National Institute Of Technology, Srinagar

Name : Vinay Kumar Singh
Enrollment : 2019BITE065
Semester : 6th
Subject : JAVA

Team Member Name
Name : Vishal
Enrollment : 2019BITE019
Semester : 6th
Subject : JAVA

Project On JAVA Graphical User Interface

JAVA Code With Awt and swing

```
import java.awt.*;
import java.awt.event.*;
import java.lang.Math;
import java.util.Scanner;
import java.util.Vector;
import javax.swing.Timer;
import javax.swing.ImageIcon;

public class bubbleBlaster extends Frame implements KeyListener {

  WindowListener wl = new WindowAdapter() {
    public void windowClosing(WindowEvent e) {
      System.exit(0);
    }
  };

  Label l = new Label("Key Listener");
  Label scoreval = new Label("0");
  Label highscoreval = new Label("0");
  int x = 250, y = 430;
  ImageIcon blaster, missile, ball;
  int playagain = 0;
  Vector xcord = new Vector<>();
  Vector ycord = new Vector<>();
  Vector missile_xcord = new Vector<>();
  Vector missile_ycord = new Vector<>();
  // Image img = ImageIO.read(new File("bgimage.jpg"));
  Image img = Toolkit.getDefaultToolkit().createImage("bgimage.jpg");

  int len = 0, itr = 0, scoreValue = 0, highScoreValue = 0;

  private int radius = 20;
  private int xDelta = 4;
  int time=50;

  bubbleBlaster() {
    addKeyListener(this);
    addWindowListener(wl);

    // l.setBounds(x, y, 100, 40);
    // add(l);
    blaster = new ImageIcon("blaster.png");
    missile = new ImageIcon("missile.png");
    ball = new ImageIcon("ball.png");

    // setBackground(bgimage);
    Timer timer = new Timer(time, new ActionListener() {
      @Override
      public void actionPerformed(ActionEvent e) {
        itr++;
```

```
        if (itr % 5 == 0) {
          missile_ycord.add(y+15);
          missile_xcord.add(x + 47);
          for (int i = 0; i < missile_ycord.size() - 1; i++) {
            int yval = (int) missile_ycord.elementAt(i);
            yval -= 30;
            if(yval<0)
            {
              missile_xcord.remove(i);
              missile_ycord.remove(i);
            }
            missile_ycord.set(i, yval);
            for (int j = 0; j < ycord.size(); j++) {
              if (yval-26 <= (int) ycord.elementAt(j) && (int)
missile_xcord.elementAt(i) >= (int) xcord.elementAt(j) - 35
                  && (int) missile_xcord.elementAt(i) <= (int)
xcord.elementAt(j) + 35) {
                // xcord.set(j, 900);
                xcord.remove(j);
                ycord.remove(j);
                missile_xcord.remove(i);
                missile_ycord.remove(i);
                scoreValue++;
                scoreval.setText(Integer.toString(scoreValue));
              }
            }
          }
        }
        if ((int) (Math.random() * 10) % 10 == 0) {
          ycord.add(20);
          xcord.add(50+len * 100 + (int) (Math.random() * 100));
          if ((int) (xcord.elementAt(xcord.size() - 1)) >= 500)
            len = 0;
          len++;
        }
        for (int i = 0; i < ycord.size(); i++) {
          int yval = (int) ycord.elementAt(i);
          yval += xDelta;
          ycord.set(i, yval);
          if (yval >= 600) {
            time=10000;
            xcord.clear();
            ycord.clear();
            while(playagain==0)
            {
              Scanner sc=new Scanner(System.in);
              playagain=sc.nextInt();
            }
            playagain=0;
            highScoreValue=Math.max(highScoreValue,scoreValue);
            scoreValue=0;
            highscoreval.setText(Integer.toString(highScoreValue));
            return;
          }
          // System.out.println(yval+" ");
          if (yval + (radius * 2) > getHeight()) {
```

```
            ycord.set(i, getHeight() + (radius * 2));
            xDelta *= 1;

          } else if (yval < 0) {
            ycord.set(i, 0);
            xDelta *= -1;
          }
        }
        repaint();
      }
    });
    timer.start();

    Label score = new Label("Score : ");
    Label highScore = new Label("High Score :");
    score.setBounds(650, 50, 112, 30);
    scoreval.setBounds(760, 50, 100, 30);
    highScore.setBounds(650, 80, 112, 30);
    highscoreval.setBounds(760, 80, 100, 30);

    // score.setFont(100.0);
    Font myfont=new Font("Serif",Font.BOLD,20);
    score.setFont(myfont);
    scoreval.setFont(myfont);
    highScore.setFont(myfont);
    highscoreval.setFont(myfont);

    this.add(score);
    this.add(scoreval);
    this.add(highScore);
    this.add(highscoreval);
    setSize(800, 630);
    setLayout(null);
    setVisible(true);

  }

  public void paint(Graphics g) {
    super.paint(g);
    g.drawImage(img, 0, 0, 800, 630, null);
    g.drawImage(blaster.getImage(), x, y, 120, 120, this);
    for (int i = 0; i < missile_xcord.size() - 1; i++)
      g.drawImage(missile.getImage(), (int) missile_xcord.elementAt(i),
(int) missile_ycord.elementAt(i), 25, 33, this);
    for (int i = 0; i < xcord.size(); i++) {
      // g.setColor(Color.ORANGE);
      g.drawImage(ball.getImage(), (int) xcord.elementAt(i), (int)
ycord.elementAt(i) - radius, 50, 50, this);

      // g.fillOval((int) xcord.elementAt(i), (int) ycord.elementAt(i) -
radius,
      // radius * 2, radius * 2);
    }

  }
```

```
  @Override
  public void keyTyped(KeyEvent e) {
  }

  @Override
  public void keyPressed(KeyEvent e) {
    int dir = e.getKeyCode();
    if (dir == 39) {
      if (x < 600)
        x += 10;
      // repaint();
    }
    if (dir == 37) {
      if (x > 20)
        x -= 10;
      // repaint();
    }

  }

  @Override
  public void keyReleased(KeyEvent e) {
  }

  public static void main(String[] args) {
    new bubbleBlaster();
  }
}
```

