

REPORT

This report shows the methods used in the creation of the financial calculator app

Financial app has 5 main parts and those are **Compound Saving, Saving, Loan, Mortgage, Help** and help view describe about how to use this app and other 4 compounds are help you to do calculation in their parts

Creating interfaces: -

in here I create tab pane and add 5 tabs to that tab pane

after that I add labels, buttons and text fields to each tab and add some style to this component

```
public class Main extends Application {

    @Override
    public void start(Stage primaryStage) throws Exception{
        primaryStage.setTitle("Financial Calculator");
        // creating tabpane
        TabPane calculator =new TabPane();

        // create tabs and add to tabpane
        Tab Compound_saving = new Tab("Compound Saving");

        //adding contents to our interface
        Label C_lb1 = new Label("Start Principal :");
        C_lb1.setLayoutX(60);
        C_lb1.setLayoutY(30);
        C_lb1.setStyle("-fx-font:bold 16px 'arialblack'");
        Label C_lb2 = new Label("Interest Rate :");
        C_lb2.setLayoutX(60);
        C_lb2.setLayoutY(90);
        C_lb2.setStyle("-fx-font:bold 16px 'arialblack'");
        Label C_lb3 = new Label("Terms(in years) :");
        C_lb3.setLayoutX(60);
        C_lb3.setLayoutY(150);
        C_lb3.setStyle("-fx-font:bold 16px 'arialblack'");
        Label C_lb4 = new Label("Future Value :");
        C_lb4.setLayoutX(60);
        C_lb4.setLayoutY(210);
        C_lb4.setStyle("-fx-font:bold 16px 'arialblack'");
        Label ans_1 = new Label();
        ans_1.setLayoutX(165);
        ans_1.setLayoutY(250);

        TextField C_amount = new TextField();
        C_amount.setLayoutX(230);
        C_amount.setLayoutY(28);
        C_amount.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-
radius:22px");
        TextField interest_1 = new TextField();
```

```

        interest_1.setLayoutX(230);
        interest_1.setLayoutY(88);
        interest_1.setStyle("-fx-font:bold 14px 'arialblack';-fx-
background-radius:22px");
        TextField terms_1 = new TextField();
        terms_1.setLayoutX(230);
        terms_1.setLayoutY(148);
        terms_1.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-
radius:22px");
        TextField fut_1= new TextField();
        fut_1.setLayoutX(230);
        fut_1.setLayoutY(208);
        fut_1.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-
radius:22px");

        Button calculate_1 = new Button("Calculate");
        calculate_1.setLayoutX(350);
        calculate_1.setLayoutY(300);
        calculate_1.setStyle("-fx-background-color:darkslateblue;-fx-text-
fill: white;-fx-background-radius:28px;" +
        "-fx-padding:12px;-fx-font:bold 20px 'arialblack'");
        Button Keyboard_1 = new Button("Keyboard");
        Keyboard_1.setLayoutX(40);
        Keyboard_1.setLayoutY(300);
        Keyboard_1.setStyle("-fx-background-color:darkslateblue;-fx-text-
fill: white;-fx-background-radius:28px;-fx-padding:12px;" +
        "-fx-font:bold 20px 'arialblack'");

        Pane base_1 = new Pane();
        base_1.setStyle("-fx-background-color:lightblue;");

base_1.getChildren().addAll(C_lb2,C_lb3,C_lb4,interest_1,fut_1,terms_1,ans_1,
calculate_1,Keyboard_1,C_lb1,C_amount);
        Compound_saving.setContent(base_1);
        //-----
        -----

```

Creating saving interface

```
Tab Saving = new Tab("Saving");

Label S_lb1 = new Label("Start Principal :\n\n(Starting Principal  
only for future value calculation)");
S_lb1.setLayoutX(60);
S_lb1.setLayoutY(170);
S_lb1.setStyle("-fx-font:bold 16px 'arialblack'");
Label S_lb2 = new Label("Interest Rate :");
S_lb2.setLayoutX(60);
S_lb2.setLayoutY(10);
S_lb2.setStyle("-fx-font:bold 16px 'arialblack'");
Label S_lb3 = new Label("Terms(in years) :");
S_lb3.setLayoutX(60);
S_lb3.setLayoutY(50);
S_lb3.setStyle("-fx-font:bold 16px 'arialblack'");
Label S_lb4 = new Label("PMT :");
S_lb4.setLayoutX(60);
S_lb4.setLayoutY(90);
S_lb4.setStyle("-fx-font:bold 16px 'arialblack'");
Label S_lb5 = new Label("Future Value :");
S_lb5.setLayoutX(60);
S_lb5.setLayoutY(130);
S_lb5.setStyle("-fx-font:bold 16px 'arialblack'");
Label ans_2 = new Label();
ans_2.setLayoutX(120);
ans_2.setLayoutY(250);

TextField S_amount = new TextField();
S_amount.setLayoutX(230);
S_amount.setLayoutY(168);
S_amount.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-  
radius:22px");
TextField interest_2 = new TextField();
interest_2.setLayoutX(230);
interest_2.setLayoutY(8);
interest_2.setStyle("-fx-font:bold 14px 'arialblack';-fx-  
background-radius:22px");
TextField terms_2 = new TextField();
terms_2.setLayoutX(230);
terms_2.setLayoutY(48);
terms_2.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-  
radius:22px");
TextField pmt_2 = new TextField();
pmt_2.setLayoutX(230);
pmt_2.setLayoutY(88);
pmt_2.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-  
radius:22px");
TextField fut_2 = new TextField();
fut_2.setLayoutX(230);
fut_2.setLayoutY(128);
fut_2.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-  
radius:22px");
```

```

Button calculate_2 = new Button("Calculate");
    calculate_2.setLayoutX(350);
    calculate_2.setLayoutY(300);
    calculate_2.setStyle("-fx-background-color:darkslateblue;-fx-text-
fill: white;-fx-background-radius:28px;" +
        "-fx-padding:12px;-fx-font:bold 20px 'arialblack'");
Button Keyboard_2 = new Button("Keyboard");
    Keyboard_2.setLayoutX(40);
    Keyboard_2.setLayoutY(300);
    Keyboard_2.setStyle("-fx-background-color:darkslateblue;-fx-text-
fill: white;-fx-background-radius:28px;" +
        "-fx-padding:12px;-fx-font:bold 20px 'arialblack'");

Pane base_2 = new Pane();
    base_2.setStyle("-fx-background-color:lightblue;");
    base_2.getChildren().addAll( S_lb2,S_lb3,S_lb4,S_lb5
,interest_2,pmt_2,terms_2,ans_2,fut_2,calculate_2,Keyboard_2,S_lb1,S_amount);
    Saving.setContent(base_2);
    //-----
    -----

