Review of Week 2

Program Format

```
 1 import java.io.*;
 2 import java.util.*;
 3
 4 public class CentimeterTable {
 5     public static void main(String args[]) {
 6
27     }
28 }
31
32
```

Data Types and Declarations

```
 1 import java.io.*;
 2 import java.util.*;
 3
 4 public class CentimeterTable {
 5     public static void main(String args[]) {
 6         final double CM_PER_INCH = 2.54;
 7         int centimeters;
 8         double inches;
 9         int rows;
10         int increment;
11         int numRows;
12         Scanner scan;
13
27     }
28 }
31
32
```

Input/Output
Assignment Statement

```
 1 import java.io.*;
 2 import java.util.*;
 3
 4 public class CentimeterTable {
 5     public static void main(String args[]) {
 6         final double CM_PER_INCH = 2.54;
 7         int centimeters;
 8         double inches;
 9         int rows;
10         int increment;
11         int numRows;
12         Scanner scan = new Scanner(System.in);
13         System.out.print("Enter the starting value for centimeters: ");
14         centimeters = scan.nextInt();
15         System.out.print("Enter the number of rows in the table: ");
16         rows = scan.nextInt();
17         System.out.print("Enter the increment in each row: ");
18         increment = scan.nextInt();
19         System.out.printf("%14s%12s\n","centimeters", "inches");
20
27     }
28 }
31
32
```

while Loops

```
1  import java.io.*;
2  import java.util.*;
3
4  public class CentimeterTable {
5      public static void main(String args[]) {
6          final double CM_PER_INCH = 2.54;
7          int centimeters;
8          double inches;
9          int rows;
10         int increment;
11         int numRows;
12         Scanner scan = new Scanner(System.in);
13         System.out.print("Enter the starting value for centimeters: ");
14         centimeters = scan.nextInt();
15         System.out.print("Enter the number of rows in the table: ");
16         rows = scan.nextInt();
17         System.out.print("Enter the increment in each row: ");
18         increment = scan.nextInt();
19         System.out.printf("%14s%12s\n","centimeters", "inches");
20         numRows = 0;
21         while (numRows < rows) {
22             inches = centimeters/CM_PER_INCH;
23             System.out.printf("%14d%12.2f\n", centimeters, inches);
24             numRows = numRows+1;
25             centimeters = centimeters + increment;
26         }
27     }
28 }
31
32
```

```java
import java.io.*;
import java.util.*;

public class CentimeterTable {
    public static void main(String args[]) {
        final double CM_PER_INCH = 2.54;
        int centimeters;
        double inches;
        int rows;
        int increment;
        int numRows;
        Scanner scan = new Scanner(System.in);
        System.out.print("Enter the starting value for centimeters: ");
        centimeters = scan.nextInt();
        System.out.print("Enter the number of rows in the table: ");
        rows = scan.nextInt();
        System.out.print("Enter the increment in each row: ");
        increment = scan.nextInt();
        System.out.printf("%14s%12s\n","centimeters", "inches");
        numRows = 0;
        while (numRows < rows) {
            inches = centimeters/CM_PER_INCH;
            System.out.printf("%14d%12.2f\n", centimeters, inches);
            numRows = numRows+1;
            centimeters = centimeters + increment;
        }
    }
}
```

Sample Execution

```
Enter the starting value for centimeters: 10
Enter the number of rows in the table: 12
Enter the increment in each row: 5
   centimeters      inches
            10        3.94
            15        5.91
            20        7.87
            25        9.84
            30       11.81
            35       13.78
            40       15.75
            45       17.72
            50       19.69
            55       21.65
            60       23.62
            65       25.59
```