CSA0976 Java Programming

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Assignment 3

1.Code:

```
import java.awt.*;
import java.util.*;
import javax.swing.*;

public class ColorfulText extends JPanel implements Runnable {
    private static final long serialVersionUID = 1L;
    private int x, y;
    private String message;
    private Color color;
    private Random random;

    public ColorfulText() {
        x = 50;
        y = 50;
        message = "Hello, world!";
        color = Color.BLACK;
        random = new Random();
    }

    @Override
    protected void paintComponent(Graphics g) {
```

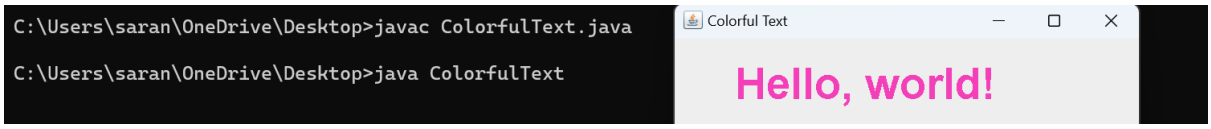
```
        super.paintComponent(g);
        g.setFont(new Font("Arial", Font.BOLD, 36));
        g.setColor(color);
        g.drawString(message, x, y);
    }

    @Override
    public void run() {
        while (true) {
            try {
                Thread.sleep(1000);
            } catch (InterruptedException e) {
                e.printStackTrace();
            }
            color = new Color(random.nextInt(256), random.nextInt(256),
random.nextInt(256));
            repaint();
        }
    }

    public static void main(String[] args) {
        JFrame frame = new JFrame("Colorful Text");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setSize(400, 200);
        ColorfulText colorfulText = new ColorfulText();
        frame.add(colorfulText);
        frame.setVisible(true);
        Thread thread = new Thread(colorfulText);
```

```
        thread.start();
    }
}
```

Output:



2.Code:

```
class Table
{
        void printTable(int n)
        {
                synchronized(this)
                {
                        for(int i=1;i<=5;i++)
                        {
                                System.out.println(n+"*"+i+"="+(n*i));
                                try
                                {
                                        Thread.sleep(500);
                                }
                                catch(Exception e)
                                {
                                        System.out.println(e);
                                }
                        }
                }
        }
```

```
}
class Mythread1 extends Thread
{
	Table t;
	Mythread1(Table t)
	{
		this.t=t;
	}
	public void run()
	{
		t.printTable(5);
	}
}
class Mythread2 extends Thread
{
	Table t;
	Mythread2(Table t)
	{
		this.t=t;
	}
	public void run()
	{
		t.printTable(10);
	}
}
class Use
{
```

```
    public static void main(String arg[])
    {
        Table obj=new Table();
        Mythread1 th1=new Mythread1(obj);
        Mythread2 th2=new Mythread2(obj);
        th1.start();
        th2.start();
    }
}
```

Output:

```
C:\Users\saran\OneDrive\Desktop\Java>javac multithreading.java

C:\Users\saran\OneDrive\Desktop\Java>java Use
5*1=5
5*2=10
5*3=15
5*4=20
5*5=25
10*1=10
10*2=20
10*3=30
10*4=40
10*5=50
```

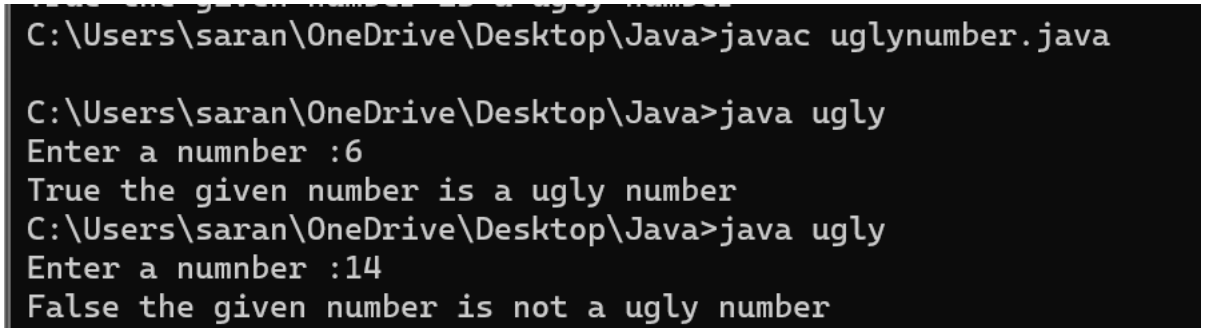
3.Code:

```
import java.io.*;
import java.util.*;
class ugly
{
    public static boolean ugl(int n)
    {
        if(n<=0)
        {
```

```
            return false;
        }
        while(n%2==0)
        {
            n/=2;
        }
        while(n%3==0)
        {
            n/=3;
        }
        while(n%5==0)
        {
            n/=5;
        }
        return n==1;
}
public static void main(String arg[])
{
        int n;
        Scanner a=new Scanner(System.in);
        System.out.print("Enter a numnber :");
        n=a.nextInt();
        if(ugl(n))
        {
            System.out.print("True the given number is a ugly number");
        }
        else
```

```
        {
            System.out.print("False the given number is not a ugly
number");
        }
    }
}
```

Output:



4.Code:

```
import java.io.*;
import java.util.*;
class fiboseries
{
    public static void main(String arg[])
    {
        int n;
        Scanner a=new Scanner(System.in);
        System.out.print("Enter a number :");
        n=a.nextInt();
        if(n<0)
        {
            System.out.println("Enter a positive Integer ");
        }
```

```
            else
            {
                System.out.print("Output :"+fibonacci(n));
            }
        }
        public static int fibonacci(int n)
        {
            if(n==1||n==0)
            {
                return(n);
            }
            else
            {
                return(fibonacci(n-1)+fibonacci(n-2));
            }
        }
}
```

Output:

```
C:\Users\saran\OneDrive\Desktop\Java>javac fiboseries.java

C:\Users\saran\OneDrive\Desktop\Java>java fiboseries
Enter a number :1
Output :1
C:\Users\saran\OneDrive\Desktop\Java>java fiboseries
Enter a number :2
Output :1
C:\Users\saran\OneDrive\Desktop\Java>java fiboseries
Enter a number :3
Output :2
C:\Users\saran\OneDrive\Desktop\Java>java fiboseries
Enter a number :4
Output :3
C:\Users\saran\OneDrive\Desktop\Java>
```

5.Code:

```
class duplicate
{
   Public static int removeDuplicates(int arr[], int n)
   {
      if (n==0 || n==1)
         return n;
      int[] temp = new int[n];
      int j = 0;
      for (int i=0; i<n-1; i++)
         if (arr[i] != arr[i+1])
            temp[j++] = arr[i];
      temp[j++] = arr[n-1];
      for (int i=0; i<j; i++)
         arr[i] = temp[i];
      return j;
   }
   public static void main (String[] args)
   {
      int arr[] = {10, 20, 20, 30, 40, 40, 40, 50, 50};
      int n = arr.length;
      n = removeDuplicates(arr, n);
      for (int i=0; i<n; i++)
        System.out.print(arr[i]+" ");
   }
}
```

Output:

```
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-3 Assignment>javac duplicate.java

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-3 Assignment>java duplicate
10 20 30 40 50
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-3 Assignment>
```