```

Creating Loan interface

```
Tab Loans = new Tab("Loan");

Label L_lb1 = new Label("Loan Amount :");
L_lb1.setLayoutX(60);
L_lb1.setLayoutY(30);
L_lb1.setStyle("-fx-font:bold 16px 'arialblack'");
Label L_lb2 = new Label("Interest Rate :");
L_lb2.setLayoutX(60);
L_lb2.setLayoutY(90);
L_lb2.setStyle("-fx-font:bold 16px 'arialblack'");
Label L_lb3 = new Label("Loan Terms(in years) :");
L_lb3.setLayoutX(60);
L_lb3.setLayoutY(150);
L_lb3.setStyle("-fx-font:bold 16px 'arialblack'");
Label L_lb4 = new Label("PMT :");
L_lb4.setLayoutX(60);
L_lb4.setLayoutY(210);
L_lb4.setStyle("-fx-font:bold 16px 'arialblack'");
Label ans_3 = new Label();
ans_3.setLayoutX(115);
ans_3.setLayoutY(250);

TextField L_amount = new TextField();
L_amount.setLayoutX(230);
L_amount.setLayoutY(28);
L_amount.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-
radius:22px");
TextField interest_3 = new TextField();
interest_3.setLayoutX(230);
interest_3.setLayoutY(88);
interest_3.setStyle("-fx-font:bold 14px 'arialblack';-fx-
background-radius:22px");
TextField terms_3 = new TextField();
terms_3.setLayoutX(230);
terms_3.setLayoutY(148);
terms_3.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-
radius:22px");
TextField pmt_3= new TextField();
pmt_3.setLayoutX(230);
pmt_3.setLayoutY(208);
pmt_3.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-
radius:22px");

Button calculate_3 = new Button("Calculate");
calculate_3.setLayoutX(350);
calculate_3.setLayoutY(300);
calculate_3.setStyle("-fx-background-color:darkslateblue;-fx-text-
fill: white;-fx-background-radius:28px;" +
    "-fx-padding:12px;-fx-font:bold 20px 'arialblack'");
Button Keyboard_3 = new Button("Keyboard");
Keyboard_3.setLayoutX(40);
Keyboard_3.setLayoutY(300);
Keyboard_3.setStyle("-fx-background-color:darkslateblue;-fx-text-
fill: white;-fx-background-radius:28px;" +
    "-fx-padding:12px;-fx-font:bold 20px 'arialblack'");
```

```
Pane base_3 = new Pane();
    base_3.setStyle("-fx-background-color:lightblue;");

base_3.getChildren().addAll(L_lb1,L_lb2,L_lb3,L_lb4,L_amount,interest_3,pmt_3
,terms_3,ans_3,calculate_3,Keyboard_3);
    Loans.setContent(base_3);
    //-----
-----
```

Creating Mortgage interface

```
Tab Mortgage = new Tab("Mortgage");

Label M_lb1 = new Label("Mortgage Price :");
    M_lb1.setLayoutX(40);
    M_lb1.setLayoutY(30);
    M_lb1.setStyle("-fx-font:bold 16px 'arialblack'");
Label M_lb2 = new Label("Interest Rate :");
    M_lb2.setLayoutX(40);
    M_lb2.setLayoutY(90);
    M_lb2.setStyle("-fx-font:bold 16px 'arialblack'");
Label M_lb3 = new Label("Mortgage Terms(in years) :");
    M_lb3.setLayoutX(40);
    M_lb3.setLayoutY(150);
    M_lb3.setStyle("-fx-font:bold 16px 'arialblack'");
Label M_lb4 = new Label("PMT :");
    M_lb4.setLayoutX(40);
    M_lb4.setLayoutY(210);
    M_lb4.setStyle("-fx-font:bold 16px 'arialblack'");
Label ans_4 = new Label();
    ans_4.setLayoutX(115);
    ans_4.setLayoutY(250);

TextField M_amount = new TextField();
    M_amount.setLayoutX(270);
    M_amount.setLayoutY(28);
    M_amount.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-
radius:22px");
TextField interest_4 = new TextField();
    interest_4.setLayoutX(270);
    interest_4.setLayoutY(88);
    interest_4.setStyle("-fx-font:bold 14px 'arialblack';-fx-
background-radius:22px");
TextField terms_4 = new TextField();
    terms_4.setLayoutX(270);
    terms_4.setLayoutY(148);
    terms_4.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-
radius:22px");
TextField pmt_4= new TextField();
    pmt_4.setLayoutX(270);
    pmt_4.setLayoutY(208);
    pmt_4.setStyle("-fx-font:bold 14px 'arialblack';-fx-background-
radius:22px");

Button calculate_4 = new Button("Calculate");
    calculate_4.setLayoutX(350);
    calculate_4.setLayoutY(300);
    calculate_4.setStyle("-fx-background-color:darkslateblue;-fx-text-
fill: white;-fx-background-radius:28px;" +
        "-fx-padding:12px;-fx-font:bold 20px 'arialblack'");
Button Keyboard_4 = new Button("Keyboard");
    Keyboard_4.setLayoutX(40);
    Keyboard_4.setLayoutY(300);
    Keyboard_4.setStyle("-fx-background-color:darkslateblue;-fx-text-
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```
fill: white;-fx-background-radius:28px;" +
    "-fx-padding:12px;-fx-font:bold 20px 'arialblack'");

    Pane base_4 = new Pane();
    base_4.setStyle("-fx-background-color:lightblue;");

base_4.getChildren().addAll(M_lb1,M_lb2,M_lb3,M_lb4,M_amount,interest_4,pmt_4
,terms_4,ans_4,calculate_4,Keyboard_4);
    Mortgage.setContent(base_4);
    //-----
-----
```


Creating help Pane

```
Tab Help = new Tab("Help");

Label H_lb1 = new Label();
H_lb1.setText("- This Calculator have 4 main(calculation) parts and  
those are Compound Saving, Saving, \n    Loan, and Mortgage. So, you able to "  
+  
    "calculate one of the components of these 4 parts. ");  
H_lb1.setLayoutY(20);  
H_lb1.setLayoutX(15);  
H_lb1.setStyle("-fx-text-fill: white;-fx-font:bold 11px  
'arialblack'");

Label H_lb2 = new Label();  
H_lb2.setText("- You must use our system keyboard only (not your  
device keyboard).");  
H_lb2.setLayoutY(60);  
H_lb2.setLayoutX(15);  
H_lb2.setStyle("-fx-text-fill: white;-fx-font:bold 11px  
'arialblack'");

Label H_lb3 = new Label();  
H_lb3.setText("- You want to give inputs for 3 values to calculate  
4th Value(The field in which the user " +  
    "\n wishes to estimate one of the parameters should be  
left blank) but you can't calculate \n all components from the calculator  
only " +  
    "specialized components are calculate able\n and those  
are:- " +  
    "\n                Compound Saving = Start principal,  
Interest Rate, Terms, Future Values" +  
    "\n                Saving                        = Terms,  
PMT, Future Value" +  
    "\n                Loan                        = PMT,  
Loan Terms" +  
    "\n                Mortgage                        = PMT,  
Mortgage Terms ");  
H_lb3.setStyle("-fx-text-fill: white;-fx-font:bold 11px  
'arialblack'");  
H_lb3.setLayoutY(90);  
H_lb3.setLayoutX(15);

Label H_lb4 = new Label();  
H_lb4.setText("- Eg : if you want to calculate Future value from  
Saving Calculator first want to fill other\n                three values " +  
    "with the help of keyboard then click the calculate Button.  
");  
H_lb4.setLayoutX(15);  
H_lb4.setLayoutY(240);  
H_lb4.setStyle("-fx-text-fill: white;-fx-font:bold 11px  
'arialblack'");

Label H_lb5 = new Label();  
H_lb5.setText("- If system say 'Invalid Input' that mean you input  
is wrong so, please check your inputs \n and check you fill the all" +
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```

        " the wanted text field also. ");
        H_lb5.setLayoutX(15);
        H_lb5.setLayoutY(280);
        H_lb5.setStyle("-fx-text-fill: white;-fx-font:bold 11px
'arialblack'");

        Label H_lb6 = new Label();
        H_lb6.setText("- For using Key Board please 'Click' the Keyboard
button in every section. ");
        H_lb6.setLayoutX(15);
        H_lb6.setLayoutY(320);
        H_lb6.setStyle("-fx-text-fill: white;-fx-font:bold 11px
'arialblack'");

        Pane base_5=new Pane();
        base_5.setStyle("-fx-background-color:black;");
        base_5.getChildren().addAll(H_lb1,H_lb2,H_lb3,H_lb4,H_lb5,H_lb6);
        Help.setContent(base_5);
        //-----
        -----

        calculator.setTabClosingPolicy(TabPane.TabClosingPolicy.UNAVAILABLE);
        //adding created tabs to tabpane
        calculator.getTabs().addAll(Compound_saving,Saving,Loans,Mortgage,Help);
        primaryStage.setResizable(false);
        primaryStage.setScene(new Scene(calculator, 500, 400));
        primaryStage.show();

    }

    public static void main(String[] args) {
        launch(args);
    }
}

