

CSCI 1100 – September 2015

Laboratory Report 5

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Please mark your lab

T 5:30 L143

Declaration: Please complete this declaration

1	This document is entirely my own work.	Yes
2	I obtained some help to complete this document.	NO
3	This document contains some material copied or cut and pasted from the internet or another document or file or program.	NO

Exercise 1.

```

/*This program will compare the numbers*/
import java.util.Scanner;
public class E1{
    public static void main(String[]args){
        double num1,num2,num3,sum;
        Scanner keyboard = new Scanner(System.in);
        System.out.println("Please input the first double ");
        num1 = keyboard.nextDouble();
        System.out.println("Please input the second double ");
        num2 = keyboard.nextDouble();
        System.out.println("Please input the third double ");
        num3 = keyboard.nextDouble(); sum = num1+num2;
        if (sum>num3){
            System.out.println("The sum of " +num1+ " and " +num2+" is " +sum+ " which is greater than " +num3);
        }
        else {
            System.out.println("The sum of " +num1+ " and " +num2+" is " +sum+ " which is less than " +num3);
        }
    }
}

```

```

----jGRASP exec: java E1

Please input the first double
>> 1
Please input the second double
>> 2
Please input the third double
>> 3
The sum of 1.0 and 2.0 is 3.0 which is less than 3.0

----jGRASP: operation complete.

----jGRASP exec: java E1

Please input the first double
>> 2
Please input the second double
>> 3
Please input the third double
>> 4.5
The sum of 2.0 and 3.0 is 5.0 which is greater than 4.5

----jGRASP: operation complete.

```

Exercise 2.

```
/*This program will test the integer is even or odd.*/
import java.util.Scanner;
public class E2{
    public static void main(String[]args){
        double num;
        Scanner keyboard = new Scanner(System.in);
        System.out.println("Please input an integer: ");
        num= keyboard.nextDouble();
        if (num%2==0){
            System.out.println(num+" is even");
        }
        else{
            System.out.println(num+" is odd");
        }
    }
}
```

```
----jGRASP exec: java E2

Please input an integer:
2
2.0 is even

----jGRASP: operation complete.

----jGRASP exec: java E2

Please input an integer:
3
3.0 is odd

----jGRASP: operation complete.
```

Exercise 3.

```
/*This program translates a number code description for towns in Nova Scotia to its longer equivalency*/
import java.util.Scanner;
public class E3{
    public static void main(String[]args){
        double num;
        Scanner keyboard = new Scanner(System.in);
        System.out.println("Please input the town code: ");
        num = keyboard.nextDouble();
        if (num==1){ System.out.println("You have chosen Halifax");
        }
        else if (num==2){
            System.out.println("You have chosen Dartmouth");
        }
        else if (num==3){
            System.out.println("You have chosen Truro");
        }
        else if (num==4){
            System.out.println("You have chosen Wolfville");
        }
        else{
            System.out.println("Not valid input.");
        }
    }
}
```

```

    ----jGRASP exec: java E3
    Please input the town code:
    1
    You have chosen Halifax
    ----jGRASP: operation complete.

    ----jGRASP exec: java E3
    Please input the town code:
    2
    You have chosen Dartmouth
    ----jGRASP: operation complete.

    ----jGRASP exec: java E3
    Please input the town code:
    3
    You have chosen Truro
    ----jGRASP: operation complete.

    ----jGRASP exec: java E3
    Please input the town code:
    4
    You have chosen Wolfville
    ----jGRASP: operation complete.

    ----jGRASP exec: java E3
    Please input the town code:
    5
    Not valid input.
    ----jGRASP: operation complete.

