CSE3212: SOFTWARE ENGINEERING LAB.

Exp1. A popular clothing brand have multiple outlet store and an online store front. They would like to develop a web-based software to operate their outlets and their online store. Prepare basic process flow, UML diagram and ER diagram for the proposed software. Here are the basic customer requirements: **:15 marks**

- Customer can filter the product searching according to size, gender, age-group, price-range, etc.
- Customer can view current stock availability of a specific product and size at the outlet stores.
- Registered customers will receive rewards for shopping.
- Registered customer can receive their order delivery from the outlet stores without paying any shipping fees.
- All customers have to pay shipping fees to receive home delivery of their order.
- Customers can exchange their product within 15 days of purchase from any outlet store.
- Customers can view and pre-order upcoming products.
- Customers can request an out-of-stock product in a specific size.
- The company may offer limited-time-sale on some products.
- The outlets store keepers will receive rewards based on the sale volume.

UNIVERSITY OF RAJSHAHI
Dept. of Computer Science and Engineering
B.Sc. ENGINEERING PART-3 (EVEN) EXAMINATION-2021
CSE3222: COMPUTER GRAPHICS LAB.

Total marks: 25 [Exam. Marks: 15, Exam Viva: 2.5; Attn.: 2.5; Quiz/Viva(CA):5]   Time: 3 hours

1. Write a program to display Translation, Rotation and Scaling of a 2D object.   **(7.5)**
2. Write a program to draw and display a curve according to Bezier curve drawing algorithm. **(7.5)**

[Solve any two problems]

1. Write an assembly language program to implement a searching program *that will read a string* (a line of letters of English alphabet) and then find out the first capital letter *which is occurred* first and last capital letter which is occurred last in the alphabetical order. *Your program will* display a message with "No Capitals" when there is no capital letter in the string.
   Sample Input: I Love Bangladesh
   Output: First capital=B, Last capital=L

2. Write an assembly language program to implement a counting program that will read a string (a line of characters of letters, digits, punctuation symbols, and others) and then count the number of Vowels and Consonants in the string. Here the count value of each item will be less than 10.
   Sample Input: My name is Karim
   Output: Vowels=5, Consonants=8

3. Write an assembly language program to implement a sorting program that will read an array of numbers of single decimal digits (from 0 to 9) and then sort the numbers in descending order.
   Sample Input: 5 7 3 8 2 9 1 4 6
   Output: 9 8 7 6 5 4 3 2 1

UNIVERSITY OF RAJSHAHI
Dept. of Computer Science and Engineering
B.Sc. ENGINEERING PART-3 (EVEN) EXAMINATION-2021
COURSE: **CSE3242** (OPERATING SYSTEM AND SYSTEM PROGRAMMING LAB.)
Total marks: 25 [Exam. Marks: 15, Exam Viva: 2.5; Attn.: 2.5; Quiz/Viva(CA):5]
Time: **3 hours**

1. Write a program to simulate the **create, delete, copy** and **move** file operation functions of an operating system. 5

2. Write a program to implement the Banker's algorithm for avoiding deadlock. Hence, show the safe sequence if found. 5

3. *Answer any one from the followings-* 5

    i) Write a program to implement LRU page replacement algorithm. [consider, no. of allocated frames is 4]

    ii) Write a program to implement FIFO page replacement algorithm. [consider, no. of allocated frames is 4]

    iii) Write a program to implement Second-Chance page replacement algorithm. [consider, no. of allocated frames is 4]

University of Rajshahi
Dept. of Computer Science and Engineering
B.Sc. Engineering Part-3 (Even) Examination-2021

ICE-3262 [Communication Engineering Lab]

Full Marks: 15   Set-1

1. Implement the modulation and demodulation for the **Differential Manchester** line   5
    coding technique.
2. Implement the encoding and decoding using **B8ZS** scrambling technique.   5
3. Implement the modulation and demodulation using **ASK.**   5