```

Calculation part of compound saving

In here I use try and catch method and if-else condition to validate user inputs

```
calculate_1.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        try {
            if (fut_1.getText().length() == 0) {
                if (terms_1.getText().length() != 0 &&
                    interest_1.getText().length() != 0 && C_amount.getText().length() != 0) {
                    double p = Double.parseDouble(C_amount.getText());
                    double r = Double.parseDouble(interest_1.getText());
                    double t = Double.parseDouble(terms_1.getText());

                    double A = p * Math.pow((1 + (r / (100 * 12))), 12 * t);

                    double A_r = Math.round(A * 100.00) / 100.00;
                    ans_1.setText("Future Value = " + A_r + " Rs");
                    ans_1.setStyle("-fx-background-color:darkslateblue;-fx-
text-fill: white;-fx-padding:6" +
                                "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
                } else {
                    ans_1.setText("Invalid Input ");
                    ans_1.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                                "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
                }
            } else if (terms_1.getText().length() == 0) {
                if (fut_1.getText().length() != 0 &&
                    interest_1.getText().length() != 0 && C_amount.getText().length() != 0) {
                    double p = Double.parseDouble(C_amount.getText());
                    double r = Double.parseDouble(interest_1.getText());
                    double A = Double.parseDouble(fut_1.getText());

                    double t = (Math.log10(A / p)) / (12 * Math.log10(1 + (r
/ (12 * 100))));
                    double t_r = Math.round(t * 100.00) / 100.00;
                    ans_1.setText("Total Terms " + t_r + "Years (" +
Math.round(t_r * 12) + " Months)");
                    ans_1.setStyle("-fx-background-color:darkslateblue;-fx-
text-fill: white;-fx-padding:6" +
                                "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
                } else {
                    ans_1.setText("Invalid Input ");
                    ans_1.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                                "px;-fx-background-radius:28px;-fx-font:bold 16px
```

```

'arialblack'");
    }

    } else if (interest_1.getText().length() == 0) {
        if (terms_1.getText().length() != 0 &&
fut_1.getText().length() != 0 && C_amount.getText().length() != 0) {
            double p = Double.parseDouble(C_amount.getText());
            double A = Double.parseDouble(fut_1.getText());
            double t = Double.parseDouble(terms_1.getText());

            double r = 12 * (Math.pow((A / p), (1 / (12 * t))) - 1);
            double r_r = Math.round(r * 100.00) / 100.00;
            ans_1.setText("Interest Rate = " + r_r * 100 + " %");
            ans_1.setStyle("-fx-background-color:darkslateblue;-fx-
text-fill: white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");

        } else {
            ans_1.setText("Invalid Input ");
            ans_1.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
        }

    } else if (C_amount.getText().length() == 0) {
        if (terms_1.getText().length() != 0 &&
interest_1.getText().length() != 0 && fut_1.getText().length() != 0) {
            double A = Double.parseDouble(fut_1.getText());
            double r = Double.parseDouble(interest_1.getText());
            double t = Double.parseDouble(terms_1.getText());

            double p = (A / Math.pow((1 + (r / 1200)), 12 * t));
            double p_r = Math.round(p * 100.00) / 100.00;
            ans_1.setText("Start Principal = " + p_r + " Rs");
            ans_1.setStyle("-fx-background-color:darkslateblue;-fx-
text-fill: white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");

        } else {
            ans_1.setText("Invalid Input ");
            ans_1.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
        }

    } else {
        ans_1.setText("Invalid Input ");
        ans_1.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                    "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
    }
}

```

```
    }  
    catch (Exception e){  
        ans_1.setText("Invalid Input ");  
        ans_1.setStyle("-fx-background-color:red;-fx-text-fill: white;-  
fx-padding:6" +  
                        "px;-fx-background-radius:28px;-fx-font:bold 16px  
'arialblack'");  
    }  
}  
});
```

Calculation part of saving

```
@Override
public void handle(ActionEvent event) {
    try {
        if (interest_2.getText().length() != 0) {
            if (fut_2.getText().length() == 0) {
                if (terms_2.getText().length() != 0 &&
pmt_2.getText().length() != 0 && S_amount.getText().length() != 0) {
                    double r = Double.parseDouble(interest_2.getText());
                    double t = Double.parseDouble(terms_2.getText());
                    double pmt = Double.parseDouble(pmt_2.getText());
                    double p = Double.parseDouble(S_amount.getText());

                    double A_1 = p * Math.pow((1 + (r / (100 * 12))), 12
* t);
                    double A_2 = pmt * ((Math.pow((1 + (r / (12 * 100))),
12 * t) - 1) / (r / 12 * 100));
                    double A_r = Math.round((A_1 + A_2) * 100.00) /
100.00;
                    ans_2.setText("Future Value = " + A_r + " Rs");
                    ans_2.setStyle("-fx-background-color:darkslateblue;-
fx-text-fill: white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                } else {
                    ans_2.setText("Invalid Input ");
                    ans_2.setStyle("-fx-background-color:red;-fx-text-
fill: white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                }
            } else if (terms_2.getText().length() == 0) {
                if (fut_2.getText().length() != 0 &&
pmt_2.getText().length() != 0) {
                    double r = Double.parseDouble(interest_2.getText());
                    double A = Double.parseDouble(fut_2.getText());
                    double pmt = Double.parseDouble(pmt_2.getText());

                    double t = Math.log10((1 + ((r / 100) * A) / pmt)) /
(Math.log10(1 + (r / 100)) * 12));
                    double t_r = Math.round(t * 100.00) / 100.00;
                    ans_2.setText("Total Terms " + t_r + "Years;");
                    ans_2.setStyle("-fx-background-color:darkslateblue;-
fx-text-fill: white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                } else {
                    ans_2.setText("Invalid Input ");
                }
            }
        }
    }
}
```

```

        ans_2.setStyle("-fx-background-color:red;-fx-text-
fill: white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
    }

    } else if (pmt_2.getText().length() == 0) {
        if (terms_2.getText().length() != 0 &&
fut_2.getText().length() != 0) {
            double r = Double.parseDouble(interest_2.getText());
            double A = Double.parseDouble(fut_2.getText());
            double t = Double.parseDouble(terms_2.getText());

            double pmt = A / ((Math.pow((1 + (r / (12 * 100))),
12 * t) - 1) / (r / 12 * 100));
            double pmt_r = Math.round(pmt * 100.00) / 100.00;
            ans_2.setText("Interest Rate = " + pmt_r + " Rs");
            ans_2.setStyle("-fx-background-color:darkslateblue;-
fx-text-fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");

        } else {
            ans_2.setText("Invalid Input ");
            ans_2.setStyle("-fx-background-color:red;-fx-text-
fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
        }
    } else {
        ans_2.setText("Invalid Input ");
        ans_2.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
    }

    } else {
        ans_2.setText("Invalid Input");
        ans_2.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
    }

    }

    catch (Exception e){
        ans_2.setText("Invalid Input");
        ans_2.setStyle("-fx-background-color:red;-fx-text-fill: white;-
fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
    }
}

});

