MTS 3033 Object Oriented Programming

Name:
Matric ID:
Group:
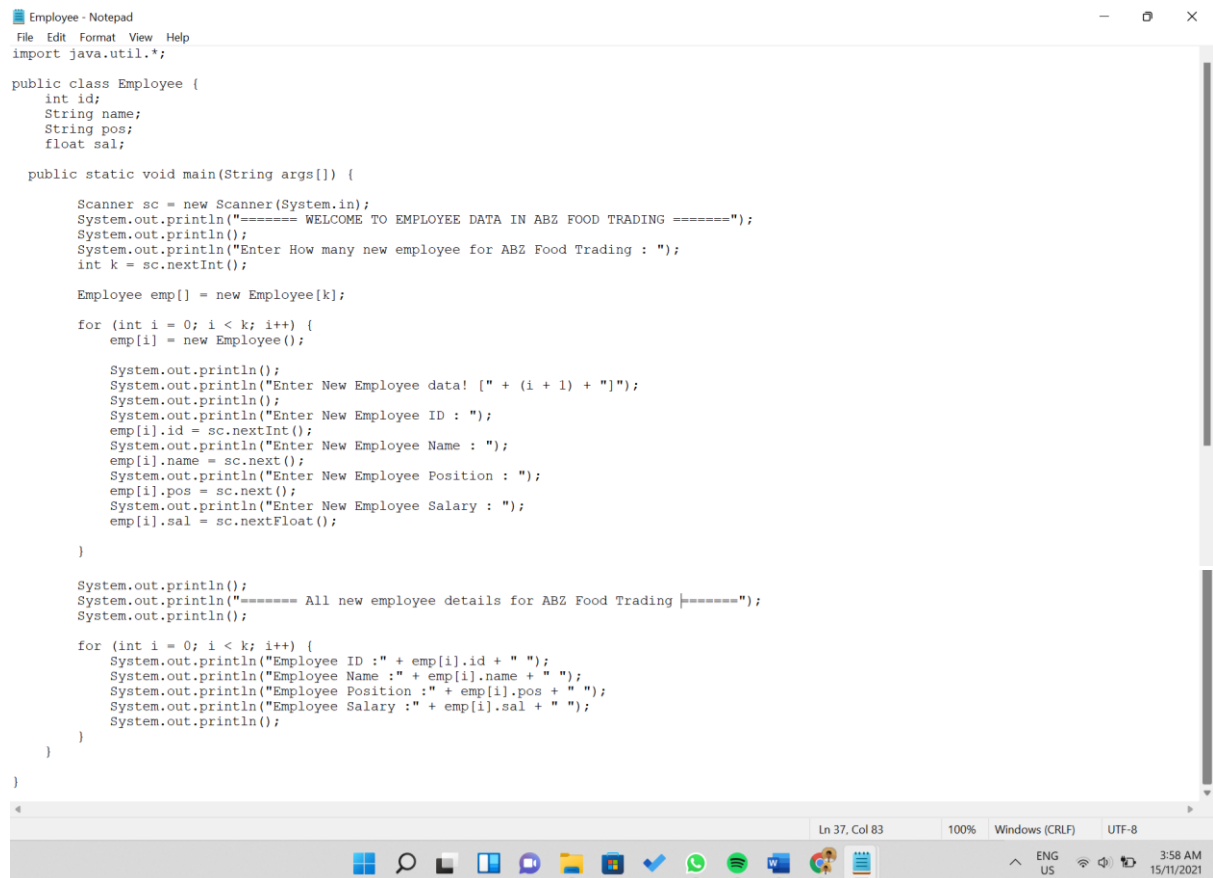**Assignment #2 (Due Date 14/11/21 @ 11pm)**

Instruction: Written and paste your print screen on this worksheet. Write your program using Notepad and compile using Command Prompt.

Part A: (20 marks; 10 marks each)

1. Anisa is a clerk at ABZ food Trading. Her job is to enter details of new employee(s) with following details: name, id, position, salary. Create appropriate class(es) of new employee using appropriate variables, constructor and methods. Output suitable results.

