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Mobile Application Assignment #1 - Report

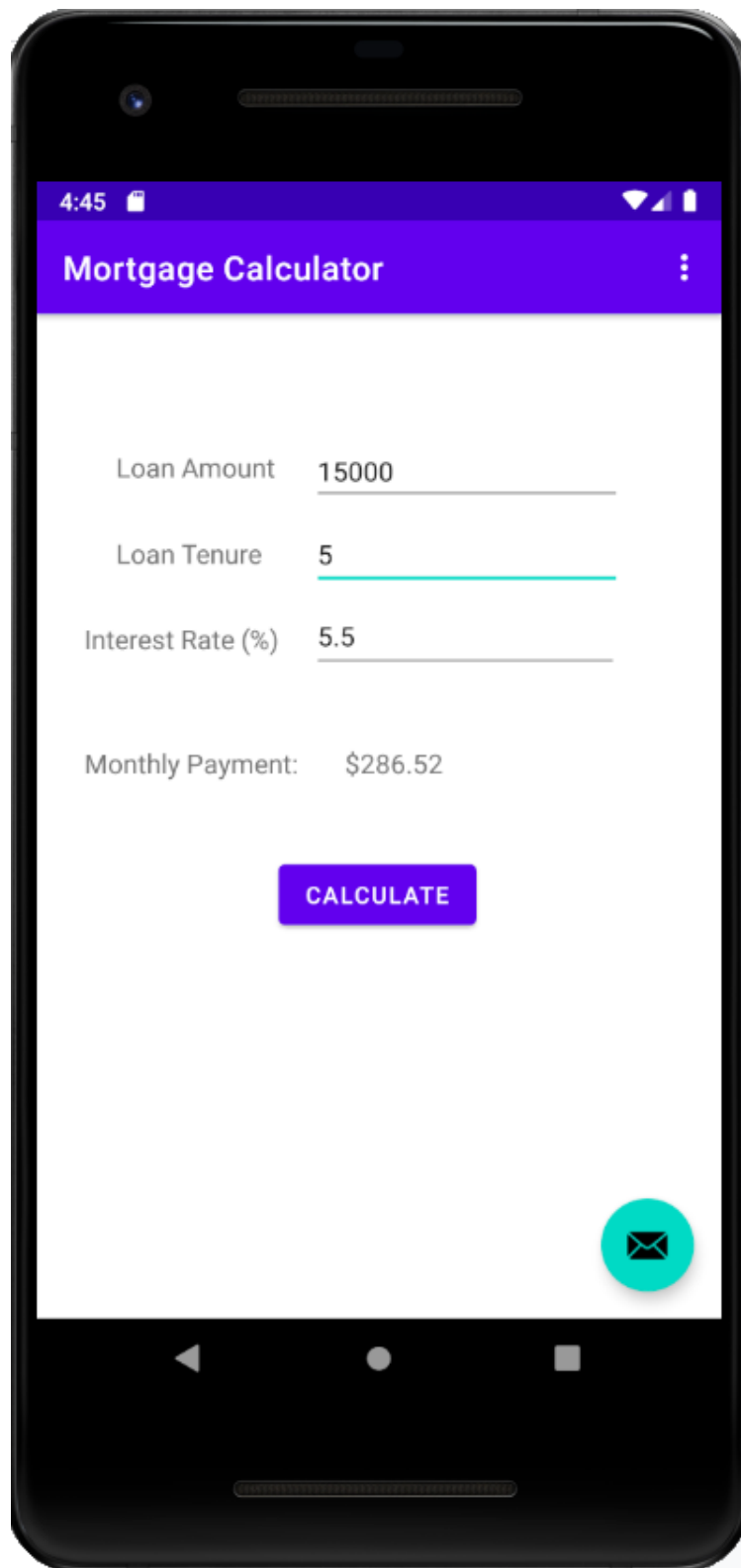
This report outlines the steps taken to create the mortgage application. The layouts used were just one layout with three inputs/views for loan amount, loan tenure, and interest rate (%). The user enters these values and then clicks on the “CALCULATE” button. This will run the EMI calculation and produce the output in the “Monthly Payment” textView.

```
1 public void onViewCreated(@NonNull View view, Bundle savedInstanceState) {  
2     super.onViewCreated(view, savedInstanceState);  
3  
4     binding.buttonFirst.setOnClickListener(new View.OnClickListener() {  
5         @Override  
6         public void onClick(View view) {  
7             // get loan amount from the textView and convert it to double  
8             double loan = Double.parseDouble(binding.loanAmount.getText().toString());  
9  
10            // get tenure amount from the textView and convert it to double  
11            double tenure = Double.parseDouble(binding.loanTenure.getText().toString());  
12  
13            // get interest amount from the textView and convert it to double, then divide it by 12 to get the interest per month  
14            double interest = Double.parseDouble(binding.interestRate.getText().toString()) / 12.0;  
15  
16            // variable to hold the (1-i)^n value  
17            double i = Math.pow((1.0 + interest / 100.0), (tenure * 12.0));  
18            // equation to calculate EMI (equated monthly installments)  
19            double emi = loan * (interest/100.0) * i / ( i - 1 );  
20  
21            // after calculated EMI, set it to the textView in the interface  
22            binding.monthlyPayment.setText("$" + String.format("%.2f", emi));  
23        }  
24    }  
25 }
```

Get inputs from layout views, then use EMI equation to calculate the mortgage payments and print it in layout.

See next page for user interface

Layout View:



The image shows a smartphone screen displaying a 'Mortgage Calculator' app. The app has a purple header bar with the title 'Mortgage Calculator' and a menu icon. Below the header, there are three input fields for 'Loan Amount' (15000), 'Loan Tenure' (5), and 'Interest Rate (%)' (5.5). The 'Loan Tenure' field has a red underline. Below these fields, the calculated 'Monthly Payment' is shown as '\$286.52'. A purple 'CALCULATE' button is centered below the payment amount. In the bottom right corner, there is a red circular button with a white envelope icon. The status bar at the top shows the time as 4:45 and various system icons. The bottom of the screen shows the Android navigation bar.

4:45

Mortgage Calculator

Loan Amount 15000

Loan Tenure 5

Interest Rate (%) 5.5

Monthly Payment: \$286.52

CALCULATE

Envelope icon