

## COSC 117 Project 1

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### Example 1: Fuel Economy to Fuel Consumption:

#### 1. Source Code

```
FuelEcoConsumption.java
1 import java.util.Scanner;
2
3 public class FuelEcoConsumption {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         Scanner keyboard = new Scanner(System.in);
8         System.out.println("How many miles per gallon?");
9         double mpg = keyboard.nextDouble();
10        keyboard.close();
11        double consumption = 235.214583 / mpg;
12        System.out.printf("%.3f MPG is equivalent to %.3f liters per 100km.", mpg, consumption);
13    }
14 }
15
16 }
17 }
```

#### 2. Output

```
Problems @ Javadoc Declaration Console
<terminated> FuelEcoConsumption [Java Application] C:\Users\jpmd1\De
How many miles per gallon?
56
56.000 MPG is equivalent to 4.200 liters per 100km.
```

## Example 2: Volume of Cuboid:

### 1. Source Code

```
VolumeCuboid.java
1 import java.util.Scanner;
2
3 public class VolumeCuboid {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         Scanner keyboard = new Scanner (System.in);
8         System.out.println("What is the length of the cuboid?");
9         double l = keyboard.nextDouble();
10        System.out.println("What is the breadth of the cuboid?");
11        double b = keyboard.nextDouble();
12        System.out.println("What is the height of the cuboid?");
13        double h = keyboard.nextDouble();
14        keyboard.close();
15        double v = l * b * h;
16        System.out.printf("The cuboid has a volume of %.4f", v);
17
18    }
19
20 }
```

### 2. Output

```
Problems @ Javadoc Declaration Console
<terminated> VolumeCuboid [Java Application] C:\Use
What is the length of the cuboid?
13
What is the breadth of the cuboid?
31
What is the height of the cuboid?
3
The cuboid has a volume of 1209.0000
```

### Example 3: Area Difference:

#### 1. Source Code

```
AreaDifference.java
1 import java.util.Scanner;
2
3 public class AreaDifference {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         Scanner keyboard = new Scanner (System.in);
8         System.out.println("Give the side length of square A");
9         double sA = keyboard.nextDouble();
10        System.out.println("Give the side length of square B");
11        double sB = keyboard.nextDouble();
12        keyboard.close();
13        double areaA = Math.pow(sA, 2);
14        double areaB = Math.pow(sB, 2);
15        double areaDifference = areaA - areaB;
16        System.out.printf("The area difference of square A minus square B is %.4f", areaDifference);
17    }
18 }
19
20 }
```

#### 2. Output

```
Problems @ Javadoc Declaration Console
<terminated> AreaDifference [Java Application] C:\Users\jpmd1\Desktop\Prograr
Give the side length of square A
31
Give the side length of square B
40
The area difference of square A minus square B is -639.0000
```

## Example 4: Restaurant Bill

### 1. Source Code

```
RestaurantBill.java
1 import java.util.Scanner;
2
3 public class RestaurantBill {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         Scanner keyboard = new Scanner (System.in);
8         System.out.println("What was the charge of the meal?");
9         double meal = keyboard.nextDouble();
10        keyboard.close();
11        double tax = (meal * 0.0675);
12        double tip = ((meal + tax) * 0.20);
13        double total = meal + tax + tip;
14        System.out.printf("Your meal of %.2f with a tax of 6.75 percent and a tip of 20 percent has a total charge of %.2f",
15                           meal, total);
16    }
17 }
18
19 }
```

### 2. Output

```
Problems  @ Javadoc  Declaration  Console
<terminated> RestaurantBill [Java Application] C:\Users\jpmd1\Desktop\Programming\eclipse-java-2021-06-R-win32-x86_64\eclipse
What was the charge of the meal?
20.06
Your meal of 20.06 with a tax of 6.75 percent and a tip of 20 percent has a total charge of 25.70
```

## Example 5: Total Purchase

### 1. Source Code

```
TotalPurchase.java ⌵
1
2 public class TotalPurchase {
3
4     public static void main(String[] args) {
5         // TODO Auto-generated method stub
6         double item1 = 15.95;
7         double item2 = 24.95;
8         double item3 = 6.95;
9         double item4 = 12.95;
10        double item5 = 3.95;
11        double sub = item1 + item2 + item3 + item4 + item5;
12        double tax = sub * 0.07;
13        double total = sub + tax;
14        System.out.println("item 1 = $15.95");
15        System.out.println("item 2 = $24.95");
16        System.out.println("item 3 = $6.95");
17        System.out.println("item 4 = $12.95");
18        System.out.println("item 5 = $3.95");
19        System.out.printf("Subtotal = $ %.2f", sub);
20        System.out.println();
21        System.out.printf("Tax = $ %.2f", tax);
22        System.out.println();
23        System.out.printf("Total Purchase = $ %.2f", total);
24    }
25 }
26
27 }
28
```

### 2. Output

```
Problems @ Javadoc Declaration Console ⌵
<terminated> TotalPurchase [Java Application] C:\Users\j
item 1 = $15.95
item 2 = $24.95
item 3 = $6.95
item 4 = $12.95
item 5 = $3.95
Subtotal = $ 64.75
Tax = $ 4.53
Total Purchase = $ 69.28
```