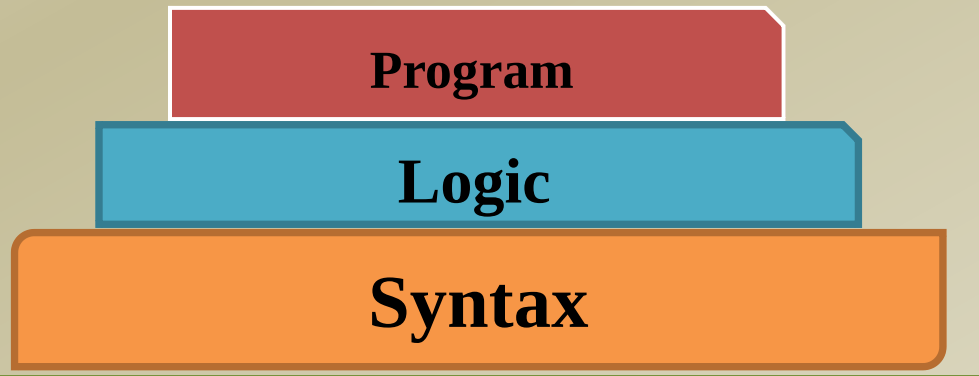
Code at Random (OPC) PVT. LTD.

Module 6: Previous Year Board Questions



Programs [2017 & 2011]

1. Write two separate program to generate the following patterns using iteration(loop) statements.

(a)

```
*
* #
* # *
* # * #
* # * # *
```

(b)

```
5 4 3 2 1
5 4 3 2
5 4 3
5 4
5
```

2. Write a program to calculate the sum of all the prime numbers between the range of 1 and 100.

Solution of Pattern

```
class pattern1
{
   public static void main(String Args[])
   {
      int i,j;
      for(i=1;i<=5;i++)
      {
         for(j=1;j<=i;j++)
         {
            if(j%2==0)
            System.out.print(“#");
            else
            System.out.print(“*");
         }
        System.out.println( );
      }
   }
}
```

```
class pattern2
{
    public static void main(String Args[]){
            for (int i=1;i<=5;i++)
             {
               for(int j=5; j>=i; j--)
               {
                  System.out.print(j);
               }
              SOPln( );
             }
            }
        }
}
```

Solution of Prime Nos sum

```
import java.util.*;
  class prime {
   public static void main(String Args[])    {
     int c=0,n,i,sum=0;
        Scanner sc= new Scanner(System.in);
       n= sc.nextInt();
     System.out.println("Prime no's Btw 1 and 100 are: ");
     for(int i=1;i<=n;i++)  {
        c=0;
        for(int j=2;j<i;j++) {
          if(i%j==0)
            c++;
         }
         if(c==0)
            sum=sum+i;
      }
            System.out.println(sum);
   }
 }
```

Programs [2007]

- Write a program to compute and display the sum of the following series:-

$$\frac{1+2}{1*2} + \frac{1+2+3}{1*2*3} + \ldots\ldots\ldots + \frac{1+2+3+4\ldots\ldots+n}{1*2*3*4\quad *n}$$

Solution to Series Program

```
public static void main(String Args[])
   {
      int n,i,f1,f2,j,k;
      double sum=0;
      Scanner sc= new Scanner(System.in);
      System.out.println("Enter the number of terms");
      n= sc.nextInt();
      for(i=2;i<=n;i++)
      {
         f1=1;
         f2=0;
         for(j=1;j<=i;j++)
         {
            f1=(f1*j);
         }
for(k=1;k<=i;k++)
         {
            f2= f2 + j;
         }
         sum= (sum + f2/f1);
      }
       System.out.println(sum);
   }
```