

## 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 args [])
```

```

    {
        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(System.in));
        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);
    }
}

```

**Theorem 1.1** *This is a theorem statement.*

*Proof.* This is a proof. ■