



CPS 499 01/Z2
CREATING MOBILE APPLICATIONS

Project Report

QUIZ WORLD APP

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QUIZ WORLD APP

Introduction to Quiz World App

I choose this App because we can implement more methods and can create a fun interactive display. I want to keep a collection of all country and capitals, So after getting familiar with the country names, these apps can be extended to geological matter present in that country. So that I can have more knowledge in every aspect present in this world. I began to write code for one set of quiz questions then I began to develop a random set of questions In this way I have achieved a successful application.

FEATURES

- **LIST ACTIVITY**

Provides a list view arranged in a linear Layout.

- **EXTERNAL WEB PAGE**

An action to move from one activity to external web page using URL.

- **ADDITIONAL SCREEN**

A display pannel which stays for given seconds of time and dissapers.

- **LAUNCHER ICON**

This icon can be created using image asset in app.

SCREEN I

SPLASH ACTIVITY

This is an additional screen, this screen appears for 6000 milliseconds.

This displays an image consisting of a globe with all country flags. After a delayed display of screen for 6000 seconds, next activity begins to open.

(MainActivity.class)

Quiz World App



```
private static final long DELAY = 6000;
```

```
Timer opening = new Timer();  
opening.schedule(task, DELAY);
```

SCREEN II

WELCOME ACTIVITY

This is an welcome screen this screen navigates to the quiz page on clicking start button.

We use intent for navigation from one page to another.

(WelcomeActivity.class)



```
View.OnClickListener bListener = new
View.OnClickListener() {
    @Override
    public void onClick(View v) {
        //create an Intent for the Bill screen

        Intent i =new
        Intent(WelcomeActivity.this,QuizActivity.class);

        // start a new activity with the intent i
        startActivity(i);
    }
};
b.setOnClickListener(bListener);
```

SCREEN III

QUIZ ACTIVITY

In this activity, the actual quiz is being conducted and Here we have five random questions each time with four choosing options for each question. At the end of five questions next Activity is redirected which is a result Activity.

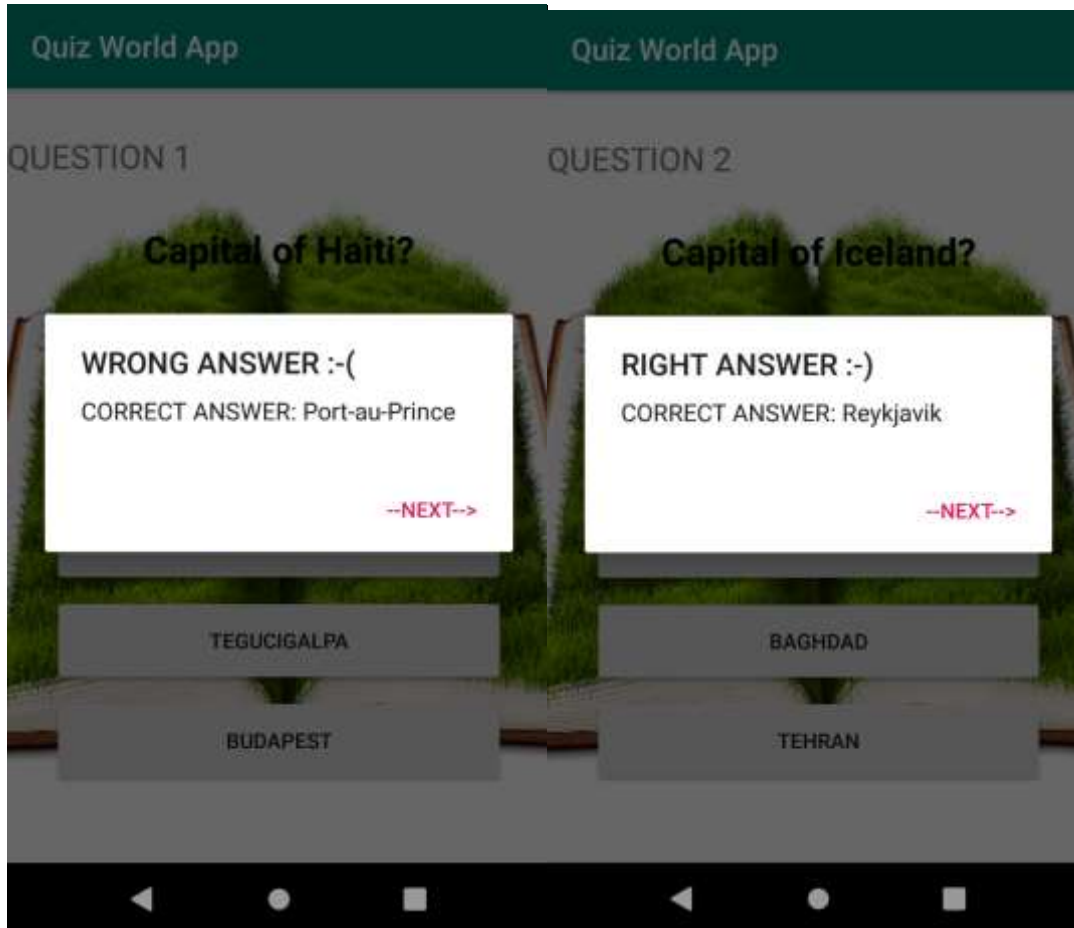
(QuizActivity.class)



```
ArrayList<ArrayList<String>> qArray =new ArrayList<>();  
String qData [][]=//data//  
  
for (int i=0;i<qData.length;i++){  
    ArrayList<String> randomArray=new ArrayList<>();  
    //random questions//
```

