School of Information Technology and Engineering

Winter Semester 2022-2023 (Freshers)

Continuous Assessment Test – II

Programme Name & Branch M.C.A & Computer Application

Course Name & code:ITA5004 & Object Oriented Programming using JAVA

Class Number (s): VL2022230500239, VL2022230500268, VL2022230500294

Faculty Name (s): Bimal Kumar Ray(10134), Shynu P G(12340), Thanga Mariappan L(19709)

Exam Duration: 90 Min.   Maximum Marks: 50

General instruction(s):

Q.No.	Question	Max Marks
1.	Illustrate how to address the sorts of problems that can arise when you try to synchronize threads, let's consider a simple application in which several threads use a shared resource. You're familiar with those take-a-number devices that are used in bakeries to manage a waiting line. Customers take a number when they arrive, and the clerk announces who's next by looking at the device. As customers are called, the clerk increments the "next customer" counter by one. There are some obvious potential coordination problems here. The device must keep proper count and can't skip customers. Nor can it give the same number to two different customers. Nor can it allow the clerk to serve nonexistent customers. Our task is to build a multithreaded simulation that uses a model of a take-a-number device to coordinate the behavior of customers and a (single) clerk in a bakery waiting line. To help illustrate the various issues involved in trying to coordinate threads, develop the program based on the problem statement.	10
2.	Write a Software Phone App using Java Swing . The user enters the phone number it need to display in the number box and pushes the "CALL" button to start a phone call. Once the call is started, the label of the "CALL" button it will display a message box that call initiated and also changes to "HANG UP". When the user hangs up, the display is cleared. The user clicking the end button a message box to show the call termination message. When the user press clear button it need to deletes the last entered number.	10
3.	Create an ATM program for representing ATM transaction. In the ATM program, First the user needs to do login by setting the password with a condition that the following must be eight characters minimum out of which atleast one Capital letter, special character, numbers while typing the password it need to display as "*" instead of characters in the password field, then after verifying login the user has to select an option from the menu displayed on the screen. The options are related to withdraw the money, deposit the money, check the balance, and exit. Initially set a balance amount as Rs1,25,000/- To withdraw the money, we simply get the withdrawal amount from the user and remove that amount from the total balance and print the successful message.	10

	To deposit the money, we simply get the deposit amount from the user, add it to the total balance and print the successful message. To check balance, we simply print the total balance of the user. Display messagebox for each menu.	
4.	Write a program in Java named Copy to copy one file into another. The program should prompt the user for two file names, filename1 and filename2. Both filename1 and filename2 must exist or the program should throw a FileNotFoundException. Although filename1 must be the name of a file (not a directory), filename2 may be either a file or a directory. If filename2 is a file, then the program should copy filename1 to filename2. If filename2 is a directory, then the program should simply copy filename1 into filename2. That is, it should create a new file with the name filename1 inside the filename2 directory, copy the old file to the new file, and then delete the old file.	10
5.	Define a data-manipulation application for the books database. The user should be able to edit existing data and add new data to the database. Allow the user to edit the database in the following ways with statements supporting dynamic parameter: a) Add a new author. b) Edit the existing information for an author. c) Add a new title for an author. (Remember that the book must have an entry in the AuthorISBN table.). d) Add a new entry in the AuthorISBN table to link authors with titles. e) Return the resultset f) count number of updates performed in the Database	10