```

Calculation part of Loan

```
calculate_3.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        try {
            if (L_amount.getText().length() != 0 &&
                interest_3.getText().length() != 0) {
                //checking calculation part

                if (pmt_3.getText().length() == 0) {
                    if (terms_3.getText().length() != 0) {
                        double p = Double.parseDouble(L_amount.getText());
                        double t = Double.parseDouble(terms_3.getText());
                        double r = Double.parseDouble(interest_3.getText());

                        double pmt = (p * (r / (12 * 100)) * Math.pow((1 +
                            ((r / 100) / 12)), 12 * t)) / (Math.pow((1 + ((r / 100) / 12)), 12 * t) - 1);
                        double pmt_r = Math.round(pmt * 100.00) / 100.00;
                        ans_3.setText("PMT = " + pmt_r + " Rs");
                        ans_3.setStyle("-fx-background-color:darkslateblue;-
fx-text-fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                    } else if (terms_3.getText().length() == 0) {
                        ans_3.setText("Invalid Input ");
                        ans_3.setStyle("-fx-background-color:red;-fx-text-
fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                    }
                } else if (terms_3.getText().length() == 0) {
                    if (pmt_3.getText().length() != 0) {
                        double p = Double.parseDouble(L_amount.getText());
                        double pmt = Double.parseDouble(pmt_3.getText());
                        double r = Double.parseDouble(interest_3.getText());

                        double t = Math.log10((1 - ((r / 100) * p) / pmt)) /
                            (Math.log10(1 + (r / 100)) * 12));
                        double t_r = Math.round(t * 100.00) / 100.00;
                        ans_3.setText("Total Mortgage Term is " + t_r + "
Years ( " + Math.round(12 * t) + " Months )");
                        ans_3.setStyle("-fx-background-color:darkslateblue;-
fx-text-fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                    } else if (pmt_3.getText().length() == 0) {
                        ans_3.setText("Invalid Input");
                        ans_3.setStyle("-fx-background-color:red;-fx-text-
fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                    }
                } else {
                    ans_3.setText("Invalid Input");
                }
            }
        }
    }
});
```



```

        ans_3.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
    }
    } else {
        ans_3.setText("Invalid Input");
        ans_3.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
    }
}
catch(Exception e){
    ans_3.setText("Invalid Input");
    ans_3.setStyle("-fx-background-color:red;-fx-text-fill: white;-
fx-padding:6" +
                    "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
}
}
});

```

Calculation part of mortgage

```
calculate_4.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        try {
            if (M_amount.getText().length() != 0 &&
                interest_4.getText().length() != 0) {
                //checking calculation part
                if (pmt_4.getText().length() == 0) {
                    if (terms_4.getText().length() != 0) {
                        double p = Double.parseDouble(M_amount.getText());
                        double t = Double.parseDouble(terms_4.getText());
                        double r = Double.parseDouble(interest_4.getText());

                        double pmt = (p * (r / (12 * 100)) * Math.pow((1 +
                            ((r / 100) / 12)), 12 * t)) / (Math.pow((1 + ((r / 100) / 12)), 12 * t) - 1);
                        double pmt_r = Math.round(pmt * 100.00) / 100.00;
                        ans_4.setText("PMT = " + pmt_r + " Rs");
                        ans_4.setStyle("-fx-background-color:darkslateblue;-
fx-text-fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                    } else if (terms_4.getText().length() == 0) {
                        ans_4.setText("Invalid Input ");
                        ans_4.setStyle("-fx-background-color:red;-fx-text-
fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                    }
                } else if (terms_4.getText().length() == 0) {
                    if (pmt_4.getText().length() != 0) {
                        double p = Double.parseDouble(M_amount.getText());
                        double pmt = Double.parseDouble(pmt_4.getText());
                        double r = Double.parseDouble(interest_4.getText());

                        double t = Math.log10((1 - ((r / 100) * p) / pmt)) /
                            (Math.log10(1 + (r / 100)) * 12));
                        double t_r = Math.round(t * 100.00) / 100.00;

                        ans_4.setText("Total Mortgage Term is " + t_r + "
Years ( " + 12 * Math.round(t_r) + " Months )");
                        ans_4.setStyle("-fx-background-color:darkslateblue;-
fx-text-fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                    } else if (pmt_4.getText().length() == 0) {
                        ans_4.setText("Invalid Input");
                        ans_4.setStyle("-fx-background-color:red;-fx-text-
fill: white;-fx-padding:6" +
                            "px;-fx-background-radius:28px;-fx-font:bold
16px 'arialblack'");
                    }
                } else {
                    ans_4.setText("Invalid Input");
                }
            }
        }
    }
});
```

```

        ans_4.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
    }
    } else {
        ans_4.setText("Invalid Input");
        ans_4.setStyle("-fx-background-color:red;-fx-text-fill:
white;-fx-padding:6" +
                        "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
    }

}
catch (Exception e){
    ans_4.setText("Invalid Input");
    ans_4.setStyle("-fx-background-color:red;-fx-text-fill: white;-
fx-padding:6" +
                    "px;-fx-background-radius:28px;-fx-font:bold 16px
'arialblack'");
}
}
});

```

Creating key board for compound saving

```
Keyboard_1.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        Stage stage_1 = new Stage();
        GridPane gridPane = new GridPane();

        Button key1 = new Button("1");
        key1.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key2 = new Button("2");
        key2.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key3 = new Button("3");
        key3.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key4 = new Button("4");
        key4.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key5 = new Button("5");
        key5.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key6 = new Button("6");
        key6.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key7 = new Button("7");
        key7.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key8 = new Button("8");
        key8.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key9 = new Button("9");
        key9.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key10= new Button("0");
        key10.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key11= new Button(".");
        key11.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key12= new Button("<-");
        key12.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");

        gridPane.setMinSize(240, 320);
        key1.setMinSize(80,80);
        key2.setMinSize(80,80);
        key3.setMinSize(80,80);
        key4.setMinSize(80,80);
        key5.setMinSize(80,80);
        key6.setMinSize(80,80);
        key7.setMinSize(80,80);
        key8.setMinSize(80,80);
        key9.setMinSize(80,80);
        key10.setMinSize(80,80);
```

```
key11.setMinSize(80,80);
key12.setMinSize(80,80);
```

```
gridPane.add(key1, 0, 0);
gridPane.add(key2, 1, 0);
gridPane.add(key3, 0, 1);
gridPane.add(key4, 1, 1);
gridPane.add(key5, 2, 1);
gridPane.add(key6, 0, 2);
gridPane.add(key7, 1, 2);
gridPane.add(key8, 2, 2);
gridPane.add(key9, 0, 3);
gridPane.add(key10, 1, 3);
gridPane.add(key11, 2, 3);
gridPane.add(key12, 2, 0);
```

```
C_amount.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                C_amount.setText(C_amount.getText() + "1");
            }
        });
        key2.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                C_amount.setText(C_amount.getText() + "2");
            }
        });
        key3.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                C_amount.setText(C_amount.getText() + "3");
            }
        });
        key4.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                C_amount.setText(C_amount.getText() + "4");
            }
        });
        key5.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                C_amount.setText(C_amount.getText() + "5");
            }
        });
        key6.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                C_amount.setText(C_amount.getText() + "6");
            }
        });
    }
});
```

```

    }
});
key7.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        C_amount.setText( C_amount.getText() + "7");
    }
});
key8.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        C_amount.setText(C_amount.getText() + "8");
    }
});
key9.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        C_amount.setText(C_amount.getText() + "9");
    }
});
key10.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        C_amount.setText(C_amount.getText() + "0");
    }
});
key11.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        int totalDots =0;
        String text = C_amount.getText();
        for (int i = 0; i<text.length(); i++ ){
            char Dots = text.charAt(i);

            if (Dots=='.' ){
                totalDots = totalDots+1;
            }
        }
        if ( totalDots ==0){
            C_amount.setText(text+".");
        }
        else {
            C_amount.setText(text+"");
        }
    }
});
key12.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = C_amount.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        }else {
            last_text = "";
        }
    }
});

```

```

        C_amount.setText(last_text);
    }
    });
}
});
interest_1.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_1.setText(interest_1.getText() + "1");
            }
        });
        key2.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_1.setText(interest_1.getText() + "2");
            }
        });
        key3.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_1.setText(interest_1.getText() + "3");
            }
        });
        key4.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_1.setText(interest_1.getText() + "4");
            }
        });
        key5.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_1.setText(interest_1.getText() + "5");
            }
        });
        key6.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_1.setText(interest_1.getText() + "6");
            }
        });
        key7.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_1.setText(interest_1 .getText() + "7");
            }
        });
        key8.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_1.setText(interest_1.getText() + "8");
            }
        });
        key9.setOnAction(new EventHandler<ActionEvent>() {

