School of Computer Science Engineering and Information Systems
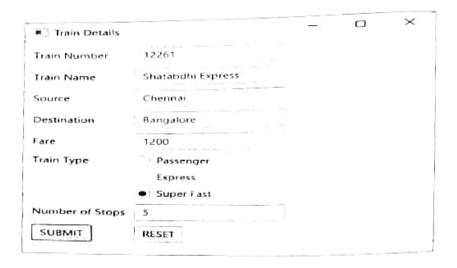
Fall Semester 2023-2024

Continuous Assessment Test – II

Programme Name & Branch: MCA

Course Name & code: PMCA502L

Class Number (s): VL2023240106170, VL2023240106174, VL2023240106179

Faculty Name (s): Dr. Mareeswari V, Dr. Thilagavathi M, Dr Vijayarani A

Exam Duration: 90 Min.

Maximum Marks: 50

Q.No	Question	Max Marks
1.	Create a user defined class which inherits thread class to do the given tasks: a. An array to store integer numbers. b. Create a constructor to initialize the array through array parameter. c. To override the run method so that it finds the count of even numbers in the array. Display the count. Write a Demonstrate class where few objects of the above user defined class to be created with array as parameter. Then invoke the run method such that the job of object1 should be completed before the next object. (Note: no need to get input for the array, instead define array with initial values)	10
2.	The Doctor-Patient process: Initially doctor is provided with two patients where first patient is inside the room and second patient is waiting outside the room. Once doctor completes the check up for both patients then the service queue allows next two patients to meet the doctor. The doctor can attend 'n' patients Write a synchronized Java thread program with intercommunication between threads to meet this requirement.	10
3.	Create a JavaFX program to collect the train details as mentioned in the following user interface. Display the train details when the number of stop is less than 7. Otherwise display "No Trains". Clear all input fields when the user clicks "RESET" button.	10

Train Details

Train Number	12261
Train Name	Shatabdhi Express
Source	Chennai
Destination	Bangalore
Fare	1200
Train Type	◯ Passenger
	Express
	● Super Fast
Number of Stops	5

[SUBMIT]   [RESET]

4. Assume that the train detail table is available in Derby under the database   **10**
   ProjDB1. The train number is the primary key. Write a console based java
   code to collect those details from user input. Then check for the existence
   of the primary key. Insert the record into the table, if it is not existing.

5. Design a JavaFX code to display the details of train table (as mentioned in   **10**
   question-3) with the navigation buttons as shown below:
   (Note: here should not write the code for adding the controls which are already
   done in question -3). Write the code to add navigation buttons and its
   corresponding events only.

Train Details

Train Number	12261
Train Name	Shatabdi
Source	Chennai
Destination	Bangalore
Fare	1200
Train Type	Super Fast
Number of Stops	5

[FIRST]   [PREVIOUS]   [NEXT] [LAST]

The first record to be displayed when the "FIRST" button is clicked and so
on.