    Notepad

```java
import java.util.*;

public class Employee {
    int id;
    String name;
    String pos;
    float sal;

  public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);
        System.out.println("======= WELCOME TO EMPLOYEE DATA IN ABZ FOOD TRADING =======");
        System.out.println();
        System.out.println("Enter How many new employee for ABZ Food Trading : ");
        int k = sc.nextInt();

        Employee emp[] = new Employee[k];

        for (int i = 0; i < k; i++) {
            emp[i] = new Employee();

            System.out.println();
            System.out.println("Enter New Employee data! [" + (i + 1) + "]");
            System.out.println();
            System.out.println("Enter New Employee ID : ");
            emp[i].id = sc.nextInt();
            System.out.println("Enter New Employee Name : ");
            emp[i].name = sc.next();
            System.out.println("Enter New Employee Position : ");
            emp[i].pos = sc.next();
            System.out.println("Enter New Employee Salary : ");
            emp[i].sal = sc.nextFloat();

        }

        System.out.println();
        System.out.println("======= All new employee details for ABZ Food Trading =======");
        System.out.println();

        for (int i = 0; i < k; i++) {
            System.out.println("Employee ID :" + emp[i].id + " ");
            System.out.println("Employee Name :" + emp[i].name + " ");
            System.out.println("Employee Position :" + emp[i].pos + " ");
            System.out.println("Employee Salary :" + emp[i].sal + " ");
            System.out.println();
        }
    }
}
```

Command Prompt


```
Administrator: Command Prompt                                    —   □   ×
Microsoft Windows [Version 10.0.22000.318]
(c) Microsoft Corporation. All rights reserved.

C:\windows\system32>cd\

C:\>set path=C:\Program Files\Java\jdk1.8.0_202\bin

C:\>javac Employee.java

C:\>java Employee
======= WELCOME TO EMPLOYEE DATA IN ABZ FOOD TRADING =======

Enter How many new employee for ABZ Food Trading :
3

Enter New Employee data! [1]

Enter New Employee ID :
111
Enter New Employee Name :
Izzul
Enter New Employee Position :
Programmer
Enter New Employee Salary :
5000

Enter New Employee data! [2]

Enter New Employee ID :
122
Enter New Employee Name :
Najwa
Enter New Employee Position :
Developer
Enter New Employee Salary :
4500

Enter New Employee data! [3]

Enter New Employee ID :
133
Enter New Employee Name :
Yusuf
Enter New Employee Position :
Contributor
Enter New Employee Salary :
3600

======= All new employee details for ABZ Food Trading =======

Employee ID :111
Employee Name :Izzul
Employee Position :Programmer
Employee Salary :5000.0

Employee ID :122
Employee Name :Najwa
Employee Position :Developer
Employee Salary :4500.0

Employee ID :133
Employee Name :Yusuf
Employee Position :Contributor
Employee Salary :3600.0


C:\>
```
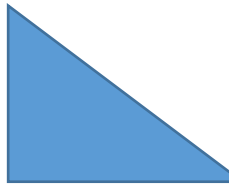
2. Create appropriate Java program using 2 class, 1 constructor and 1 method to calculate area of triangle. Output the results.

Formula: ½ x length x height

Notepad

```
import java.util.*;

//1st class
class Triangle{
    public static void main(){
        System.out.println("The area of The Triangle is :");
    }
}

//2nd class
class AreaTriangle{
    AreaTriangle(){
        System.out.println("======= This programme is to calculate the Area Of Triangle =======");
        System.out.println();
    }

    public static void main(String[] args){
        Triangle my = new Triangle();
        AreaTriangle you = new AreaTriangle();

    Scanner sc = new Scanner(System.in);

        System.out.println("Enter the Length of The Triangle :");
        double length = sc.nextDouble();

        System.out.println("Enter the Height of The Triangle :");
        double height = sc.nextDouble();

        Triangle.main();
        double area = length*height/2;
        System.out.println(area);
    }
}
```

