THADOMAL SHAHANI TSEC ENGINEERING COLLEGE

EXPERIMENT NO. 6

Aim :- Write an Android Application that creates an alert on receiving a message.

Theory :-

In Android development, creating an application that triggers an alert upon receiving a message involves utilizing the BroadcastReview component to listen for incoming messages and triggering an alert mechanism upon receipt. This process typically involves registering a dummy button which when clicked, will generate a message and as the message is generated, it triggers an alert, and displays it in an alert dialog.

Program structure :-

activity_main.xml :

The above file is the XML layout code provided which defines the layout for an Android activity's main UI screen. Following are the functions used in the code :

1) Relativelayout :

This is the root layout element used to arrange child views relative to each other or to parent.

2) xmlns : android :

This namespace declaration allows you to use Android-specific attributes in XML layout file.

3) xmlns : tools :

This namespace declaration is used for design-time attributes provided by Android Studio layout editor.

4) android : background :

This attribute sets the background color or drawable for Relative Layout.

5) android : padding :

This attribute specifies the padding (empty space) inside the Button. In this case, its set to 15 dp, providing some space between the text and edges of the Button.

Overall, this layout defines a Relative Layout with a single Button centered in the middle. The Button has rounded corners, a drop shadow effect, and padding, making it visually appealing and interactive.

Rounded_button_background.xml & colors.xml :-

The provided XML files, are used in app development to define custom drawable shapes and colors.

First file defines a drawable shape resource used as background for UI elements, such as buttons. It specifies a rectangle shape with rounded corners, utilizing '<shape>' element with other attributes.

The second file defines color resources that can be referenced throughout the app. It includes 'red color (color values defined using hexadecimal notation #RRGGBB), allowing developers to maintain consistency in color usage across different UI elements and layouts in the app.

Java Programming Logic :-

This Java code represents an Android application that creates an alert dialog when a button is clicked. Following are the functions used :-

1) Package Declaration :

The 'com.example.alertapplication' package declaration indicates name of the application.

2) Import Statements:

These bring in classes from Android framework that are used in the code, eg. dialogs, listeners, etc.

3) MainActivity class and onCreate():

This method sets layout for activity using the 'setContentView()' method, passing layout resource 'R.layout.activity_main'.

4) showAlert():

This method creates and shows an alert dialog with a title ("Alert") and a message parameter. It uses an 'AlertDialog.Builder' to construct the dialog and sets a positive button "OK" that dismisses the dialog when clicked.

5) AlertDialog:

This class represents a dialog that can show title, message and buttons, shown using 'show()' method.

Conclusion:

This Android project demonstrates implementation of visually appealing UI featuring a button that triggers an alert dialog.