Again based upon answer chose we are initializing an alert box where either answer is correct or wrong is shown and also a correct answer is displayed.

To move to next question click on the Next button.



```
public void checkAnswer(View view) {
    Button ansButton= findViewById(view.getId());
    String btntxt= ansButton.getText().toString();
    String alertTitle;
    if(btntxt.equals(correctAnswer)) {
        alertTitle="RIGHT ANSWER :-)";
        correctAnswerCount++;
    }
    else{
        alertTitle="WRONG ANSWER :-( ";
    }
    AlertDialog.Builder builder=new AlertDialog.Builder(this);
    builder.setTitle(alertTitle);
    builder.setMessage("CORRECT ANSWER: " + correctAnswer);
    builder.setPositiveButton("--NEXT-->", new DialogInterface.OnClickListener() {
        @Override
        public void onClick(DialogInterface dialogInterface, int i) {
```

```

        if (qCount == Q_COUNT) {
            //show result
            Intent intent=new
Intent(getApplicationContext(),ResultActivity.class);
            intent.putExtra("RIGHT_ANSWER_COUNT",correctAnswerCount);
            startActivity(intent);
        }
        else {
            qCount++;
            showNextQuiz();
        }
    }
});
builder.setCancelable(false);
builder.show();

```

SCREEN IV

RESULT ACTIVITY

Here the number of the correct answer to the total number of question is being displayed, then a final score is displayed.

Below the final score, an external source to practice session is displayed and a button to home is displayed.

(ResultActivity.class)



Based upon result count final score is displayed.

```
TextView resultCount = findViewById(R.id.resultCount);
TextView resultFinal = findViewById(R.id.resultFinal);
int score=getIntent().getIntentExtra("RIGHT_ANSWER_COUNT",0);

SharedPreferences settings = getSharedPreferences("QuizWorldApp",
Context.MODE_PRIVATE);

int finalScore = settings.getInt("finalScore",0);
finalScore+=score;
resultCount.setText(score + "/5");
resultFinal.setText("Final Score :" + score);

//update the totalScore
SharedPreferences.Editor editor =settings.edit();
editor.putInt("finalScore", finalScore);
editor.apply();
```

We have two on click listeners for two buttons.

```
View.OnClickListener bListener = new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        //create an Intent for the Bill screen

        Intent i =new Intent(ResultActivity.this,WebActivity.class);
```

```

        // start a new activity with the intent i
        startActivity(i);
    }
};
b.setOnClickListener(bListener);
final Button c = (Button)findViewById(R.id.button3);
View.OnClickListener cListener = new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        //create an Intent for the Bill screen

        Intent i =new Intent(ResultActivity.this, WelcomeActivity.class);

        // start a new activity with the intent i
        startActivity(i);
    }
};

//set the split button b's event handler

c.setOnClickListener(cListener);

```

SCREEN IV

LIST ACTIVITY

This is a list activity much useful in providing similar kind of content which has its own information.

1. The first button named Kidsworld is used for kids to practice quiz topics, this redirects to external sites where more topics on country capitals can be found.
2. And all remaining buttons provide the same functionality of redirecting to external sites with different GUI and more interactive questions.