```

```

        @Override
        public void handle(ActionEvent event) {
            interest_1.setText(interest_1.getText() + "9");
        }
    });
    key10.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            interest_1.setText(interest_1.getText() + "0");
        }
    });
    key11.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            int totalDots = 0;
            String text = interest_1.getText();
            for (int i = 0; i < text.length(); i++) {
                char Dots = text.charAt(i);

                if (Dots == '.') {
                    totalDots = totalDots + 1;
                }
            }
            if (totalDots == 0) {
                interest_1.setText(text + ".");
            }
            else {
                interest_1.setText(text + "");
            }
        }
    });
    key12.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            String text = interest_1.getText();
            String last_text;
            if (text.length() != 0) {
                int last = text.length() - 1;
                last_text = text.substring(0, last);
            }
            else {
                last_text = "";
            }
            interest_1.setText(last_text);
        }
    });
}

});
terms_1.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_1.setText(terms_1.getText() + "1");
            }
        });
    });
}

```



```

key2.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_1.setText(terms_1.getText() + "2");
    }
});
key3.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_1.setText(terms_1.getText() + "3");
    }
});
key4.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_1.setText(terms_1.getText() + "4");
    }
});
key5.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_1.setText(terms_1.getText() + "5");
    }
});
key6.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_1.setText(terms_1.getText() + "6");
    }
});
key7.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_1.setText( terms_1.getText() + "7");
    }
});
key8.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_1.setText(terms_1.getText() + "8");
    }
});
key9.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_1.setText(terms_1.getText() + "9");
    }
});
key10.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_1.setText(terms_1.getText() + "0");
    }
});
key11.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {

```

```

        int totalDots =0;
        String text = terms_1.getText();
        for (int i = 0; i<text.length(); i++ ){
            char Dots = text.charAt(i);

            if (Dots=='.' ){
                totalDots = totalDots+1;
            }
        }
        if ( totalDots ==0){
            terms_1.setText(text+".");
        }
        else {
            terms_1.setText(text+"");
        }
    }
});
key12.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = terms_1.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        }else {
            last_text = "";
        }
        terms_1.setText(last_text);
    }
});

}
});
fut_1.setMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_1.setText(fut_1.getText() + "1");
            }
        });
        key2.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_1.setText(fut_1.getText() + "2");
            }
        });
        key3.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_1.setText(fut_1.getText() + "3");
            }
        });
        key4.setOnAction(new EventHandler<ActionEvent>() {
            @Override

```

```

        public void handle(ActionEvent event) {
            fut_1.setText(fut_1.getText() + "4");
        }
    });
    key5.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            fut_1.setText(fut_1.getText() + "5");
        }
    });
    key6.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            fut_1.setText(fut_1.getText() + "6");
        }
    });
    key7.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            fut_1.setText(fut_1.getText() + "7");
        }
    });
    key8.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            fut_1.setText(fut_1.getText() + "8");
        }
    });
    key9.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            fut_1.setText(fut_1.getText() + "9");
        }
    });
    key10.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            fut_1.setText(fut_1.getText() + "0");
        }
    });
    key11.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            int totalDots = 0;
            String text = fut_1.getText();
            for (int i = 0; i < text.length(); i++) {
                char Dots = text.charAt(i);

                if (Dots == '.') {
                    totalDots = totalDots + 1;
                }
            }
            if (totalDots == 0) {
                fut_1.setText(text + ".");
            }
            else {
                fut_1.setText(text + "");
            }
        }
    });

```

```

        }
    }
});
key12.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = fut_1.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        fut_1.setText(last_text);
    }
});

}

});

Scene scene = new Scene(gridPane);
stage_1.setTitle("Key Board");
stage_1.setScene(scene);
stage_1.show();

}

});

```

Creating keyboard for saving

```

Keyboard_2.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        Stage stage_2 = new Stage();
        GridPane gridPane = new GridPane();

        Button key1 = new Button("1");
        key1.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key2 = new Button("2");
        key2.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key3 = new Button("3");
        key3.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key4 = new Button("4");
        key4.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
    }
});

```

```

        Button key5 = new Button("5");
        key5.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key6 = new Button("6");
        key6.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key7 = new Button("7");
        key7.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key8 = new Button("8");
        key8.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key9 = new Button("9");
        key9.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key10= new Button("0");
        key10.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key11= new Button(".");
        key11.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key12= new Button("<-");
        key12.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");

        gridPane.setMinSize(240, 320);
        key1.setMinSize(80, 80);
        key2.setMinSize(80, 80);
        key3.setMinSize(80, 80);
        key4.setMinSize(80, 80);
        key5.setMinSize(80, 80);
        key6.setMinSize(80, 80);
        key7.setMinSize(80, 80);
        key8.setMinSize(80, 80);
        key9.setMinSize(80, 80);
        key10.setMinSize(80, 80);
        key11.setMinSize(80, 80);
        key12.setMinSize(80, 80);

        gridPane.add(key1, 0, 0);
        gridPane.add(key2, 1, 0);
        gridPane.add(key3, 0, 1);
        gridPane.add(key4, 1, 1);
        gridPane.add(key5, 2, 1);
        gridPane.add(key6, 0, 2);
        gridPane.add(key7, 1, 2);
        gridPane.add(key8, 2, 2);
        gridPane.add(key9, 0, 3);
        gridPane.add(key10, 1, 3);
        gridPane.add(key11, 2, 3);
        gridPane.add(key12, 2, 0);

        S_amount.setOnMouseClicked(new EventHandler<MouseEvent>() {
            @Override
            public void handle(MouseEvent event) {
                key1.setAction(new EventHandler<ActionEvent>() {

```

```

        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "1");
        }
    });
    key2.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "2");
        }
    });
    key3.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "3");
        }
    });
    key4.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "4");
        }
    });
    key5.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "5");
        }
    });
    key6.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "6");
        }
    });
    key7.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "7");
        }
    });
    key8.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "8");
        }
    });
    key9.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "9");
        }
    });
    key10.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            S_amount.setText(S_amount.getText() + "0");
        }
    });

```

```

    }
});
key11.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        int totalDots = 0;
        String text = S_amount.getText();
        for (int i = 0; i < text.length(); i++) {
            char Dots = text.charAt(i);

            if (Dots == '.') {
                totalDots = totalDots + 1;
            }
        }
        if (totalDots == 0) {
            S_amount.setText(text + ".");
        } else {
            S_amount.setText(text + "");
        }
    }
});
key12.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = S_amount.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        S_amount.setText(last_text);
    }
});
}
});
interest_2.setMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_2.setText(interest_2.getText() + "1");
            }
        });
        key2.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_2.setText(interest_2.getText() + "2");
            }
        });
        key3.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_2.setText(interest_2.getText() + "3");
            }
        });
    }
});

```

```

});
key4.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_2.setText(interest_2.getText() + "4");
    }
});
key5.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_2.setText(interest_2.getText() + "5");
    }
});
key6.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_2.setText(interest_2.getText() + "6");
    }
});
key7.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_2.setText(interest_2.getText() + "7");
    }
});
key8.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_2.setText(interest_2.getText() + "8");
    }
});
key9.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_2.setText(interest_2.getText() + "9");
    }
});
key10.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_2.setText(interest_2.getText() + "0");
    }
});
key11.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        int totalDots = 0;
        String text = interest_2.getText();
        for (int i = 0; i < text.length(); i++) {
            char Dots = text.charAt(i);

            if (Dots == '.') {
                totalDots = totalDots + 1;
            }
        }
        if (totalDots == 0) {
            interest_2.setText(text + ".");
        }
    }
});

```



```

        } else {
            interest_2.setText(text + "");
        }
    }
});
key12.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = interest_2.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        interest_2.setText(last_text);
    }
});

});
terms_2.setMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_2.setText(terms_2.getText() + "1");
            }
        });
        key2.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_2.setText(terms_2.getText() + "2");
            }
        });
        key3.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_2.setText(terms_2.getText() + "3");
            }
        });
        key4.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_2.setText(terms_2.getText() + "4");
            }
        });
        key5.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_2.setText(terms_2.getText() + "5");
            }
        });
        key6.setAction(new EventHandler<ActionEvent>() {
            @Override

```

```

        public void handle(ActionEvent event) {
            terms_2.setText(terms_2.getText() + "6");
        }
    });
    key7.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            terms_2.setText(terms_2.getText() + "7");
        }
    });
    key8.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            terms_2.setText(terms_2.getText() + "8");
        }
    });
    key9.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            terms_2.setText(terms_2.getText() + "9");
        }
    });
    key10.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            terms_2.setText(terms_2.getText() + "0");
        }
    });
    key11.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            int totalDots = 0;
            String text = terms_2.getText();
            for (int i = 0; i < text.length(); i++) {
                char Dots = text.charAt(i);

                if (Dots == '.') {
                    totalDots = totalDots + 1;
                }
            }
            if (totalDots == 0) {
                terms_2.setText(text + ".");
            } else {
                terms_2.setText(text + "");
            }
        }
    });
    key12.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            String text = terms_2.getText();
            String last_text;
            if (text.length() != 0) {
                int last = text.length() - 1;
                last_text = text.substring(0, last);
            } else {
                last_text = "";
            }
        }
    });

```

```

        }
        terms_2.setText(last_text);
    }
});

}

});
fut_2.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_2.setText(fut_2.getText() + "1");
            }
        });
        key2.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_2.setText(fut_2.getText() + "2");
            }
        });
        key3.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_2.setText(fut_2.getText() + "3");
            }
        });
        key4.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_2.setText(fut_2.getText() + "4");
            }
        });
        key5.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_2.setText(fut_2.getText() + "5");
            }
        });
        key6.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_2.setText(fut_2.getText() + "6");
            }
        });
        key7.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_2.setText(fut_2.getText() + "7");
            }
        });
        key8.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                fut_2.setText(fut_2.getText() + "8");
            }
        });
    }
});

```

```

    });
    key9.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            fut_2.setText(fut_2.getText() + "9");
        }
    });
    key10.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            fut_2.setText(fut_2.getText() + "0");
        }
    });
    key11.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            int totalDots = 0;
            String text = fut_2.getText();
            for (int i = 0; i < text.length(); i++) {
                char Dots = text.charAt(i);

                if (Dots == '.') {
                    totalDots = totalDots + 1;
                }
            }
            if (totalDots == 0) {
                fut_2.setText(text + ".");
            } else {
                fut_2.setText(text + "");
            }
        }
    });
    key12.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            String text = fut_2.getText();
            String last_text;
            if (text.length() != 0) {
                int last = text.length() - 1;
                last_text = text.substring(0, last);
            } else {
                last_text = "";
            }
            fut_2.setText(last_text);
        }
    });

}

});
pmt_2.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                pmt_2.setText(pmt_2.getText() + "1");
            }
        });
    }
});

```

```

    }
});
key2.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "2");
    }
});
key3.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "3");
    }
});
key4.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "4");
    }
});
key5.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "5");
    }
});
key6.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "6");
    }
});
key7.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "7");
    }
});
key8.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "8");
    }
});
key9.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "9");
    }
});
key10.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "0");
    }
});
key11.setAction(new EventHandler<ActionEvent>() {

```

```

@Override
public void handle(ActionEvent event) {
    int totalDots = 0;
    String text = pmt_2.getText();
    for (int i = 0; i < text.length(); i++) {
        char Dots = text.charAt(i);

        if (Dots == '.') {
            totalDots = totalDots + 1;
        }
    }
    if (totalDots == 0) {
        pmt_2.setText(text + ".");
    } else {
        pmt_2.setText(text + "");
    }
}
});
key12.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = pmt_2.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        pmt_2.setText(last_text);
    }
});

}

});

Scene scene = new Scene(gridPane);
stage_2.setTitle("Key Board");
stage_2.setScene(scene);
stage_2.show();
}

});

```

Creating keyboard for loan

```
Keyboard_3.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        Stage stage_3 = new Stage();
        GridPane gridPane = new GridPane();

        Button key1 = new Button("1");
        key1.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key2 = new Button("2");
        key2.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key3 = new Button("3");
        key3.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key4 = new Button("4");
        key4.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key5 = new Button("5");
        key5.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key6 = new Button("6");
        key6.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key7 = new Button("7");
        key7.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key8 = new Button("8");
        key8.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key9 = new Button("9");
        key9.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key10= new Button("0");
        key10.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key11= new Button(".");
        key11.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key12= new Button("<-");
        key12.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");

        gridPane.setMinSize(240, 320);
        key1.setMinSize(80, 80);
        key2.setMinSize(80, 80);
        key3.setMinSize(80, 80);
        key4.setMinSize(80, 80);
        key5.setMinSize(80, 80);
        key6.setMinSize(80, 80);
        key7.setMinSize(80, 80);
        key8.setMinSize(80, 80);
        key9.setMinSize(80, 80);
        key10.setMinSize(80, 80);
        key11.setMinSize(80, 80);
```

```

key12.setMinSize(80, 80);

gridPane.add(key1, 0, 0);
gridPane.add(key2, 1, 0);
gridPane.add(key3, 0, 1);
gridPane.add(key4, 1, 1);
gridPane.add(key5, 2, 1);
gridPane.add(key6, 0, 2);
gridPane.add(key7, 1, 2);
gridPane.add(key8, 2, 2);
gridPane.add(key9, 0, 3);
gridPane.add(key10, 1, 3);
gridPane.add(key11, 2, 3);
gridPane.add(key12, 2, 0);

L_amount.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                L_amount.setText(L_amount.getText() + "1");
            }
        });
        key2.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                L_amount.setText(L_amount.getText() + "2");
            }
        });
        key3.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                L_amount.setText(L_amount.getText() + "3");
            }
        });
        key4.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                L_amount.setText(L_amount.getText() + "4");
            }
        });
        key5.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                L_amount.setText(L_amount.getText() + "5");
            }
        });
        key6.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                L_amount.setText(L_amount.getText() + "6");
            }
        });
        key7.setOnAction(new EventHandler<ActionEvent>() {
            @Override

```



```

        public void handle(ActionEvent event) {
            L_amount.setText(L_amount.getText() + "7");
        }
    });
    key8.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            L_amount.setText(L_amount.getText() + "8");
        }
    });
    key9.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            L_amount.setText(L_amount.getText() + "9");
        }
    });
    key10.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            L_amount.setText(L_amount.getText() + "0");
        }
    });
    key11.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            int totalDots = 0;
            String text = L_amount.getText();
            for (int i = 0; i < text.length(); i++) {
                char Dots = text.charAt(i);

                if (Dots == '.') {
                    totalDots = totalDots + 1;
                }
            }
            if (totalDots == 0) {
                L_amount.setText(text + ".");
            } else {
                L_amount.setText(text + "");
            }
        }
    });
    key12.setOnAction(new EventHandler<ActionEvent>() {
        @Override
        public void handle(ActionEvent event) {
            String text = L_amount.getText();
            String last_text;
            if (text.length() != 0) {
                int last = text.length() - 1;
                last_text = text.substring(0, last);
            } else {
                last_text = "";
            }
            L_amount.setText(last_text);
        }
    });
}
});

```

```

interest_3.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_3.setText(interest_3.getText() + "1");
            }
        });
        key2.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_3.setText(interest_3.getText() + "2");
            }
        });
        key3.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_3.setText(interest_3.getText() + "3");
            }
        });
        key4.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_3.setText(interest_3.getText() + "4");
            }
        });
        key5.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_3.setText(interest_3.getText() + "5");
            }
        });
        key6.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_3.setText(interest_3.getText() + "6");
            }
        });
        key7.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_3.setText(interest_3.getText() + "7");
            }
        });
        key8.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_3.setText(interest_3.getText() + "8");
            }
        });
        key9.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_3.setText(interest_3.getText() + "9");
            }
        });
    }
});