Command Prompt

```
Microsoft Windows [Version 10.0.22000.318]
(c) Microsoft Corporation. All rights reserved.

C:\windows\system32>cd\

C:\>set path=C:\Program Files\Java\jdk1.8.0_202\bin

C:\>javac AreaTriangle.java

C:\>java AreaTriangle
======= This programme is to calculate the Area Of Triangle =======

Enter the Length of The Triangle :
4
Enter the Height of The Triangle :
3
The area of The Triangle is :
6.0

C:\>
```
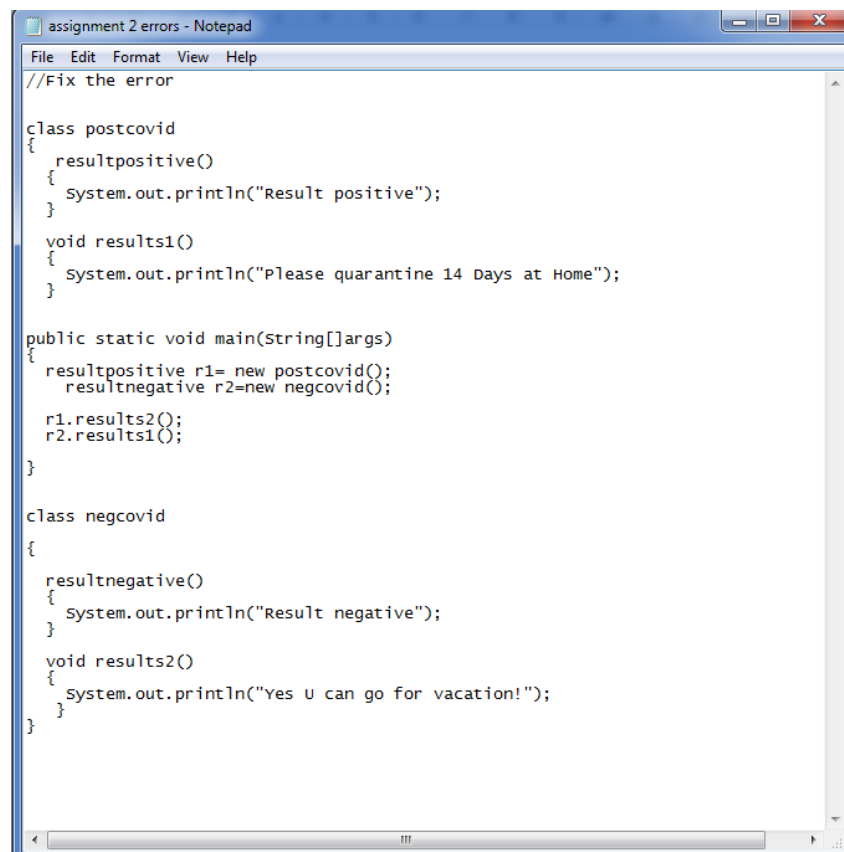
Part B: **(10 marks)**

Program 1.0 contains error(s). Fix the error(s), compile and output the results as shown in command prompt below.

```
Administrator: Command Prompt

Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\Users\User>cd\

C:\>set path=C:\Program Files\Java\jdk1.8.0_281\bin

C:\>javac postcovid.java

C:\>java postcovid
Result positive
Please quarantine 14 Days at Home
Result negative
Yes U can go for vacation!

C:\>_
```

```
assignment 2 errors - Notepad

File  Edit  Format  View  Help
//Fix the error

class postcovid
{
   resultpositive()
   {
     System.out.println("Result positive");
   }

   void results1()
   {
     System.out.println("Please quarantine 14 Days at Home");
   }

public static void main(String[]args)
{
   resultpositive r1= new postcovid();
     resultnegative r2=new negcovid();

  r1.results2();
  r2.results1();

}

class negcovid

{

  resultnegative()
  {
    System.out.println("Result negative");
  }

  void results2()
  {
    System.out.println("Yes U can go for vacation!");
   }
}
```

