Code:

SimplePaint.java

```
import java.awt.*;
import java.awt.event.*;
import java.applet.*;
import java.io.File;
import java.io.IOException;
import java.text.SimpleDateFormat;
import java.util.Calendar;
import java.util.Date;

/*<applet code="SimplePaint.class" height="1080" width="1920">  */
public class SimplePaint extends Applet implements MouseListener,
MouseMotionListener, KeyListener,Runnable {
    private int currentColor = BLACK;

    private final static int
                BLACK = 0,
                RED = 1,
                GREEN = 2,
                BLUE = 3,
                CYAN = 4,
                MAGENTA = 5,
                YELLOW = 6,
                 WHITE = 7;

    int STROKE = 2;

    Thread t = null;
    int hours = 0, minutes = 0, seconds = 0;
    String timeString = "";

    private int prevX, prevY; // previous values clicked/ dragged by users

    private boolean dragging;    // checking if the user is currently dragging
the mouse or not

    private Graphics g;

   public void init() {
      addMouseListener(this);
      addMouseMotionListener(this);
      addKeyListener(this);
    }
```

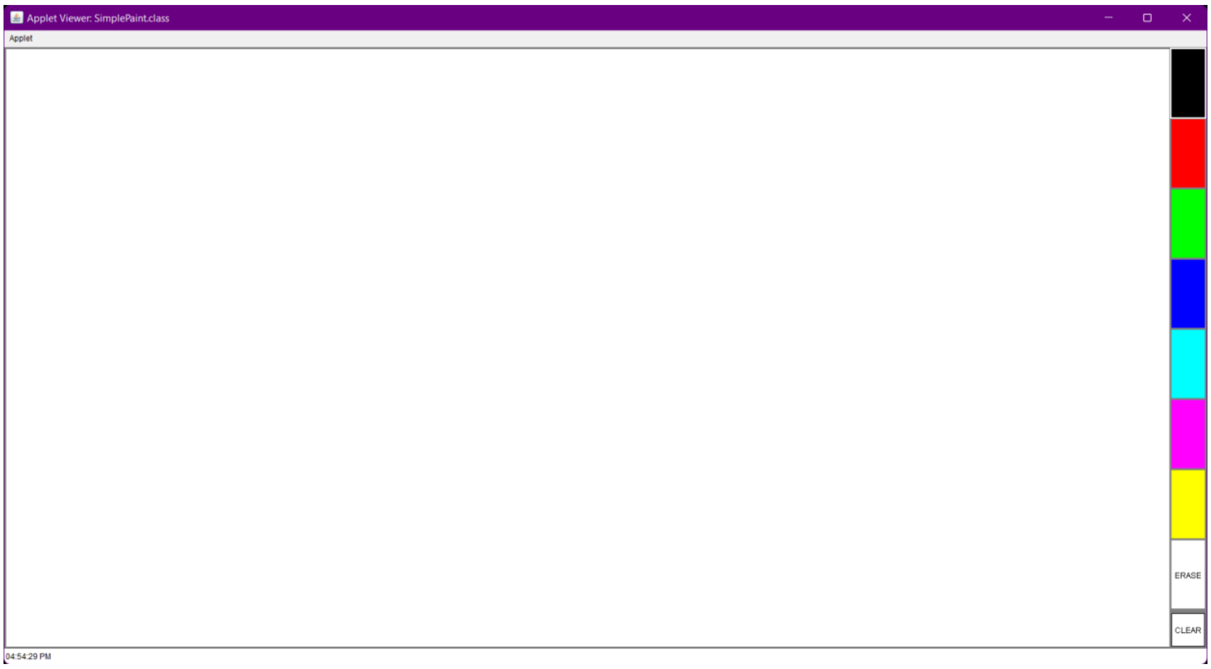
```java
public void update(Graphics g) {
   paint(g);
}

public void paint(Graphics g) {

  int width = getSize().width;
  int height = getSize().height;

  int colorSpacing = (height - 56) / 8;


  //drawing screen
  g.setColor(Color.white);
  g.fillRect(3, 3, width - 59, height - 6);


  //backgroundscreen
  g.setColor(Color.gray);
  g.drawRect(0, 0, width-1, height-1);
  g.drawRect(1, 1, width-3, height-3);
  g.drawRect(2, 2, width-5, height-5);


  g.fillRect(width - 56, 0, 56, height);


  g.setColor(Color.white);
  g.fillRect(width-53,  height-53, 50, 50);
  g.setColor(Color.black);
  g.drawRect(width-53, height-53, 49, 49);
  g.drawString("CLEAR", width-48, height-23);

    // For color button colors
  g.setColor(Color.black);
  g.fillRect(width-53, 3 + 0*colorSpacing, 50, colorSpacing-3);
  g.setColor(Color.red);
  g.fillRect(width-53, 3 + 1*colorSpacing, 50, colorSpacing-3);
  g.setColor(Color.green);
  g.fillRect(width-53, 3 + 2*colorSpacing, 50, colorSpacing-3);
  g.setColor(Color.blue);
  g.fillRect(width-53, 3 + 3*colorSpacing, 50, colorSpacing-3);
  g.setColor(Color.cyan);
  g.fillRect(width-53, 3 + 4*colorSpacing, 50, colorSpacing-3);
  g.setColor(Color.magenta);
  g.fillRect(width-53, 3 + 5*colorSpacing, 50, colorSpacing-3);
  g.setColor(Color.yellow);
  g.fillRect(width-53, 3 + 6*colorSpacing, 50, colorSpacing-3);
  // BOOKMARK
    g.setColor(Color.white);
    g.fillRect(width-53, 3 + 7*colorSpacing, 50, colorSpacing-3);

    //for background of clear button
  g.setColor(Color.white);
  g.drawRect(width-55, 1 + currentColor*colorSpacing, 53, colorSpacing);
  g.drawRect(width-54, 2 + currentColor*colorSpacing, 51, colorSpacing-2);

  g.setColor(Color.BLACK);
  g.drawString("ERASE", width-48, height-105);

}

private void changeColor(int y) {

// border of the selected color
  int width = getSize().width;
  int height = getSize().height;
  int colorSpacing = (height - 56) / 8;
  int newColor = y / colorSpacing;

  if (newColor < 0 || newColor > 7)
     return;

  Graphics g = getGraphics();
  g.setColor(Color.gray);
  g.drawRect(width-55, 1 + currentColor*colorSpacing, 53, colorSpacing);
  g.drawRect(width-54, 2 + currentColor*colorSpacing, 51, colorSpacing-2);
  currentColor = newColor;
  //current border set to white
  g.setColor(Color.white);
  g.drawRect(width-105, 1 + currentColor*colorSpacing, 53, colorSpacing);
  g.drawRect(width-54, 2 + currentColor*colorSpacing, 51, colorSpacing-2);
  g.dispose();

}

public void start ()
{
    t = new Thread (this);
    t.start ();
}

public void run ()
{
        try
        {


            while (true)
            {
                String temp;
                Calendar cal = Calendar.getInstance ();
                hours = cal.get (Calendar.HOUR_OF_DAY);
                minutes = cal.get (Calendar.MINUTE);
                seconds = cal.get (Calendar.SECOND);
                 if (hours > 12){
                    temp = " PM";
                    hours -= 12;
                 }else{
                    temp = " AM";
                 }
                SimpleDateFormat formatter = new SimpleDateFormat("hh:mm:ss");
                Date date = cal.getTime ();
                timeString = formatter.format (date);
                timeString += temp;
                t.sleep (1000); // interval given in milliseconds
