United International University (UIU)

Dept. of Computer Science & Engineering (CSE)

Final Exam Year: 2020 Trimester: Fall

Course: CSE 1115 Object-oriented Programming, Marks: 25, Time: 1 Hour 15 minutes

There are FIVE questions. Answer all of them. Figures in the right-hand margin indicate full marks.

Any examinee found adopting unfair means will be expelled from the trimester / program as per UIU disciplinary rules

Question 1

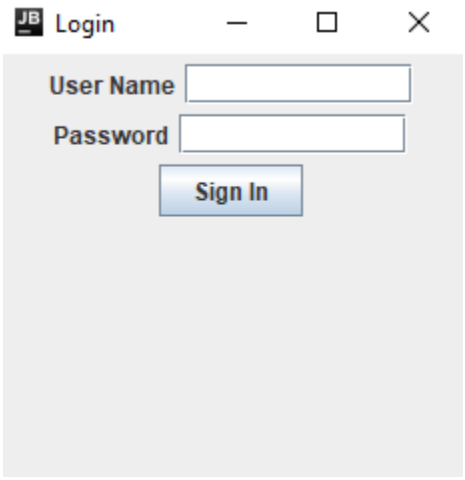
You are given a text file named "**numbers.txt**" which contains some numbers in each line that are separated with commas.

Write a Java program to read the file and for each line write the sum of the numbers in "**output.txt**" file. A sample input and output are provided below. [7]

numbers.txt	output.txt
10,11,12	33
1,18	19
2,13	15
33,22,1,1	57
1	1

Question 2

Create a 250*250 frame like following and print "**Login successful**" in the console if the user inputs **admin** in the user name, **1234** in the password, and clicks on the **Sign In** button. Otherwise, print "**Try again**". [9]



Question 3

a. Handle all the exceptions **individually** in the following piece of code. [3]

```
1  public class Q3 {
2      public static void main(String[] args) {
3          File file = new File("src/file1.txt");
4          Scanner s = new Scanner(file);
5          int a = s.nextInt();
6          int b = s.nextInt();
7          int c = a / b;
8          System.out.println(c);
9      }
10 }
```

b. Write a custom exception **CovidAlert** so that the following code snippet produces the expected output. [2]

```
public class Q3b {
    public static void main(String[] args) {
        int pcr_max_value = 5, pcr_min_value = 1;
        int pcr_value_of_patient = 6;
        if (pcr_value_of_patient > pcr_max_value || pcr_value_of_patient < pcr_min_value) {
            try {
                throw new CovidAlert("This patient is covid infected");
            } catch (CovidAlert covidAlert) {
                System.out.println(covidAlert.getMessage());
            }
        }
    }
}
```

Expected Output

This patient is covid infected

Question 4

Create an abstract class **Animal** which has an abstract method **bark()**. Now, create two concrete classes **Cat** and **Horse** such that the given code produces the expected output. [4]

```
public class Main {
    public static void main(String[] args){
        Animal c = new Cat();
        c.bark();
        Animal d = new Horse();
        d.bark();
    }
}
```

Expected Output
Cat meows
Horse whinnies