Alex Kurata

1.

ex1_4.java

```
1
2  public class ex1_4 {
3      public static void main(String[] args) {
4          System.out.println("a   a^2   a^3");
5          System.out.println("1   1     1");
6          System.out.println("2   4     8");
7          System.out.println("3   9     27");
8          System.out.println("4   16    64");
9      }
10 }
11
```

ex1_4.java ex2_1.java

```
1
2  import java.util.Scanner;
3
4
5  public class ex2_1 {
6      public static void main(String[] arg) {
7          Scanner input = new Scanner(System.in);
8          System.out.print("Enter a degree in celsius: ");
9          double cel = input.nextDouble();
10         double far = (9.0/5.0) * cel + 32;
11         System.out.println(cel + " degrees celsius is equal to " + far + " degrees fahrenheit");
12
13     }
14 }
15
```

ex1_4.java ex2_1.java ex2_5.java

```
1
2  import java.util.Scanner;
3
4
5  public class ex2_5 {
6
7      public static void main(String[] args) {
8          Scanner input = new Scanner(System.in);
9          double subT = input.nextDouble(); //sub total
10
11         double tipP = (input.nextDouble()/100); //tip percentage
12         double tip = tipP * subT;
13
14         double tot = subT + tip; //total = sub total + tip
15
16         System.out.println("The tip is $" + tip + ", with a total of $" + tot);
17     }
18
19 }
20
```

ex1_4.java ex2_1.java ex2_5.java ex2_6.java

```java

import java.util.Scanner;


public class ex2_6 {

    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        System.out.println("Enter a number between 0 and 1000: ");

        int userInput = input.nextInt();

        do{
            if (userInput >= 1000 || userInput <= 0) {
                System.out.println("Enter a number between 0 and 1000: ");
                userInput = input.nextInt();
            }
        }while (userInput >= 1000 || userInput <= 0);

        double digits2 = userInput / 10 ; //getting the first two digits
        double digit3 = userInput % 10; //extracting the last digit
        double digit2 = digits2 % 10; //getting the second digit through the remainder of the first two
        double digit1 = userInput / 100; //taking the first digit and removing the second digit and dividing 10

        double sum = digit1 + digit2 + digit3;

        System.out.println("The sum of the digits is: " + sum);
    }

}

```

ex1_4.java ex2_1.java ex2_5.java ex2_6.java ex2_9.java

```java

import java.util.Scanner;


public class ex2_9 {

    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        System.out.println("Enter v0, v1, and t: ");

        double v0 = input.nextDouble();
        double v1 = input.nextDouble();
        double t = input.nextDouble();

        double vf = v1 - v0;
        double fin = vf / t;

        System.out.println("The average acceleration is: " + fin);

    }

}
```

2.

The agile development method commits to a purpose of dedicating changes as the program is being developed. The waterfall method works by constantly testing and planning each step with very little time being spent on the programming aspect. Whereas the agile development process works by having each person contribute directly to the program in a much faster and disorderly process. Agile development has the positive aspect of being faster but the downfall being that each step of the program experiences much less planning and can often be more disorganized than the waterfall method.