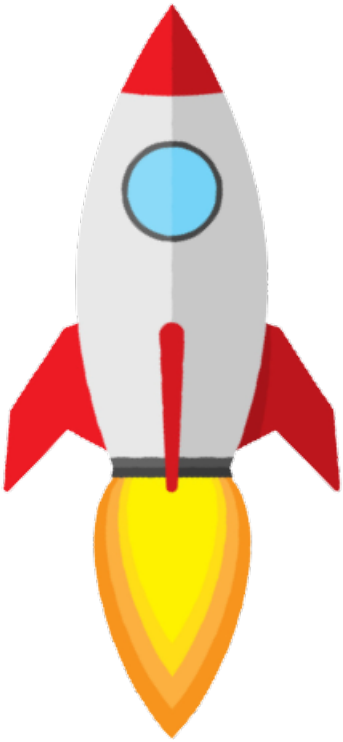
Assets Used

1. Background Image

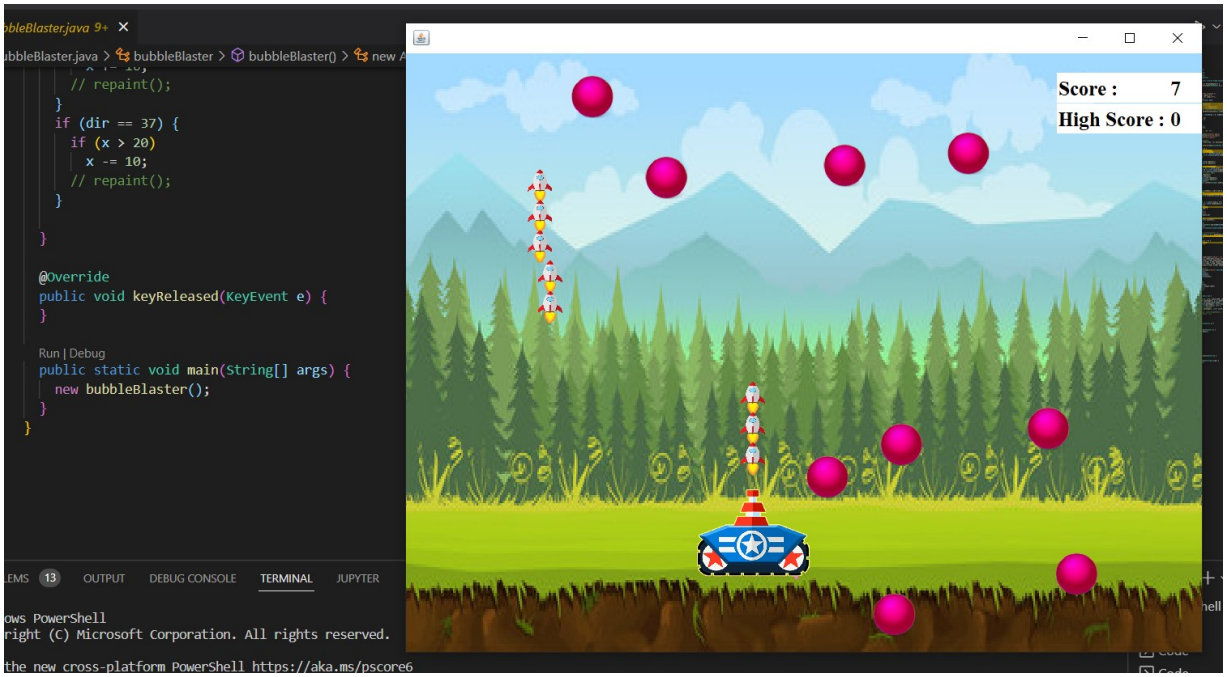
2. Blaster Image

3. **Bubble Image**

4. **Missile Image**



Output : --


// repaint();
}
if (dir == 37) {
if (x > 20)
x -= 10;
// repaint();
}
}
@Override
public void keyReleased(KeyEvent e) {
}
Run | Debug
public static void main(String[] args) {
new bubbleBlaster();
}
}
OUTPUT
DEBUG CONSOLE
TERMINAL
JUPYTER
ows PowerShell
right (C) Microsoft Corporation. All rights reserved.
the new cross-platform PowerShell https://aka.ms/pscore6
Score : 7
High Score : 0