

Android Application Development - Assignment

Assignment 1

Objective:

Develop an application, which will display a user interface for Calculator and implement the mathematical operations for the application. This app should have an activity to display the calculator UI and a Java file which will have the code implemented for the operations

Key Learnings:

1. Using the table layout in Android
2. Implementing the click handlers for buttons and program

App Prototype Image



Assignment 2:

Objective:

This assignment will help in understanding how to play audio in Android. Develop an application, which will have an activity to show the interface shown below in the prototype images section. This is a media player to be developed which enables a set of songs to be played with the controls to control the play back of the songs in the list view.

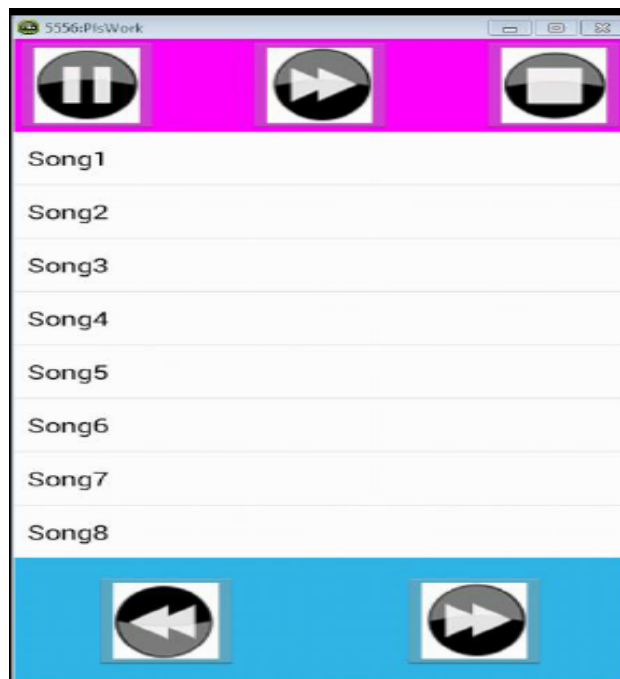
Key Requirements for this:

- List View should a set of songs to be played. Either the songs can be put in the raw folder as part of the resources of the applications or the songs can also be read from the asset folder of the application.
- App should have the interface for play, pause, stop, previous, next
- Application should allow the songs being played are controlled using the buttons [for example, next button : should allow the next song in the list to be played]
- Optionally, the app can also contain a text view, which may display the song, which is currently being played.

Key Learnings

- Working with media.
- Working with the raw resources / assets
- Controlling the playback of the songs

App Prototype Image



Assignment 3:

Objective:

Develop an application to display a set of photos one by one. Application has to be developed to show a static set of pictures, which is already copied into the drawable folder in the Android application project.

The User Interface should consist of-

- a. 2 buttons [next, previous],
- b. 1 Toggle Button to enable/disable the slideshow mechanism and
- c. An Image View to show the picture

Specifications:

1. Next button should show the next picture in the list, and once it reaches the end of the list, it should start showing the first picture.
2. Previous button should show the previous picture in the list and once it reached the beginning of the list, it should start showing the last picture.
3. ToggleButton is for supporting the slideshow support for automatically showing the next picture after every “n” seconds.

Note.: If the state of the ToggleButton is on, then the auto mode should be on, if it is off, showing the next/previous picture has to be manual by explicitly clicking on the “prev”/”next” button.

Key Learnings

1. Working with images in Android
2. Programming Button and ToggleButton

App Prototype Image



Assignment 4:

Objective:

Develop an application to change the background colour of a text view in the app using Seek bars. Application has to be developed to show 3 seek bars, 4 text views - one for each colour like red, green, blue and one for changing the background

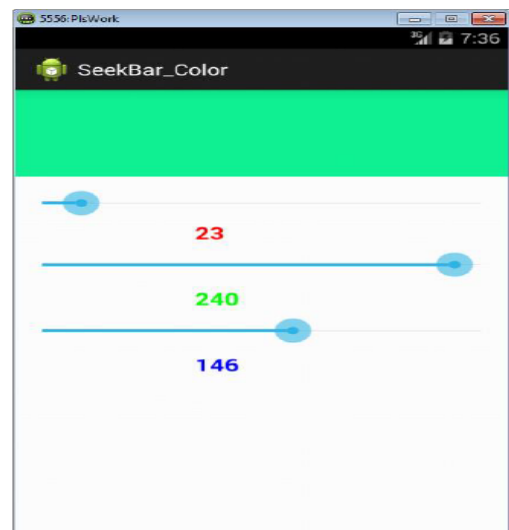
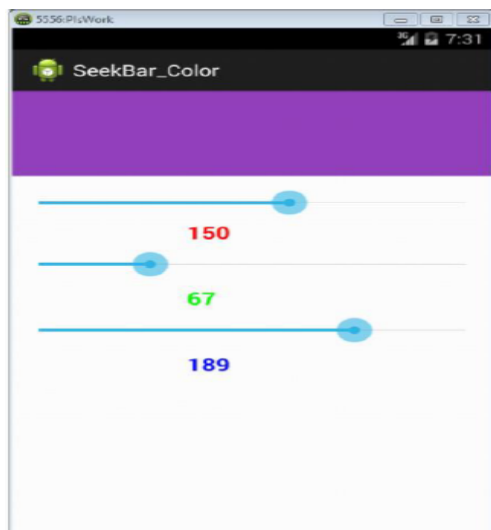
Specifications:

As and when the seek bar thumb is moved, the background of the text view has to be changed to the new colour with the values of the thumb positions of the 3 seek bars respectively, and the progress number [current thumb position value] has to be shown in the 3 text views for red, green and blue

Key Learnings:

1. Working with seek bars in Android
2. Programming seek bar change event listener.
3. Working the background colour.

App Prototype Image



Assignment 5:

Objective:

This application will help the developer to know how to pick the content from the gallery and use it in the app. Upon clicking the button to change the wallpaper, the app has to open the gallery and allow the user to pick any image from the gallery. The picked image will be used as a background for the activity of the application

Specifications:

Application should have one activity with one button with a text “Set Wallpaper”. Clicking on this button, gallery should be opened and the picked image from the gallery to be used as a background for the current activity.

Key Learnings:

1. Working with intents to pick an external content

App Prototype Image



Assignment 6:

Objective:

This application will help the developer to know how to work with notification in Android. At times, an app may have to display an icon to notify the user about some ongoing activity / some message to navigate to

Examples include: Download icon being placed by download manager. Music being played by the music player may have an icon being placed.

Specifications:

Application should have one activity with a button with a text “Notify”, clicking on which a notification icon will be placed on the status bar. This notification should display a message (as in the prototype image below), upon pulling down the notification and clicking on the notification, it has navigate to the DIALPAD activity.

Key Learnings:

1. Working with notifications in Android
2. Working with pending intent
3. Opening the inbuilt DIALPAD activity using intents.

App Prototype Image:

