```
//Header files
import java.awt.*;
import java.awt.event.*;
import java.util.*;
import javax.swing.*;


//GuessANumber class that implements ActionsListener for button
and
//KeyListener for JTextField
public class GuessANumber extends JFrame implements
ActionListener, KeyListener
{
// declare and initialize the required variables
JButton startBtn;
JTextField jtf1, jtf2;
JLabel lab1, lab2, lab3, lab0;
JPanel jpan, jpan1;
int guessNumber;
int MAX = 1000, MIN = 1;
int tries = 0;
String guessString = "";

// constructor
public GuessANumber()
{
  // JPanel object
  jpan = new JPanel(new GridLayout(4, 2, 10, 15));
```

```java
  // Start button object
  startBtn = new JButton("Start Game");

  // JTextField object
  jtf1 = new JTextField();

  jtf1.setEnabled(false);

  // Create the required labels objects
  lab0 = new JLabel("Click Start Button to start the game: ");
  lab1 = new JLabel(
    "I have a number between 1 and 1000 can you guess my
number?");
  lab2 = new JLabel(
    "Please enter a number for your first guess and hit the
Enter button");

  // add the components to the jpan object
  jpan.add(lab0);
  jpan.add(startBtn);
  jpan.add(lab1);
  lab3 = new JLabel();
  jpan.add(new JLabel());
  jpan.add(lab2);
  jpan.add(jtf1);
  jpan.add(lab3);

  // add the jpan to the container
  add(jpan);

  // add the ActionListener and KeyListener interfaces to
  // JButton and JTextField
  startBtn.addActionListener(this);
  jtf1.addKeyListener(this);
}

@Override
// Performs the action of button click
public void actionPerformed(ActionEvent ae)
{
  if (startBtn == ae.getSource())
  {
   // generates the random number and sets the
   // other components values
   Random rand = new Random();
```

```java
      guessNumber = (int) (rand.nextInt(MAX + MIN));
      System.out.println(guessNumber);
      jtf1.setText("");
      jtf1.setEnabled(true);
      startBtn.setVisible(false);
      lab3.setText("");
    }
  }

  @Override
  // When enter Key is pressed in the JTextField
  // it verifies the number is guessed number or not
  // displays the message and changes the back ground color
  public void keyPressed(KeyEvent ke)
  {
    int key = ke.getKeyCode();
    if (jtf1 == ke.getSource())
    {
     if (key == KeyEvent.VK_ENTER)
     {
      guessString = guessANumber();
      lab3.setText(guessString + "\n");
      lab3.setFont(new Font("Times New Roman", Font.BOLD, 30));
      jtf1.setText("");
     }
    }
  }


  @Override
  public void keyReleased(KeyEvent arg0)
  {
    // TODO Auto-generated method stub
  }

  @Override
  public void keyTyped(KeyEvent arg0)
  {
    // TODO Auto-generated method stub
  }

  // guessANumber method will check for the guessed number
  // against the random number and returns a string value
  public String guessANumber()
  {
```
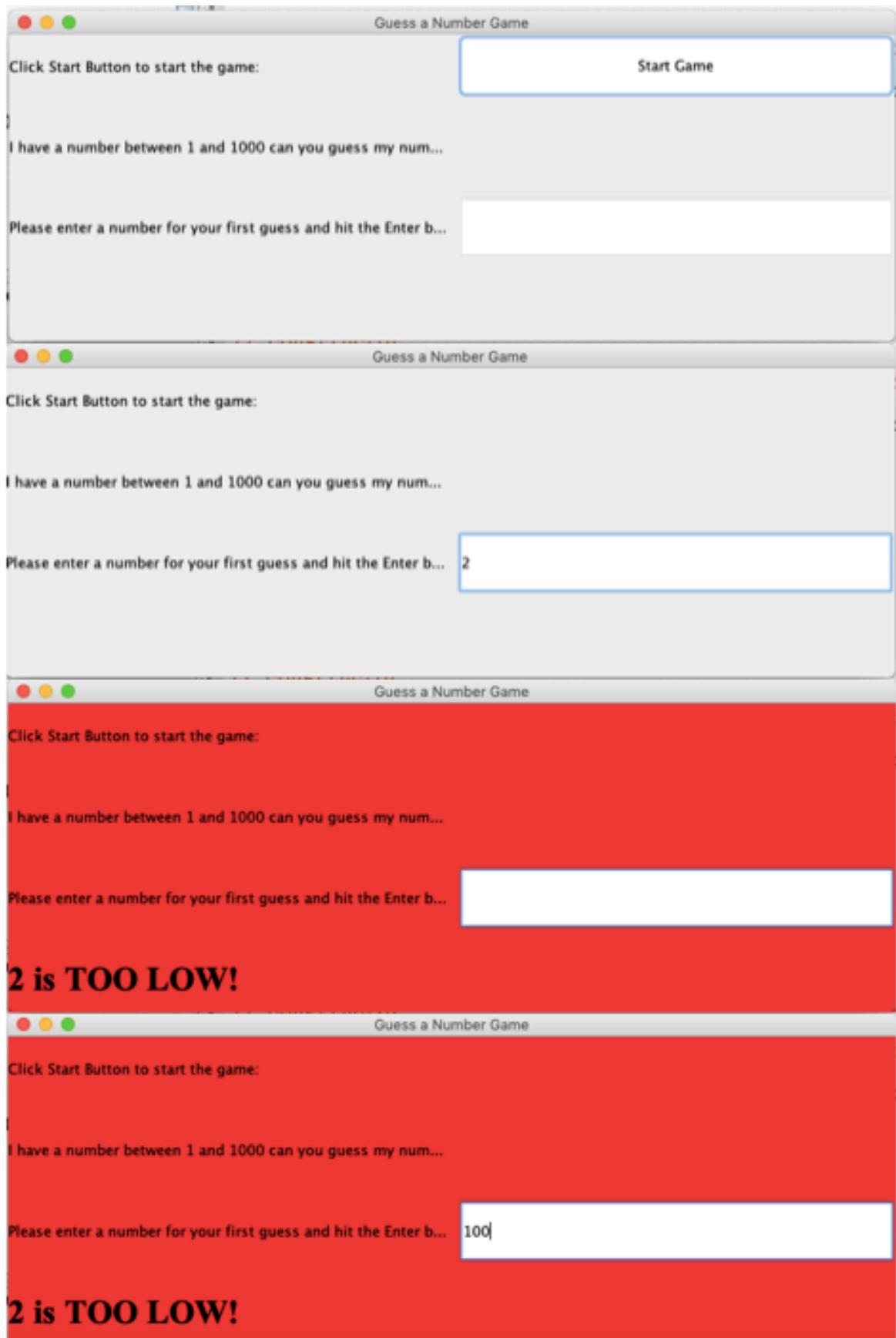
```java
      // declare the required variables
      int guess;
      String str = "";
      guess = Integer.parseInt(jtf1.getText());

      // condition to check the value
      if (guess < guessNumber)
      {
       str = guess + " is TOO LOW!";

       jpan.setBackground(Color.red);
      }
      else if (guess > guessNumber)
      {
       str = guess + " is To HIGH!";
       jpan.setBackground(Color.blue);
      }
      else
      {
       str = "Congrats! You have won the game! \n";
       startBtn.setVisible(true);
       jpan.setBackground(Color.green);
      }
      tries++;
      return str;
  }

  // main method
  public static void main(String args[])
  {
    GuessANumber frame = new GuessANumber();
    frame.setVisible(true);
    frame.setSize(800, 300);
    frame.setTitle("Guess a Number Game");
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
  }
  }
```

Guess a Number Game

Click Start Button to start the game:

Start Game

I have a number between 1 and 1000 can you guess my num...

Please enter a number for your first guess and hit the Enter b...

Guess a Number Game

Click Start Button to start the game:

I have a number between 1 and 1000 can you guess my num...

Please enter a number for your first guess and hit the Enter b... 2

Guess a Number Game

Click Start Button to start the game:

I have a number between 1 and 1000 can you guess my num...

Please enter a number for your first guess and hit the Enter b...

2 is TOO LOW!

Guess a Number Game

Click Start Button to start the game:

I have a number between 1 and 1000 can you guess my num...

Please enter a number for your first guess and hit the Enter b... 100

2 is TOO LOW!

Guess a Number Game

Click Start Button to start the game:

I have a number between 1 and 1000 can you guess my num...

Please enter a number for your first guess and hit the Enter b...

900 is To HIGH!

Guess a Number Game

Click Start Button to start the game:

I have a number between 1 and 1000 can you guess my num...

Please enter a number for your first guess and hit the Enter b... 600

900 is To HIGH!

Guess a Number Game

Click Start Button to start the game:

I have a number between 1 and 1000 can you guess my num...

Please enter a number for your first guess and hit the Enter b...

600 is TOO LOW!

Guess a Number Game

Click Start Button to start the game:

I have a number between 1 and 1000 can you guess my num...

Please enter a number for your first guess and hit the Enter b... 635

600 is TOO LOW!

Guess a Number Game

Click Start Button to start the game:

Start Game

I have a number between 1 and 1000 can you guess my num...

Please enter a number for your first guess and hit the Enter b...

Congrats! You have won the...