```

```

key10.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_3.setText(interest_3.getText() + "0");
    }
});
key11.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        int totalDots = 0;
        String text = interest_3.getText();
        for (int i = 0; i < text.length(); i++) {
            char Dots = text.charAt(i);

            if (Dots == '.') {
                totalDots = totalDots + 1;
            }
        }
        if (totalDots == 0) {
            interest_3.setText(text + ".");
        } else {
            interest_3.setText(text + "");
        }
    }
});
key12.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = interest_3.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        interest_3.setText(last_text);
    }
});

});
terms_3.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_3.setText(terms_3.getText() + "1");
            }
        });
        key2.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_3.setText(terms_3.getText() + "2");
            }
        });
    }
});

```

```

key3.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_3.setText(terms_3.getText() + "3");
    }
});
key4.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_3.setText(terms_3.getText() + "4");
    }
});
key5.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_3.setText(terms_3.getText() + "5");
    }
});
key6.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_3.setText(terms_3.getText() + "6");
    }
});
key7.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_3.setText(terms_3.getText() + "7");
    }
});
key8.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_3.setText(terms_3.getText() + "8");
    }
});
key9.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_3.setText(terms_3.getText() + "9");
    }
});
key10.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_3.setText(terms_3.getText() + "0");
    }
});
key11.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        int totalDots = 0;
        String text = terms_3.getText();
        for (int i = 0; i < text.length(); i++) {
            char Dots = text.charAt(i);

            if (Dots == '.') {

```

```

        totalDots = totalDots + 1;
    }
}
if (totalDots == 0) {
    terms_3.setText(text + ".");
} else {
    terms_3.setText(text + "");
}
}
});
key12.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = terms_3.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        terms_3.setText(last_text);
    }
});

}
});
pmt_3.setMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                pmt_3.setText(pmt_3.getText() + "1");
            }
        });
        key2.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                pmt_3.setText(pmt_3.getText() + "2");
            }
        });
        key3.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                pmt_3.setText(pmt_3.getText() + "3");
            }
        });
        key4.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                pmt_3.setText(pmt_3.getText() + "4");
            }
        });
        key5.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {

```

```

        pmt_3.setText(pmt_3.getText() + "5");
    }
});
key6.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_3.setText(pmt_3.getText() + "6");
    }
});
key7.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_3.setText(pmt_3.getText() + "7");
    }
});
key8.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_3.setText(pmt_3.getText() + "8");
    }
});
key9.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_3.setText(pmt_3.getText() + "9");
    }
});
key10.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_2.setText(pmt_2.getText() + "0");
    }
});
key11.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        int totalDots = 0;
        String text = pmt_3.getText();
        for (int i = 0; i < text.length(); i++) {
            char Dots = text.charAt(i);

            if (Dots == '.') {
                totalDots = totalDots + 1;
            }
        }
        if (totalDots == 0) {
            pmt_3.setText(text + ".");
        } else {
            pmt_3.setText(text + "");
        }
    }
});
key12.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = pmt_3.getText();
        String last_text;

```

```

        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        pmt_3.setText(last_text);
    }
    });

}

});

Scene scene = new Scene(gridPane);
stage_3.setTitle("Key Board");
stage_3.setScene(scene);
stage_3.show();
}

```

Creating keyboard for mortgage

```

Keyboard_4.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        Stage stage_4 = new Stage();
        GridPane gridPane = new GridPane();

        Button key1 = new Button("1");
        key1.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key2 = new Button("2");
        key2.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key3 = new Button("3");
        key3.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key4 = new Button("4");
        key4.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key5 = new Button("5");
        key5.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key6 = new Button("6");
        key6.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key7 = new Button("7");
        key7.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key8 = new Button("8");
        key8.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key9 = new Button("9");
        key9.setStyle("-fx-text-fill: white;-fx-font:bold 20px 'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key10= new Button("0");
    }
});

```

```

        key10.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key11= new Button(".");
        key11.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");
        Button key12= new Button("<-");
        key12.setStyle("-fx-text-fill: white;-fx-font:bold 20px
'arialblack';-fx-background-color:black;-fx-border-color:white");

        gridPane.setMinSize(240, 320);
        key1.setMinSize(80, 80);
        key2.setMinSize(80, 80);
        key3.setMinSize(80, 80);
        key4.setMinSize(80, 80);
        key5.setMinSize(80, 80);
        key6.setMinSize(80, 80);
        key7.setMinSize(80, 80);
        key8.setMinSize(80, 80);
        key9.setMinSize(80, 80);
        key10.setMinSize(80, 80);
        key11.setMinSize(80, 80);
        key12.setMinSize(80, 80);

        gridPane.add(key1, 0, 0);
        gridPane.add(key2, 1, 0);
        gridPane.add(key3, 0, 1);
        gridPane.add(key4, 1, 1);
        gridPane.add(key5, 2, 1);
        gridPane.add(key6, 0, 2);
        gridPane.add(key7, 1, 2);
        gridPane.add(key8, 2, 2);
        gridPane.add(key9, 0, 3);
        gridPane.add(key10, 1, 3);
        gridPane.add(key11, 2, 3);
        gridPane.add(key12, 2, 0);

        M_amount.setOnMouseClicked(new EventHandler<MouseEvent>() {
            @Override
            public void handle(MouseEvent event) {
                key1.setOnAction(new EventHandler<ActionEvent>() {
                    @Override
                    public void handle(ActionEvent event) {
                        M_amount.setText(M_amount.getText() + "1");
                    }
                });
                key2.setOnAction(new EventHandler<ActionEvent>() {
                    @Override
                    public void handle(ActionEvent event) {
                        M_amount.setText(M_amount.getText() + "2");
                    }
                });
                key3.setOnAction(new EventHandler<ActionEvent>() {
                    @Override
                    public void handle(ActionEvent event) {
                        M_amount.setText(M_amount.getText() + "3");
                    }
                });
            }
        });

```



```

});
key4.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        M_amount.setText(M_amount.getText() + "4");
    }
});
key5.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        M_amount.setText(M_amount.getText() + "5");
    }
});
key6.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        M_amount.setText(M_amount.getText() + "6");
    }
});
key7.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        M_amount.setText(M_amount.getText() + "7");
    }
});
key8.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        M_amount.setText(M_amount.getText() + "8");
    }
});
key9.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        M_amount.setText(M_amount.getText() + "9");
    }
});
key10.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        M_amount.setText(M_amount.getText() + "0");
    }
});
key11.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        int totalDots = 0;
        String text = M_amount.getText();
        for (int i = 0; i < text.length(); i++) {
            char Dots = text.charAt(i);

            if (Dots == '.') {
                totalDots = totalDots + 1;
            }
        }
        if (totalDots == 0) {
            M_amount.setText(text + ".");
        }
    }
});

```

```

        } else {
            M_amount.setText(text + "");
        }
    }
});
key12.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = M_amount.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        M_amount.setText(last_text);
    }
});
}
});
interest_4.setMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_4.setText(interest_4.getText() + "1");
            }
        });
        key2.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_4.setText(interest_4.getText() + "2");
            }
        });
        key3.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_4.setText(interest_4.getText() + "3");
            }
        });
        key4.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_4.setText(interest_4.getText() + "4");
            }
        });
        key5.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                interest_4.setText(interest_4.getText() + "5");
            }
        });
        key6.setAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {

```

```

        interest_4.setText(interest_4.getText() + "6");
    }
});
key7.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_4.setText(interest_4.getText() + "7");
    }
});
key8.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_4.setText(interest_4.getText() + "8");
    }
});
key9.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_4.setText(interest_4.getText() + "9");
    }
});
key10.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        interest_4.setText(interest_4.getText() + "0");
    }
});
key11.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        int totalDots = 0;
        String text = interest_4.getText();
        for (int i = 0; i < text.length(); i++) {
            char Dots = text.charAt(i);

            if (Dots == '.') {
                totalDots = totalDots + 1;
            }
        }
        if (totalDots == 0) {
            interest_4.setText(text + ".");
        } else {
            interest_4.setText(text + "");
        }
    }
});
key12.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = interest_4.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
    }
});

