddingRight="16dp"
android:paddingTop="16dp"
android:orientation="vertical"
tools:context="com.minzani.wishapp.PaymentFormActivity">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="1 monthly pay"
    android:textColor="#070000"
    android:id="@+id/textView" />

<CheckBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="100000 Ush"/>

<CheckBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="50$"/>

<CheckBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="75 #"/>

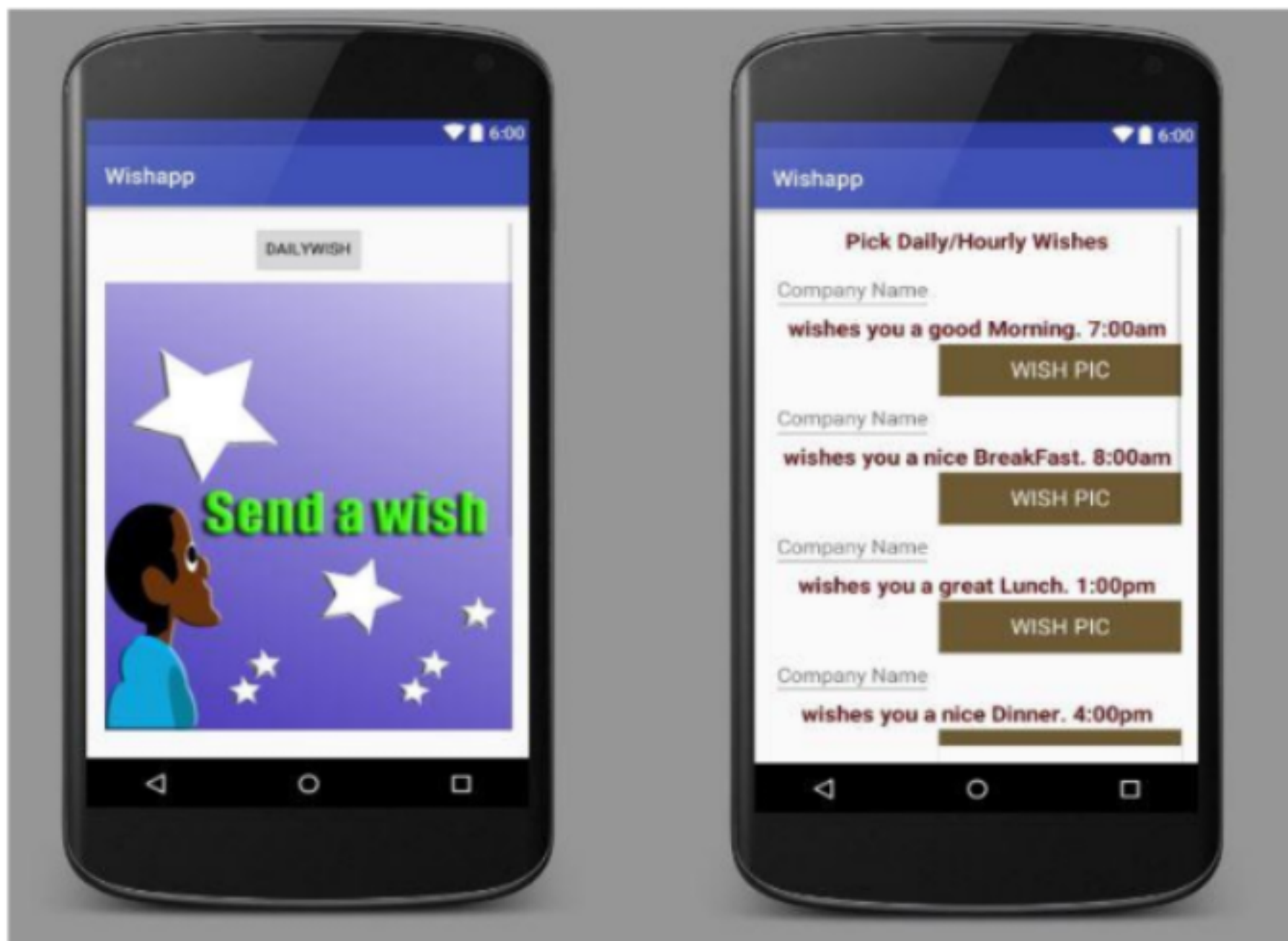
<CheckBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="60 #"/>

<Button
    android:layout_width="match_parent"

```

Payment form takes in payment done by business client on the platform to enable their wishes are delivered to intend purpose and being business platform it is growing idea to support each other recovery in times of support so saving is apriority and earning payment very important too.

The application is charge on monthly basis business owner [app clients]. Business will be support through that period to do best in business on the platform, reminders and wishes sending, business boost on the platform to be seen by all possible customers.



