

## 1 Week 1

**Problem 1.1** *Write a program in Java to find the prime numbers between 1 to 100*

*Code.*

```
class prime
{
    static boolean primes [];
    public static void fillFalse ()
    {
        int i;
        for (i=0;i<101;i++) {
            primes[i]=true;
        }
    }
    public static void initialise ()
    {
        fillFalse ();
        int i,j;
        primes[1]=false;
        for (i=2;i<101;i++) {
            if (primes[i]==true) {
                for (j=i+i;j<101;j+=i) {
                    primes[j]=false;
                }
            }
        }
    }
    public static void print ()
    {
        int i;
        for (i=1;i<=100;i++) {
            if (primes[i]==true)
                System.out.println(i);
        }
    }
    public static void main (String ags [])
```

```

    {
        primes=new boolean[101];
        initialise();
        print();
    }
}

```

**Problem 1.2** *Write a program in Java to reverse a given number.*

*Code.*

```

import java.io.*;
class reverse
{
    public static void main(String args[]) throws IOException
    {
        BufferedReader br=new BufferedReader(new InputStreamReader(Sy
        int n;
        n=Integer.parseInt(br.readLine());
        int m=n, rev=0;
        while(m>0) {
            rev=(rev*10)+m%10;
            m/=10;
        }
        System.out.println("Reversed Number "+rev);
    }
}

```

**Problem 1.3** *Write a program in Java to find the sum of digits of a given number.*

*Code.*

```

import java.io.*;
class sum
{
    public static void main(String args[]) throws IOException
    {
        BufferedReader br=new BufferedReader(new InputStreamReader(Sy
        int n;
        n=Integer.parseInt(br.readLine());
        int m=n, rev=0, sum=0;
        while(m>0) {
            sum+=(m%10);
            m/=10;
        }
    }
}

```

```

        System.out.println("Sum of each digits "+sum);
    }
}

```

**Problem 1.4** Write a program in Java to print the following pattern.

```

*
**
***
****

```

*Code.*

```

class patt1
{
    public static void main(String args [])
    {
        int n=4,i,j;
        for(i=1;i<=n;i++) {
            for(j=1;j<=i;j++) {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}

```

**Problem 1.5** Write a program in Java to print the following pattern.

```

*
***
*****
*****

```

*Code.*

```

class patt2
{
    public static void main(String args [])
    {
        int n=4,i,j,k;
        for(i=1;i<=n;i++) {
            for(j=n-1;j>=i;j--) {
                System.out.print(" ");
            }
            for(j=1;j<=((2*i)-1);j++) {
                System.out.print("*");
            }
        }
    }
}

```

```

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

```

**Problem 1.6** *Write a program in Java to print the following pattern.*

```

*
**
***
****

```

*Code.*

```

class patt3
{
    public static void main(String args[])
    {
        int n=4,i,j;
        for(i=1;i<=n;i++) {
            for(j=n-1;j>=i;j--) {
                System.out.print("_");
            }
            for(j=1;j<=i;j++) {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}

```