PROGRAMMING IN JAVA

1.
```
 class thread1 extends Thread {

    public void run() {
        String ANSI_RED = "\033[0;31m";
        System.out.println(ANSI_RED+"Don't give up keep working hard");


    }
}
     class thread2 extends Thread {
        public void run(){
            String ANSI_GREEN = "\033[0;32m";
            System.out.println(ANSI_GREEN+"Don't give up keep working hard");

        }
    }
     class thread3 extends Thread {
        public void run(){
          String ANSI_YELLOW = "\033[0;33m";
          System.out.println(ANSI_YELLOW+"Don't give up keep working hard");

        }
    }
      class thread4 extends Thread {
        public void run() {
          String ANSI_BLUE = "\033[0;34m";
          System.out.println(ANSI_BLUE+"Don't give up keep working hard");

        }
    }
    public class A3q1 {
    public static void main(String args[]) {
        thread1 t1 = new thread1();
        thread2 t2 = new thread2();
        thread3 t3 = new thread3();
        thread4 t4 = new thread4();
        t1.start();
        t2.start();
        t3.start();
        t4.start();
    }
}
```

OUTPUT:

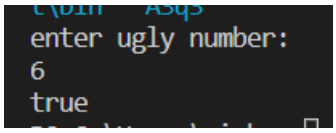
```
Don't give up keep working hard
Don't give up keep working hard
Don't give up keep working hard
Don't give up keep working hard
```

2.
```
class thread1 extends Thread {

    public void run() {
        for(int i=1;i<=5;i++) {
            System.out.println(i+"*"+5+"="+(i*2));
        }
    }
}
class thread2 extends Thread {
    public void run() {
        for(int i=1;i<=10;i++) {
            System.out.println(i+"*"+10+"="+(i*10));
        }
    }
}
class A3q2 {
    public static void main(String args[]) {
        thread1 t1 = new thread1();
        thread2 t2 = new thread2();
        t1.setPriority(Thread.MAX_PRIORITY);
        t1.start();
        t2.start();
}
}
```

3.
```
import java.util.*;

class A3q3 {
    public static void main(String args[]) {
             int i,n;
          Scanner s = new Scanner(System.in);
          System.out.println("enter ugly number:");
          n = s.nextInt();
          int s1 = n % 2;
           for(i=3;i<=Math.sqrt(n);i++)
           {
            while(n%i==0)
            {
                System.out.println(i);
```

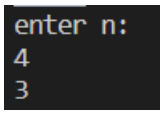
```
            }
           }
           if(s1 == 0 && i == 3 || i == 5 ) {
            System.out.println("true");
           }
           else
           System.out.println("false");
    }
}
```

OUTPUT:



4.
```
import java.util.*;

class A3q4 {
     static int fib(int n) {
        if(n <=1)
        return n;
        else
        return fib(n-1) + fib(n-2);
     }
    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);
        System.out.println("enter n:");
      int  n = s.nextInt();
      System.out.println(fib(n));
    }
}
```

OUTPUT:



5.
```
class A3q5 {

    public static void main(String args[]) {
        String s = "TEMPLE",s1="";
        char c;
        for(int i=0;i<s.length();i++) {
            c = s.charAt(i);
            s1 = c + s1;
```

```
        }
        System.out.println("reversed string is:"+s1);
    }
}
```

OUTPUT:

```
reversed string is:ELPMET
```

6.

```
import java.util.*;

class A3q6 {
    public static void main(String args[]) {
    Scanner s = new Scanner(System.in);
    String s1 = s.nextLine();

    int s2 = Integer.parseInt(s1);
    System.out.println(s2 + 100);
    System.out.println(s1 + 100);

    }
}
```

OUTPUT:

```
200
300
200100
```

7.

```
import java.util.*;

class UsernameValidator {
    public static final String regularExpression = "[a-zA-Z][a-zA-Z0-
9_]{5,18}$";
}
public class A3q7 {
    public static final Scanner s = new Scanner(System.in);
    public static void main(String args[]) {
            String s2 = s.nextLine();
            if(s2.matches(UsernameValidator.regularExpression)) {
                System.out.println("Valid");
            }
            else
            System.out.println("Invalid");
        }
}
```

8.
```
import java.util.*;

import java.io.*;
class A3q8 {
    public static void main(String args[]) {
        int n = 4,i,j;
        String names[] = {"rahul","angani","badoni","charles"};
        String temp;
        for(i=0;i<n;i++)
            {
                for(j=i+1;j<n;j++) {
                    if(names[i].compareTo(names[j])>0) {
                        temp = names[i];
                        names[i] = names[j];
                        names[j] = temp;
                    }
                }
            }
            System.out.println("the names in alphabetical order");
            for(i=0;i<n;i++) {
                System.out.println(names[i]);
            }
}
}
```

9.
```
import java.util.*;

class A3q10 {
    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);
        System.out.println("enter the string:");
        String s1 = s.nextLine();
        char c = ' ';
        int n=0;
        for(int i=0;i<s1.length();i++)
        {
     c = s1.charAt(i);
        if(c == 'a' || c == 'e' || c =='i' || c == 'o' || c == 'u' || c == 'A'
|| c == 'E' || c == 'I' || c == 'O' || c == 'U')
        {
            n++;
            System.out.print(c + " ");
        }
    }
    System.out.println();
    System.out.print("Number of vowels are:");
```

```
    System.out.println(n);
    }
}
```

10.

```
import java.util.*;
class A3q11{
    public static void main(String aregs[]) {
        Scanner s = new Scanner(System.in);
        System.out.print("enter string:");
        String s1 = s.nextLine();
        int i,n=0,m=0;
        char c = ' ';
        for(i=0;i<s1.length();i++) {
            c = s1.charAt(i);
            if(c == 'a' || c == 'e' || c =='i' || c == 'o' || c == 'u' || c ==
'A' || c == 'E' || c == 'I' || c == 'O' || c == 'U')
            {
                n++;
                System.out.print(c + " ");
            }
             else
            {
              m++;
              System.out.print(c + " ");
            }
        }
        System.out.print("vowels:");
        System.out.print(n);
       // System.out.print(m);
        }
}
```

OUTPUT:

```
enter string:ENGINEERING
E N G I N E E R I N G vowels:5
```

11.

```
import java.util.*;

class A3cdq12 {
    public static void main(String args[]) {
Scanner s = new Scanner(System.in);
System.out.println("enter the string:");
String s1 = s.nextLine();
System.out.println("enter chararcter need to be searched:");
char s2 = s.next().charAt(0);
```

```
for(int i=0;i<s1.length();i++) {
    if(s1.charAt(i) == s2) {
        System.out.println(s2 + " is present at the index "+i);
    }
}
    }
}
```

OUTPUT:

```
enter the string:
ENGI
enter chararcter need to be searched:
E
E is present at the index 0
```

12.

```
import java.util.*;

class A3q13 {
    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);
        System.out.println("enter the string:");
        String s1 = s.nextLine();
        String s2 = " ";
        s2 = s1.replaceAll("[aeiouAEIOU]","");
        System.out.println(s2);
    }
}
```

OUTPUT:

```
enter the string:
ENGI
NG
```

13.

```
import java.util.*;

class A3q14 {
    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);
        System.out.println("enter the string:");
        String s1 = s.nextLine();
        Character c[] = new chararcter[s1.length()];
        for(int i=0;i<s1.length();i++) {
            c[i] = s1.charAt(i);
        }
        Arrays.sort(c);
```

```
        Collections.reverse(Arrays(c));
        for(char x:c)
        {
            System.out.println(x);
        }

    }
}
```