CS3201: OBJECT ORIENTED PROGRAMMING LAB EXAM

Date: 31/05/2024   **Max marks: 15**

1. Assume you are an app called BAC, a social media monitoring app, geared towards managing people's accounts. Implement a class with the attributes – name, number_of_followers, scandal rating (1 to 5), number_of_likes. Implement operator overloading to carry out the following use cases-

   (a) In case two people are collaborating (overload by using + on the names of two person objects together), add their "likes" attributes together and print the new updated total likes that each person object has.

   (b) In case two people 'fight', the person with the higher scandal rating loses ½ their followers, while the one with lower scandal rating loses 1/4th of their followers. **However, in case the difference in scandal rating is more than 5, the person with higher scandal rating should lose all their followers, while the number of followers for the person with lower scandal rating increases by 10%.**

   (c) Have an operator that compares two people object and prints out the person who has the higher number of (likes+followers).

2. You are developing a software to track Ethereum holdings of different corporations. Thec company class has attributes *name, number_of_coins,* and *rarity_of_coin* (has value between 1 and 3, or char A, B or C). Using a class template, calculate the value (value is defined as number_of_coins*rarity) of each company's holdings and print them out in the following format – **Company name : {Value}**

3. Implement a simple program that performs exception handling for the following scenario-
   → A user inputs a date (int), month (int) and year (int), and the program checks whether it a leap year.
   → Exception handling should take care that the user cannot input an invalid month (less than 1 or greater than 12)
   → Exception handling should also ensure that the date entered is valid (e.g. date entered cannot be less than 1 or greater than 28 for the 2nd month, February)
   BONUS QUESTION: *Include functionality to also ensure that the program allows users to input 29 as a valid input for date in February in case the year is a leap year.*

P. No.	Comments	Marks
1.		
2.		
3.		
TOTAL MARKS:		