CONFIDENTIAL

OPEN BOOK ASSESSMENT
SEPTEMBER/OCTOBER SEMESTER 2020

OBJECT ORIENTED PROGRAMMING
(CSC2515)

(TIME: 2 HOURS)

MATRIC NO. : | | | | | | | | | |

IC. / PASSPORT NO. : | | | | | | | | | | | | | | |

LECTURER : **SOM PRASAD SHRESTHA**

GENERAL INSTRUCTIONS

1. This question booklet consists of 4 printed pages including this page.
2. Answer **ALL questions** in the **ANSWER BOOKLET**.
3. **Please refer to following format while answering the Questions:**
   a. **Answers should be in Font: Times New Roman and Font size: 12.**
   b. **Write the Question number clearly.**
   c. **Start new answer on a Fresh Page.**

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INSTRUCTIONS: **TIME:** ***2 HOURS***

(60 MARKS)

There are FOUR (4) questions in this section. Answer ALL Questions in the ANSWER BOOKLET.

1. Answer the questions below based on the following class.

```
public class Coordinate {
      private int id;
      private String name;
      private double latitude;
      private double longitude;
}
```

   a. toString() method is very useful while printing state of any object. Write a toString() method for above class. Use all relevant information in class.

(3 marks)

   b. `equals` method is often used to check if two user defined objects are equal or not. Override `equals` method defined in Object class in above class that will return true if id is equal or latitude and longitude are equal, else false.

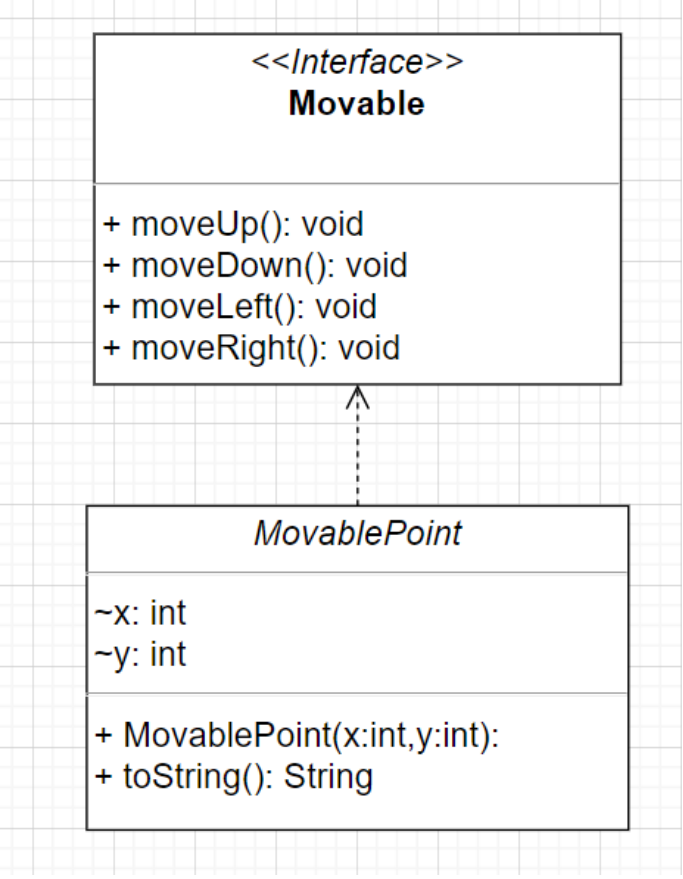
(7 marks)
(CL02:PL02:C2)

2. Consider a program that reads the record of employee. Write a program that reads input from a csv file and calculates the average salary. Complete the following main method code.

```
public static void main(String []args){
        File file=null;
        FileReader reader=null;
        try{
            file=new File("emp-data.csv");
            //complete code from here
        }catch(IOException ex){
            ex.printStackTrace();
        }
    }
```

(10 marks)
(CL02:PL02:C2)

3. Write code to realize following class diagram. Provide suitable implementation for the all required methods



(20 marks)
(CL02:PL02:C3)

4. Write a Java program named "TwoLargestOddNumbers.java", which reads a sequence of positive integers from terminal, and terminates when a negative value is typed in. Right before it terminates, it should print out top 2 largest odd prime numbers (in descending order) ever seen in the sequence.
[Make a separate method that checks if a number is odd prime or not.]

For example:
2
7
11
22
3
4
-1
Total numbers keyed in are 6.
The top 2 largest odd numbers are: 11, 7

```
import java.util.Scanner;
public class TestClass
{
    public static void main(String[] args) {
        int n;
        int large=0;
        int secondLarge=0;
        int count=0;
        //Write your code here
    }

     public static boolean checkOddPrime(int num) {
          //Complete method defination to check if a
          number if odd prime or not
      }
}
```

(20 marks)
(CL02:PL02:C3)

***** END OF QUESTIONS *****