(WebActivity.class)

```

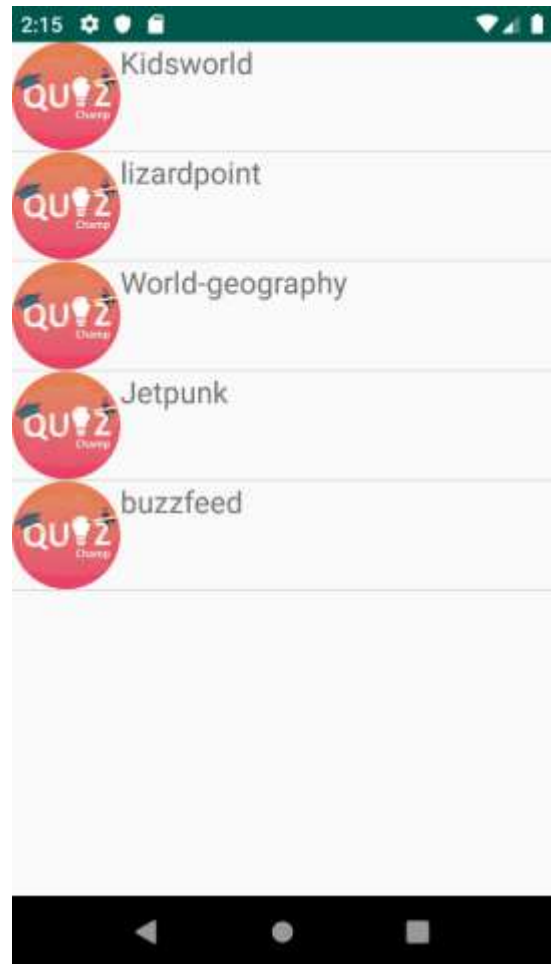
List<String> Gadgets =

Arrays.asList(getResources().getStringArray(
R.array.gadgets));

// inflate the GUI with the gadgets list

setListAdapter(new
ArrayAdapter<String>(this,
R.layout.activity_web,
R.id.you, Gadgets));

```



```

protected void onListItemClick(ListView l, View v, int position, long id)
{
    Intent intent ;

    switch (position)
    {
        case 0:// Night Guide (web page, image)
            intent = new Intent(WebActivity.this, PictureActivity.class);

            // add label text and resource id to the intent as String extras

            intent.putExtra(PictureActivity.LBL_KEY,
getResources().getString(R.string.txtNight));
            intent.putExtra(PictureActivity.ID_KEY,
Integer.toString(R.drawable.img11));
            intent.putExtra(PictureActivity.BTN,
getResources().getString(R.string.btnNight));

            intent.putExtra(PictureActivity.URL, getResources().getString(R.string.nightURL));
            break;
    }
}