```

public class HmbackActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_hmback);
        picform();
        payment();
    }

    private static Button btn;
    private static Button btn1;

    public void payment()
    {
        btn = (Button)findViewById(R.id.payment);
        btn.setOnClickListener(
            (v) -> {
                Intent I = new Intent("com.minzani.wishapp.PaymentFormActivity");
                startActivity(I);
            }
        );
    }

    public void picform()
    {
        btn1 = (Button)findViewById(R.id.wishpic);
        btn1.setOnClickListener(
            (v) -> {
                Intent I = new Intent("com.minzani.wishapp.PicFormActivity");
                startActivity(I);
            }
        );
    }
}

```

Homepage that lays scrollable list of business owner that are on the application platform to be scrolled through by users on the platform, displaying send wish button along with business brand images as uploaded to application stored in database telling the story to business world through the platform which is the reason WishApp is to business community.

The wish button seen to business community registered with application does what the platform is meant .when clicked redirects to wish form with business Identity. Where they find wish list to their need and feel interest to send to their clients from the application like morning wakeups or lunch time wishes which bring about promotions in business and know-how of new product, business attachments to customer etc.

Next is wish form with form directives as seen above for use to business owners.

A handwritten signature in black ink, located in the bottom right corner of the page. The signature is stylized and appears to be a personal name.



SQL and Databases

Consideration: 15%

The following 2 tables exist in a simple MySQL database

Table Name: FamilyMembers

id	FirstName	LastName	Gender	DateOfBirth
1	Martin	Muwanguzi	Male	1975-08-10
2	Sandra	Muwanguzi	Female	1981-02-11
3	Samantha	Muwanguzi	Female	2004-01-12
4	Tony	Muwanguzi	Male	2006-03-17
5	Timothy	Muwanguzi	Male	2008-03-19
6	Catherine	Muwanguzi	Female	2010-05-21
7	Cynthia	Muwanguzi	Female	2014-09-10

Table Name: PreferredMovies

id	userID	PreferredMovie	TypeOfMovie
1	1	Kingsman	Action
2	1	The Lego Movie	Animation
3	1	Batman vs Superman	Action
4	2	Flatliners	Thriller
5	2	Battle of the Sexes	Drama
6	2	Mother	Drama
7	2	American Made	Drama
8	2	Wonder Woman	Action
9	3	The Lego Movie	Animation
10	3	Beauty and the Beast	Animation
11	4	Kingsman	Action
12	5	The Lego Movie	Animation

13	5	Batman vs Superman	Action
14	5	Guardians of the Galaxy	Action
15	6	Mother	Drama

Hints:

1. userID in table PreferredMovies = id in table FamilyMembers
2. Each of the questions below require only one SQL query.
3. The query (in "2" above) may include a nested query, use joins etc.

Assignment: Write SQL queries to return the following:

1. Which movie is preferred by **most** of the family members
 ____SELECT PreferredMovie FROM familymember JOIN preferredmovies ON
 familymember.id = preferredmovies.userid GROUP BY PreferredMovie HAVING
 COUNT(PreferredMovie) > 2 _____
2. Which movie type (TypeOfMovie) is the **least** preferred within the family
 ____SELECT TypeOfMovie FROM familymember JOIN preferredmovies ON
 familymember.id = preferredmovies.userid GROUP BY typeofmovie HAVING
 COUNT(typeOfMovie) = 1 _____
3. Top 2 popular movie types by family members older than 10 years
 ____SELECT TypeOfMovie FROM familymember JOIN preferredmovies ON
 familymember.id = preferredmovies.userid WHERE (year(CURRENT_DATE) - year(Date)) > 10
 GROUP BY TypeOfMovie HAVING COUNT(TypeOfMovie) > 2 LIMIT 2 _____
4. Top 2 popular movie types by female family members
 ____SELECT TypeOfMovie FROM familymember JOIN preferredmovies ON
 familymember.id = preferredmovies.userid WHERE familymember.Gender = 'female'
 GROUP BY TypeOfMovie HAVING COUNT(TypeOfMovie) > 1 _____
5. Family members with no preferred movies
 ____SELECT * FROM familymember LEFT JOIN preferredmovies ON familymember.id =
 preferredmovies.userid WHERE preferredmovies.userid IS null _____