Program 1.0

Notepad

```
postcovid - Notepad
File  Edit  Format  View  Help
//error fixed

class postcovid
{
  postcovid()
  {
    System.out.println("Result Positive");
  }

  void results1()
  {
    System.out.println("Please quarantine 14 Days at Home");
  }

public static void main(String[]args)
 {
    postcovid r1= new postcovid();
    r1.results1();
    negcovid r2= new negcovid();
    r2.results2();
 }
}

class negcovid
{
    negcovid()
    {
       System.out.println("Result negative");
    }

    void results2()
    {
       System.out.println("Yes U can go for vacation!");
    }
}
```
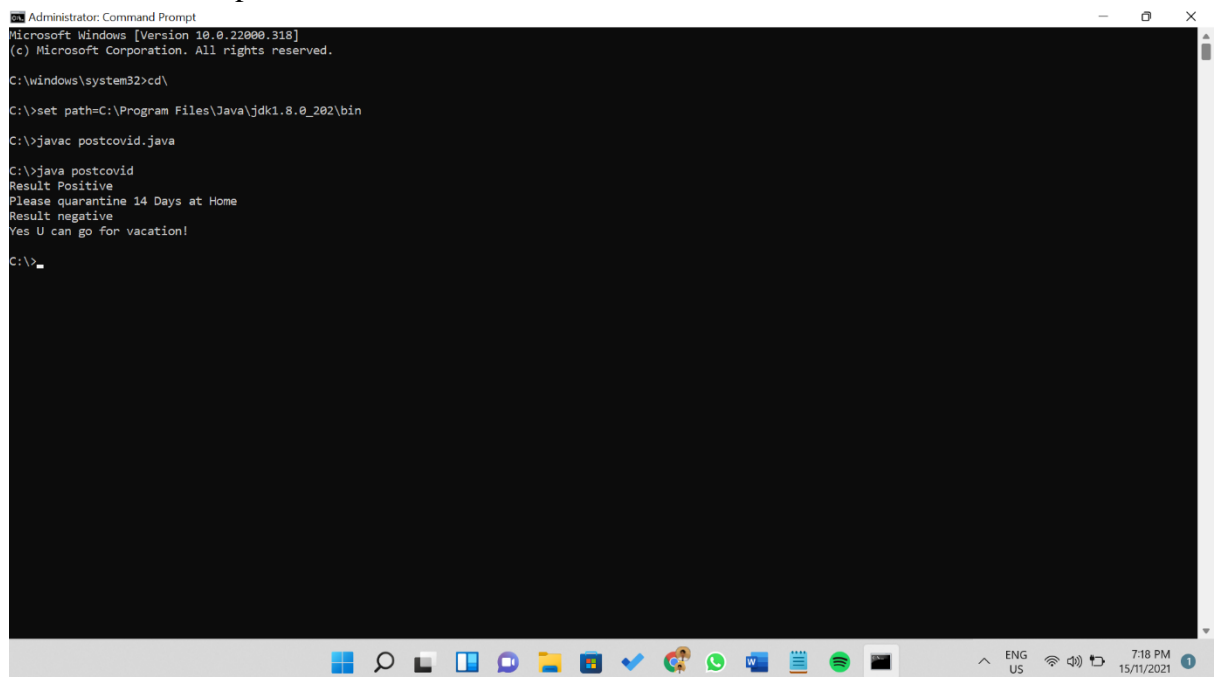
Ln 1, Col 14   100%   Windows (CRLF)   UTF-8

Command Prompt

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.22000.318]
(c) Microsoft Corporation. All rights reserved.

C:\windows\system32>cd\

C:\>set path=C:\Program Files\Java\jdk1.8.0_202\bin

C:\>javac postcovid.java

C:\>java postcovid
Result Positive
Please quarantine 14 Days at Home
Result negative
Yes U can go for vacation!

C:\>
```