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Tutorial # 3 Writing Classes
SOFE 2710U Object Oriented Programming and Design
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Question 1:

```
public class q1 {

    public static void main (String [] args) {

        enum Level {North, West, East, South}
        Level dir1,dir2,dir3,dir4;
        dir1 = Level.North;
        dir2 = Level.South;
        dir3 = Level.West;
        dir4 = Level.East;
        System.out.println("Direction 2: " + dir2 + "\nDirection 3: " +
dir3);
        System.out.println("Ordinal for direction 2 is: " + dir2.ordinal()
+ "\nOrdinal of direction 3 is: " + dir3.ordinal());

    }
}
```

```
Direction 2: South
Direction 3: West
Ordinal for direction 2 is: 3
Ordinal of direction 3 is: 1
PS C:\Users\anasj\OneDrive\Desktop\js\tut3>
```

Question 2:

```
public class q1 {

    public static void main (String [] args) {

        enum Level {North, South, West, East}
        Level dir1,dir2,dir3,dir4;
        dir1 = Level.North;
```

```
        dir2 = Level.South;
        dir3 = Level.West;
        dir4 = Level.East;
        System.out.println("Direction 1: " + dir1 + "\nDirection 2: " +
dir2 + "\nDirection 3: " + dir3 + "\nDirection 4: " + dir4);
        System.out.println("Ordinal for direction 1 is: " + dir1.ordinal()
+ "\nOrdinal for direction 2 is: " + dir2.ordinal() + "\nOrdinal of
direction 3 is: " + dir3.ordinal() + "\nOrdinal of direction 4 is: " +
dir4.ordinal() );

    }
}
```

```
Direction 1: North
Direction 2: South
Direction 3: West
Direction 4: East
Ordinal for direction 1 is: 0
Ordinal for direction 2 is: 1
Ordinal of direction 3 is: 2
Ordinal of direction 4 is: 3
PS C:\Users\anasj\OneDrive\Desktop\js\tut3>
```

Question 3:

```
import java.util.Random;
public class q3 {

    public static void main (String [] args) {

        // create random generator called roll
        Random roll = new Random();

        // simulate die rolls, die 1, die 2
        int die1 = roll.nextInt(6) + 1;
        int die2 = roll.nextInt(6) + 1;

        // summation of die rolls
        int totalroll = (die1 + die2);

        // print statments
```

```
        System.out.println("Die 1 Rolled: " + die1 + "\nDie 2 Rolled: " +
die2);
        System.out.println("The total of the die roll is: " + totalroll);

    }

}
```

```
Die 1 Rolled: 1
Die 2 Rolled: 2
The total of the die roll is: 3
PS C:\Users\anasj\OneDrive\Desktop\js\tut3>
```

Question 4:

```
import java.util.Scanner;
import java.lang.Math;

public class q4 {

    public static void main (String[] args) {

        double x1, y1, x2, y2; // coordinates of two points
        double distance; // distance between the points
        Scanner scan = new Scanner(System.in);
        // Read in the two points
        System.out.print ("Enter the coordinates of the first point "
+"(put a space between them): ");
        x1 = scan.nextDouble();
        y1 = scan.nextDouble();
        System.out.print ("Enter the coordinates of the second point: ");
        x2 = scan.nextDouble();
        y2 = scan.nextDouble();
        // Compute the distance
        distance = ((Math.pow((x1-x2), 2)) + (Math.pow((y2-y1), 2)));
        // Print out the answer
        System.out.println("Distance between points: " + x1 + ", " + y1 +
", " + x2 + ", " + y2 + ", Is equal to: " + distance);
    }

}
```

```
Enter the coordinates of the first point (put a space between them): 2 8
Enter the coordinates of the second point: 8 3
Distance between points: 2.0, 8.0, 8.0, 3.0, Is equal to: 61.0
PS C:\Users\anasj\OneDrive\Desktop\js\tut3>
```

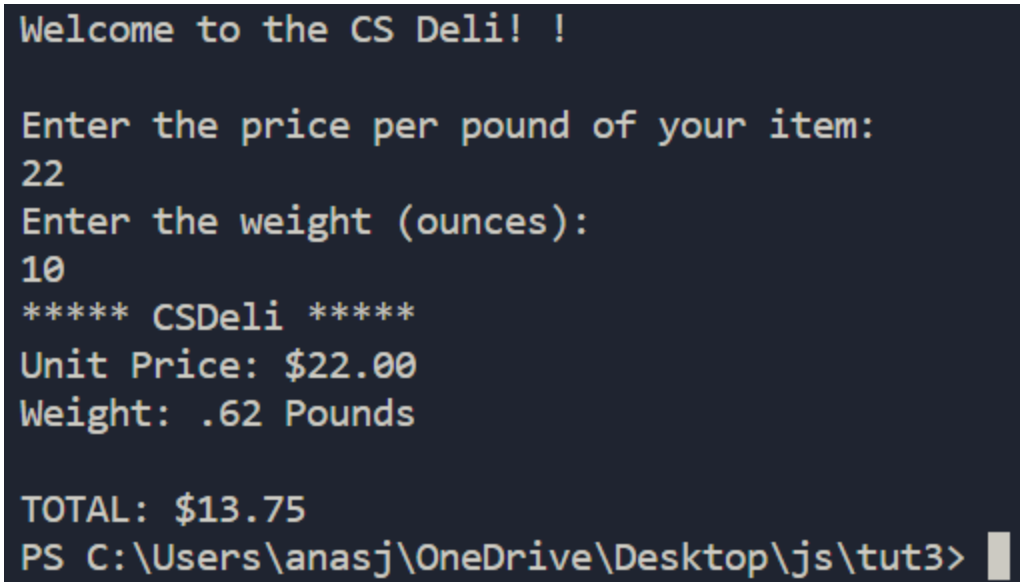
Question 5:

```
import java.text.NumberFormat;
import java.text.DecimalFormat;
import java.util.Scanner;

public class q5{
// main reads in the price per pound of a deli item
// and number of ounces of a deli item then computes
// the total price and prints a "label" for the item
    public static void main (String[] args){

        NumberFormat cur = NumberFormat.getCurrencyInstance();
        DecimalFormat dec = new DecimalFormat(".00");
        final double OUNCES_PER_POUND = 16.0;
        double pricePerPound; // price per pound
        double weightOunces; // weight in ounces
        double weight; // weight in pounds
        double totalPrice; // total price for the item
        Scanner scan = new Scanner(System.in);
        System.out.println ("Welcome to the CS Deli! ! \n ");
        System.out.println("Enter the price per pound of your item:");
        pricePerPound = scan.nextDouble();
        System.out.println("Enter the weight (ounces):");
        weightOunces = scan.nextDouble();
        // Convert ounces to pounds and compute the total price
        weight = weightOunces / OUNCES_PER_POUND;
        totalPrice = pricePerPound * weight;
        System.out.println("***** CSDeli ***** \nUnit Price: " +
cur.format(pricePerPound) + "\n" + "Weight: " + dec.format(weight) + "
Pounds" + "\n\n" + "TOTAL: " + cur.format(totalPrice) );

    }
}
```


Welcome to the CS Deli! !
Enter the price per pound of your item:
22
Enter the weight (ounces):
10
***** CSDeli *****
Unit Price: $22.00
Weight: .62 Pounds
TOTAL: $13.75
PS C:\Users\anasj\OneDrive\Desktop\js\tut3>