```

```

        interest_4.setText(last_text);
    }
});

}

});
terms_4.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_4.setText(terms_4.getText() + "1");
            }
        });
        key2.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_4.setText(terms_4.getText() + "2");
            }
        });
        key3.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_4.setText(terms_4.getText() + "3");
            }
        });
        key4.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_4.setText(terms_4.getText() + "4");
            }
        });
        key5.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_4.setText(terms_4.getText() + "5");
            }
        });
        key6.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_4.setText(terms_4.getText() + "6");
            }
        });
        key7.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_4.setText(terms_4.getText() + "7");
            }
        });
        key8.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                terms_4.setText(terms_4.getText() + "8");
            }
        });
    }
});

```

```

key9.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_4.setText(terms_4.getText() + "9");
    }
});
key10.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        terms_4.setText(terms_4.getText() + "0");
    }
});
key11.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        int totalDots = 0;
        String text = terms_4.getText();
        for (int i = 0; i < text.length(); i++) {
            char Dots = text.charAt(i);

            if (Dots == '.') {
                totalDots = totalDots + 1;
            }
        }
        if (totalDots == 0) {
            terms_4.setText(text + ".");
        } else {
            terms_4.setText(text + "");
        }
    }
});
key12.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = terms_4.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        terms_4.setText(last_text);
    }
});

}
});
pmt_4.setOnMouseClicked(new EventHandler<MouseEvent>() {
    @Override
    public void handle(MouseEvent event) {
        key1.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent event) {
                pmt_4.setText(pmt_4.getText() + "1");
            }
        });
    }
});

```

```

key2.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_4.setText(pmt_4.getText() + "2");
    }
});
key3.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_4.setText(pmt_4.getText() + "3");
    }
});
key4.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_4.setText(pmt_4.getText() + "4");
    }
});
key5.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_4.setText(pmt_4.getText() + "5");
    }
});
key6.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_4.setText(pmt_4.getText() + "6");
    }
});
key7.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_3.setText(pmt_3.getText() + "7");
    }
});
key8.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_4.setText(pmt_4.getText() + "8");
    }
});
key9.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_4.setText(pmt_4.getText() + "9");
    }
});
key10.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        pmt_4.setText(pmt_4.getText() + "0");
    }
});
key11.setAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {

```

```

        int totalDots = 0;
        String text = pmt_4.getText();
        for (int i = 0; i < text.length(); i++) {
            char Dots = text.charAt(i);

            if (Dots == '.') {
                totalDots = totalDots + 1;
            }
        }
        if (totalDots == 0) {
            pmt_4.setText(text + ".");
        } else {
            pmt_4.setText(text + "");
        }
    }
});
key12.setOnAction(new EventHandler<ActionEvent>() {
    @Override
    public void handle(ActionEvent event) {
        String text = pmt_3.getText();
        String last_text;
        if (text.length() != 0) {
            int last = text.length() - 1;
            last_text = text.substring(0, last);
        } else {
            last_text = "";
        }
        pmt_3.setText(last_text);
    }
});

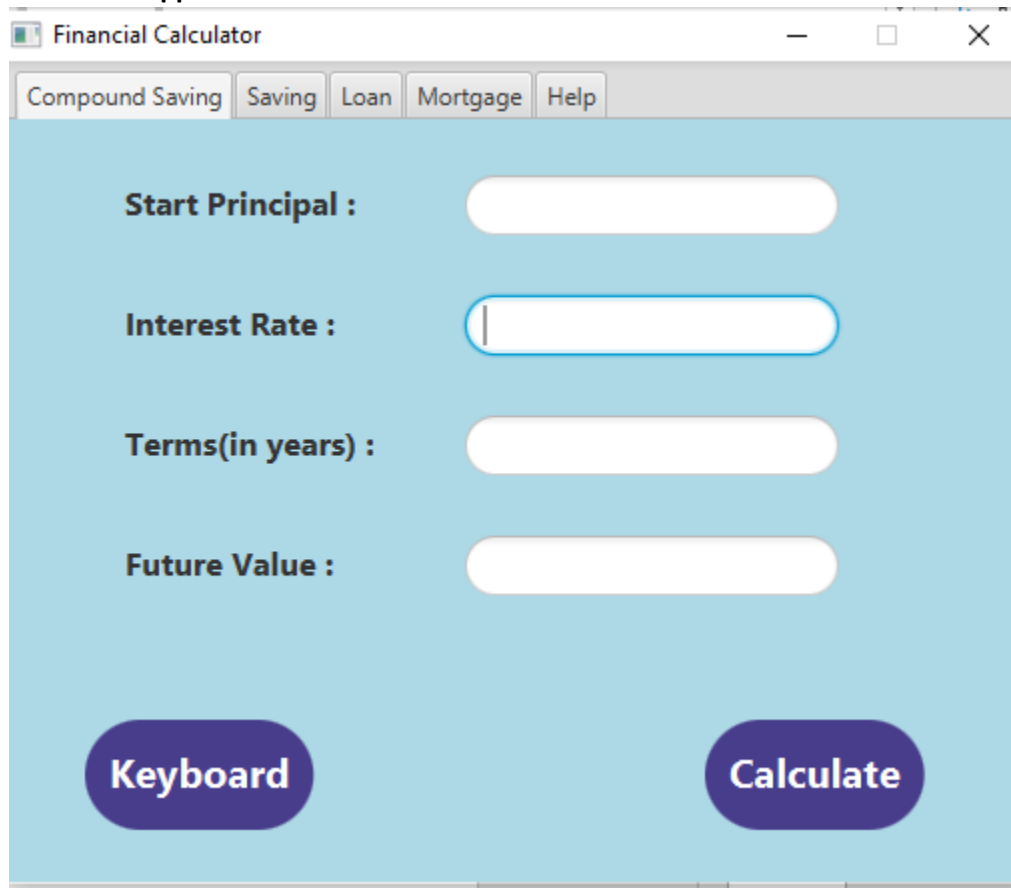
    }
});

Scene scene = new Scene(gridPane);
stage_4.setTitle("Key Board");
stage_4.setScene(scene);
stage_4.show();
}

});

```

Pictures of app interface



The image shows a screenshot of a web application titled "Financial Calculator". The interface has a light blue background and a white header bar. The header bar contains a title "Financial Calculator" and three window control buttons (minimize, maximize, close). Below the header bar is a navigation menu with five tabs: "Compound Saving", "Saving", "Loan", "Mortgage", and "Help". The "Compound Saving" tab is currently selected. The main content area is light blue and contains four input fields with labels to their left: "Start Principal :", "Interest Rate :", "Terms(in years) :", and "Future Value :". Each input field is a white rounded rectangle. At the bottom of the main content area, there are two dark blue rounded buttons: "Keyboard" on the left and "Calculate" on the right.

Financial Calculator

Compound Saving Saving Loan Mortgage Help

Start Principal :

Interest Rate :

Terms(in years) :

Future Value :

Keyboard Calculate

Financial Calculator

Compound Saving

Saving

Loan

Mortgage

Help

Interest Rate :

Terms(in years) :

PMT :

Future Value :

Start Principal :

(Starting Principal only for future value calculation)

Keyboard

Calculate

Financial Calculator

Compound Saving

Saving

Loan

Mortgage

Help

Loan Amount :

Interest Rate :

Loan Terms(in years) :

PMT :

Keyboard

Calculate

Financial Calculator

Compound Saving

Saving

Loan

Mortgage

Help

Mortgage Price :

Interest Rate :

Mortgage Terms(in years) :

PMT :

Keyboard

Calculate

