National University of Computer and Emerging Sciences, Lahore Campus

	Course:	Object Oriented Analysis & Design - Lab	Course Code:	CS-309
	Program:	BS (Computer Science)	Semester:	Spring 2018
	Duration:	90 Minutes	Total Marks:	100
	Paper Date:	30-Mar-18	Weight	-
	Section:	A	Page(s):	3
	Exam:	Mid	Reg. No.	

Instructions:

- If you find any confusion in the statement, make suitable ASSUMPTIONS.

- "Mid Submission" folder is located in your respective lab folders.

- Submit complete project folder

- Your cell phones should be switched off and placed on your desk upside down.

- You are not allowed to borrow anything.

- You are immediately disqualified from the exam if:

    - You are seen talking, whispering, borrowing or looking at someone's PC.

    - A USB is found attached to your PC.

    - You are seen using cell phone.

    - You are caught using internet.

- F grade will be awarded on plagiarism.

Best of luck for the exam.

Q no.	Total	Obtained
1	50	
2	50	

Problem Statement:

Your task is to implement a system for Fast Cafeteria. Students can purchase food or can get food on loan and get their pending sum written by cafe owner. There are three types of food i.e. Beverages, Bakery Items and Desi Food.

Desi food will have a menu and will only be served during lunch timings i.e 1 - 3 P.M

If a student doesn't return his pending sum within a week He gets fined 10% of his sum per day .

The cafe owner needs a system to handle all these queries . Maintaining inventory (stock) of items on daily basis . If any inventory is missiing the supplier comes and supplies certain quota . Keeping track of sale , purchase and student loan .

Bonus : On an Event Day society books the cafe and no desi food is served to students except society students who will give coupons for their quota of food .

Q1: Make Complete Class Diagram by identifying obvious and non obvious classes' names and draw relationships among classes. Your implementation should be according to design.
          (50 marks)

Marks will be deducted if there is a mismatch between design and implementation.

Use StarUML for this part.

Q2: You are required to implement complete system.   (50 marks)

- Adding Inventory

- Maintaining inventory according to sale , purchase

- Sale , purchase and loan details with time and date

- Society quota set and utilized

.

          Note: Implement the complete driver program that takes each and every input from user and shows details accordingly .