                showStatus(timeString);
            }
        }
        catch (Exception e)
        {
        }
    }

    private void setUpDrawingGraphics() {

      g = getGraphics();
      switch (currentColor) {
         case BLACK:
            g.setColor(Color.black);
            break;
         case RED:
            g.setColor(Color.red);
            break;
         case GREEN:
            g.setColor(Color.green);
            break;
         case BLUE:
            g.setColor(Color.blue);
            break;
         case CYAN:
            g.setColor(Color.cyan);
         break;
      case MAGENTA:
         g.setColor(Color.magenta);
         break;


      case YELLOW:
         g.setColor(Color.yellow);
         break;
       case WHITE:
           g.setColor(Color.white);
           break;
    }
 }

public void mousePressed(MouseEvent evt) {


   int x = evt.getX();
   int y = evt.getY();

   int width = getSize().width;
   int height = getSize().height;

   if (dragging == true)
       return;

   if (x > width - 53) {

      if (y > height - 53)
         repaint();
      else
         changeColor(y);
   }
   else if (x > 3 && x < width - 56 && y > 3 && y < height - 3) {

      prevX = x;
      prevY = y;
      dragging = true;
      setUpDrawingGraphics();
   }

}     // end mousePressed()

public void mouseReleased(MouseEvent evt) {

    if (dragging == false)
       return;  // Nothing to do because the user isn't drawing.
```

```java
       dragging = false;
       g.dispose();
       g = null;
   }

   public void mouseDragged(MouseEvent evt) {


       if (dragging == false)
          return;  // Nothing to do because the user isn't drawing.

       int x = evt.getX();   // x-coordinate of mouse.
       int y = evt.getY();   // y=coordinate of mouse.

       if (x < 3)                           // Adjust the value of x,
          x = 3;                            //   to make sure it's in
       if (x > getSize().width - 57)        //   the drawing area.
          x = getSize().width - 57;

       if (y < 3)                           // Adjust the value of y,
          y = 3;                            //   to make sure it's in
       if (y > getSize().height - 4)        //   the drawing area.
          y = getSize().height - 4;

//        g.drawLine(prevX, prevY, x, y);  // Draw the line.
       g.fillOval (prevX, prevY, STROKE, STROKE);
       g.fillOval (x, y, STROKE, STROKE);

       prevX = x;  // Get ready for the next line segment in the curve.
       prevY = y;

   } // end mouseDragged.

    public void keyTyped(KeyEvent evt) {
       char c = evt.getKeyChar();
       switch (c){
           case '1':
               STROKE = 1;
               break;
           case '2':
               STROKE = 2;
               break;
           case '3':
               STROKE = 3;
               break;
           case '4':
               STROKE = 4;
               break;
       case '5':
           STROKE = 5;
           break;
       case '6':
           STROKE = 6;
           break;


       case '7':
           STROKE = 7;
           break;
       case '8':
           STROKE = 8;
           break;
       case '9':
           STROKE = 9;
           break;
       case 'a':
           if(STROKE==1){}
           else {
               STROKE -= 1;
           }
           break;
       case 'd':
           STROKE += 1;
           break;
       case 'w':
           if(currentColor <= 0 ){
               currentColor=6;
           }else{
               currentColor-=1;
           }
           break;
       case 's':
           currentColor = (currentColor+1) % 7;
           break;
       default:
           return;
   }
}

public void keyPressed(KeyEvent evt) {
    char c = evt.getKeyChar();
    switch (c){
        case 'a':
            if(STROKE==1){}
            else {
                STROKE -= 1;
                }
                break;
            case 'd':
                STROKE += 1;
                break;
            default:
                return;
        }


        System.out.println(STROKE);
    }

    public void keyReleased(KeyEvent evt) { }
    public void mouseEntered(MouseEvent evt) { }   // Some empty routines.
   public void mouseExited(MouseEvent evt) { }      //  (Required by the
MouseListener
   public void mouseClicked(MouseEvent evt) { }   //     and
MouseMotionListener
   public void mouseMoved(MouseEvent evt) { }     //     interfaces).
} // end class SimplePaint
```

