COMPUTER GRAPHICS

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PROBLEM STATEMENT :

Write a java program to generate animation of moving pendulum.

CODE :

**package** cgg;

**import** java.applet.Applet;

**import** java.awt.Color;

**import** java.awt.Dimension;

**import** java.awt.Graphics;

**import** javax.swing.JFrame;

**public** **class** Pendulum **extends** Applet{

**public** Pendulum() {

// **TODO** Auto-generated constructor stub

}

**public** **void** init(){

}

**public** **void** paint(Graphics g){

**int** x1,y1,x2,y2;

**int** k1,j1,k2,j2;

**int** px,py;

**double** theta=3\*Math.***PI***/2;

x1=450;

y1=100;

x2=450;

y2=300;

px=425;

py=275;

**this**.setSize(**new** Dimension(1000,600));

//g.setColor(Color.red);

//g.drawLine(450,100, 450, 300);

//g.drawOval(425, 275, 50, 50);

**for**(**int** i=0;i<1024;i++){

Dimension d = getSize();

g.setColor(Color.***WHITE***);

g.fillRect(0, 0, d.width, d.height);

g.setColor(Color.***red***);

**if**(i<256||i>768)

{

k2= (**int**) (x2\*Math.*cos*(theta));

j2= (**int**) (y2\*Math.*sin*(theta));

g.drawLine(450,100,450-k2,200-j2);

g.setColor(Color.***black***);

g.fillOval(425-k2,175-j2,50,50);

g.setColor(Color.***red***);

theta=theta+0.001;

}

**else** **if**(i<768){

k2= (**int**) (x2\*Math.*cos*(theta));

j2= (**int**) (y2\*Math.*sin*(theta));

g.drawLine(450,100,450-k2,200-j2);

g.setColor(Color.***black***);

g.fillOval(425-k2,175-j2,50,50);

g.setColor(Color.***red***);

theta=theta-0.001;

}

**try** {

Thread.*sleep*(1);

} **catch** (InterruptedException e) {

// **TODO** Auto-generated catch block

e.printStackTrace();

}

}

}

**public** **static** **void** main(String[] args, Graphics g){

Pendulum a=**new** Pendulum();

a.setSize(2000,2000);

a.setVisible(**true**);

a.paint(g);

// a.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

}

}

OUTPUT :