```

SCREEN IV

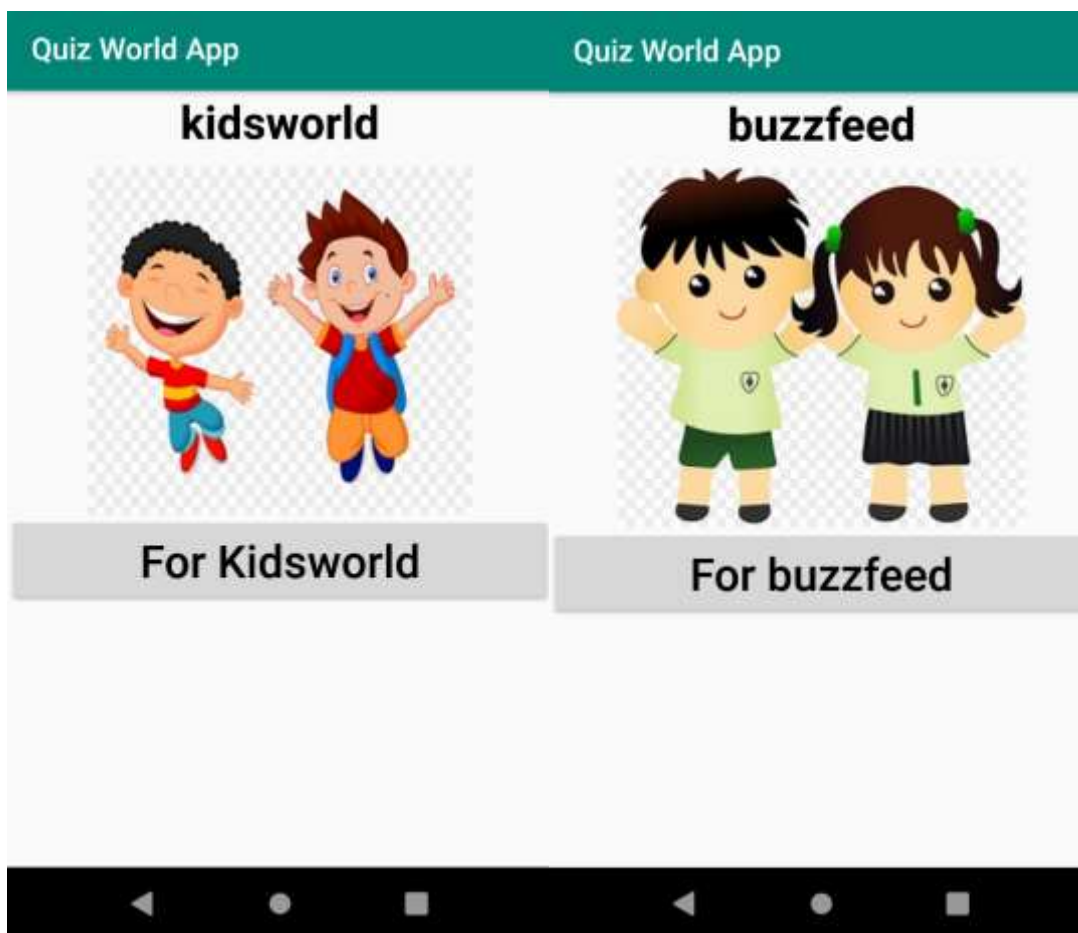
WEB ACTIVITY

These are the overview of external sites links These provide basic information of sites before entering into them.

Name of the page is displayed at the top followed by an image and then a button to external links is displayed

on clicking the button we are redirected to external links of the displayed page name.

We are providing these external sites by using URL saved in the resources.



(PictureActivity.class)

```

Intent intent = getIntent();
Bundle extras = intent.getExtras();

if(extras!=null) // make sure there are extras
{
    // get the String extra with key=LBL_KEY
    String res_label = extras.getString(LBL_KEY);

    // display the labelString in the titleTextView
    final TextView pictureTitle = findViewById(R.id.titleTextView);
    pictureTitle.setText(res_label);

    String btnLbl = extras.getString(BTN);
    final Button btnLabel = (Button) findViewById(R.id.button5);
    btnLabel.setText(btnLbl);

    // get the String extra with key=ID_KEY
    String image_id = extras.getString(ID_KEY);

    // convert the resource ID from String to integer
    int imageID = Integer.parseInt(image_id);

    final String url = extras.getString(URL);
    final Button btnSite = (Button) findViewById(R.id.button5);
    btnSite.setTransformationMethod(null);
    View.OnClickListener buttonListener = new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Intent intent1 = new Intent(Intent.ACTION_VIEW, Uri.parse(url));
            startActivity(intent1);
        }
    };
    btnSite.setOnClickListener(buttonListener);

    /*
        in the pictureImageView
        1. display the image with the imageID resource id
        2. change the content description to the res_label String
    */

    final ImageView picture = (ImageView) findViewById(R.id.pictureImageView);
    picture.setImageResource(imageID);
    picture.setContentDescription(res_label);
    picture.setOnClickListener(buttonListener);
}
} // end onCreate method
} // end Picture class

```

CONCLUSION:

By the end of this project, I learned a practical way of implementing various concepts That which I have learned theoretically. This knowledge would be very useful to further enhance in the field of Andriod Development. I got to know the importance of following the Step-by-Step procedures in reaching the final product. Additionally, I understand that the initial stages like creating new activities should be done very carefully because the next steps are going to be based on this. On the other hand using dimensions, layout, String found to be confused but day-by-day working on the projects made me understand the format and create the fixed format buttons and clear Layouts.

There is some trouble while doing setListAdapter, ListView methods. Nevertheless, we are supported by faculty in detailed notes.

A practical way of understanding is the best way to enhance knowledge in any particular field. So, I think this project implementation plays a major role in my knowledge building on Mobile Applications.

References:

- **Androd developers.**
- **Android Boot Camp for Developers using Java: A Guide to Creating Your First Android Apps, Third Edition.**
- **Andriod studio beginners.**
- **Google.**
- **Class lesson slides.**
- **Androd developers(Youtube).**
- **Buzzfeed.**