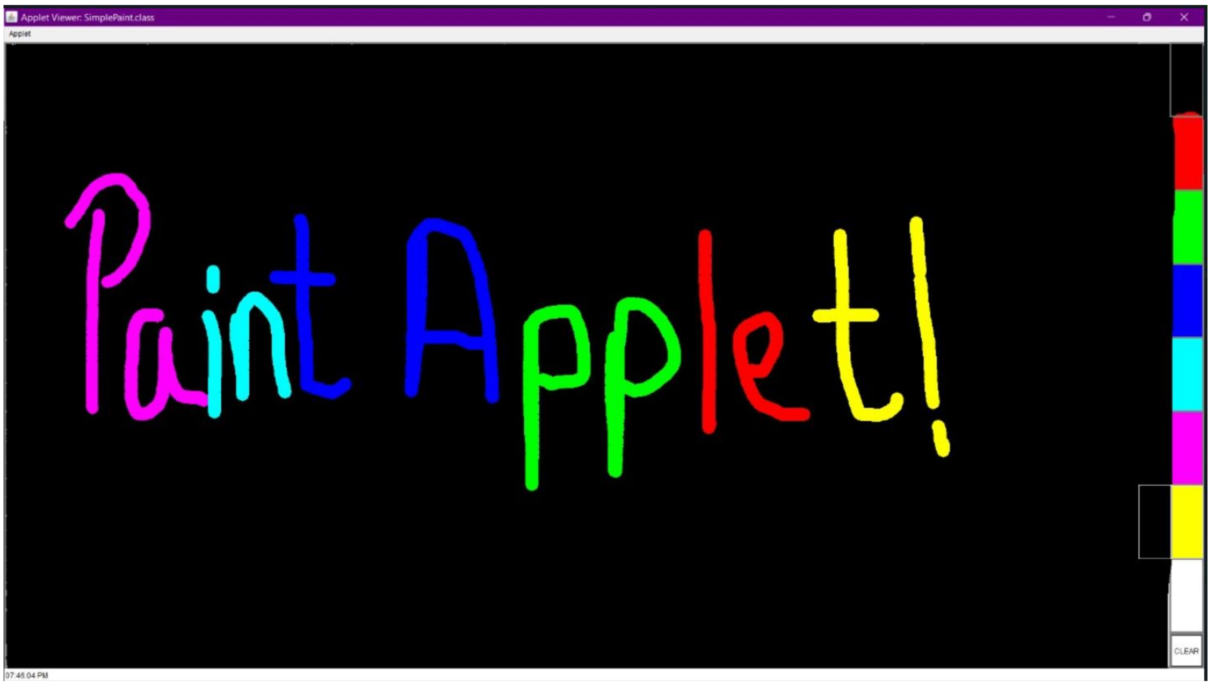
SimplePaint.html

```
<html>

<applet code="SimplePaint.class" height="900" width="1800" >  </applet>

</html>
```

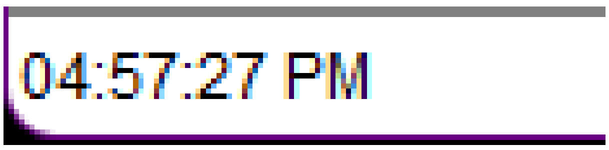
Output:



Painting Applet First View



Drawing in the applet



Live time in the applet implemented by using multi-threading concept