1. Launch the Android Studio. If you are launching for the first time below screen appears. Click on “Start a new Android Studio project”.

![Android Studio Setup Wizard](image)

2. Enter “MortgageCalculator” as Application name. We can also see where the project is getting stored in the Project Location field. Click Next.

![Create New Project](image)

4. Select BlankActivity, Click Next.

5. Click Finish.
6. After you click Finish in above step. Below screen pop’s up. It might take couple of minute to completely setup the project.
7. Now it’s time to verify, if we have setup everything correct.
Click on “Run 'app'” . Below Screen pops up.
Select the Android virtual device.
During the installation process Android virtual device will be created. Select the Android virtual device. If Virtual device is not created click on the button next to the Android virtual device drop down list. Follow the instruction in the wizard to set up appropriate virtual device. Click on OK.
8. Below screen pops up. To unlock Hold the left mouse button and scroll mouse upwards from the lock symbol shown in the figure below.

9. After unlock the screen. Below screen shows up.
This is our application. Click on it to launch the application.
10. Now it’s time to implement Mortgage Calculator application. We can use the relative layout or the change the Layout to Table Layout. To change to “TableLayout” see the Section changing layouts.
11. We will now add the text, edit text fields and buttons. In the Form Widget panel under the Palette panel on the left side of the IDE.

Drag and drop Plain Text View for displaying texts (Principle Amount, Interest Rate, Periods and Payment Amount).
To add the Edit text fields, Drag and drop the appropriate Edit text palette. Under Text Fields you can see numerous Edit text palettes, Choose correct Edit text for your application. Example: Principle amount is decimal number, so we can drag and drop Edit Text “Number (Decimal)” to enter the Principle amount. We can still use “Plain Text” Edit Text Palette but in the code need to verify if the text entered is decimal number or not.

Drag and drop the buttons to Calculate and reset.
12. After adding and arranging all the components, your screen should look like the snapshot shown below.

13. Now it's time to write some code to implement functionality to mortgage calculator. In the `MainActivity.java` we need to declare variables for buttons and Edit text component that we created in the Layout file.
14. Now we need to initialize the variables that were created in the step 13.

```java
public class MainActivity extends ActionBarActivity {

    RelativeLayout background;
    Button btnCalculate;
    Button btnReset;
    EditText etxtPrincipal, etxtInterest, etxtPeriod, etxtPrice;

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

        background = (RelativeLayout) findViewById(R.id.background);
        etxtPrincipal = (EditText) findViewById(R.id.etxtPrincipal);
        etxtInterest = (EditText) findViewById(R.id.etxtInterest);
        etxtPeriod = (EditText) findViewById(R.id.etxtPeriod);
        etxtPrice = (EditText) findViewById(R.id.etxtPrice);
        btnCalculate = (Button) findViewById(R.id.btnCalculate);
        btnReset = (Button) findViewById(R.id.btnReset);
    }

    btnCalculate.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            double principle = Double.parseDouble(etxtPrincipal.getText().toString());
            double interest = Double.parseDouble(etxtInterest.getText().toString());
            int period = Integer.parseInt(etxtPeriod.getText().toString());
            double price = (interest * principle) / (1 - Math.pow(1 + interest, -period));
            etxtPrice.setText(String.format("%.0f", price));
        }
    });

    btnReset.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            etxtPrincipal.setText(""");
            etxtInterest.setText(""");
            etxtPeriod.setText(""");
            etxtPrice.setText(""");
        }
    });
}
```

15. Now we need to create listeners for the buttons.
16. Now we have completed coding. It’s time to run the application. Follow the steps from 7 to 9 to run the application.
Changing Layout:

1. Right click on the layout> New > Layout resource file.

2. Below screen pops up. Enter File name and Root element as shown. Click OK.
3. Now `tableLayout` resource file is generated. You now need to tell the application to launch this layout when application is run.

4. change the layout name in `MainActivity.java`