```

Question 4.

```
/*This program will computes the total cost of ordering a car*/
import java.util.Scanner;
public class E4{
    public static void main(String[]args){
        double num,num1,num2,ns,on,other,aftertax;
        ns=2000;
        on=1000;
        other=1500;
        aftertax=1.15;
        Scanner keyboard = new Scanner(System.in);
        System.out.println("Type the car cost: ");
        num = keyboard.nextDouble();
        System.out.println("Give the shipping destination - Type 1 for Nova Scotia, 2 for the Ontario and 3 other Canadian Destinations: ");
        num1 = keyboard.nextDouble();
        if (num1==1){
            num=num+ns;
        }
        else if (num1==2){
            num=num+on;
        }
        else{
            num=num+other;
        }
        System.out.println("Are you a student? Type 1 for yes or 0 for no: ");
        num2 = keyboard.nextDouble();
        if (num2==1){
            System.out.println("Total cost: " +num);
        }
        else{
            num=num*aftertax;
            System.out.println("Total cost: " +num);
        }
    }
}
```

```
----jGRASP exec: java E4
Type the car cost:
10000
Give the shipping destination - Type 1 for Nova Scotia, 2 for the Ontario and 3 other Canadian Destinations:
1
Are you a student? Type 1 for yes or 0 for no:
0
Total cost: 13799.999999999998
----jGRASP: operation complete.

----jGRASP exec: java E4
Type the car cost:
10000
Give the shipping destination - Type 1 for Nova Scotia, 2 for the Ontario and 3 other Canadian Destinations:
2
Are you a student? Type 1 for yes or 0 for no:
0
Total cost: 12649.999999999998
----jGRASP: operation complete.

----jGRASP exec: java E4
Type the car cost:
10000
Give the shipping destination - Type 1 for Nova Scotia, 2 for the Ontario and 3 other Canadian Destinations:
3
Are you a student? Type 1 for yes or 0 for no:
1
Total cost: 11500.0
----jGRASP: operation complete.
```

Question 5.

```
/*This program calculate the grade of student*/
import java.util.Scanner;
public class E5{
    public static void main(String[]args){
        double t,a,l,grade;
        Scanner keyboard = new Scanner(System.in);
        System.out.println("Please enter your lab mark out of 100: ");
        l = keyboard.nextDouble();
        System.out.println("Please enter your assignment mark out of 100: ");
        a = keyboard.nextDouble();
        System.out.println("Please enter your test mark out of 100: ");
        t = keyboard.nextDouble();
        if (l>a){
            grade=t*0.5+a*0.5;
        }
        else {
            grade=t*0.5+a*.25+l*.25;
        }
        if (grade>=80){
            System.out.println("You got an A");
        }
        else if(grade>=70){
            System.out.println("You got a B");
        }
        else if(grade>=60){
            System.out.println("You got a C");
        }
        else if(grade>=50){
            System.out.println("You got a D");
        }
        else{
            System.out.println("You got a F");
        }
    }
}
```

```
----jGRASP exec: java E5
Please enter your lab mark out of 100:
>> 50
Please enter your assignment mark out of 100:
>> 75
Please enter your test mark out of 100:
>> 65
You got a C
----jGRASP: operation complete.
```

```
----jGRASP exec: java E5
Please enter your lab mark out of 100:
>> 78
Please enter your assignment mark out of 100:
>> 80
Please enter your test mark out of 100:
>> 95
You got an A
----jGRASP: operation complete.
```


Question 6.

```
/*This program calculates employee worked hours.*/
import java.util.Scanner;
public class E6{
    public static void main(String[]args){
        double time,overtime;
        Scanner keyboard = new Scanner(System.in);
        System.out.println("Please type your hours worked: ");
        time = keyboard.nextDouble();
        if (time<=25){
            System.out.println("You are a part time worker.");
            System.out.println("Hours worked: " +time);
        }
        else if(time<=40){
            System.out.println("You are a full time worker.");
            System.out.println("Hours worked: " +time);
        }
        else{
            overtime=time-40;
            System.out.println("You are a full time worker.");
            System.out.println("Hours worked: " +time);
            System.out.println("Overtime hours: " +overtime);
        }
    }
}
```

```
----jGRASP exec: java E6
Please type your hours worked:
20
You are a part time worker.
Hours worked: 20.0
----jGRASP: operation complete.

----jGRASP exec: java E6
Please type your hours worked:
30
You are a full time worker.
Hours worked: 30.0
----jGRASP: operation complete.

----jGRASP exec: java E6
Please type your hours worked:
45
You are a full time worker.
Hours worked: 45.0
Overtime hours: 5.0
----jGRASP: operation complete.
```