National University of Computer and Emerging Sciences, Lahore Campus

Course:	**Database Systems**	**Course Code:**	**CS2005**
Program:	**BS (Computer Science)**	**Semester:**	**Spring 2022**
Out Date:	**13-Mar-2022**	**Total Marks:**	
Due Date:	**Fri 18-Mar-2022** ***(start of lab)***	**Weight:**	
Section		**Page(s):**	**1**
Assignment:	**2 (SQL)**		

Instructions:
- This assignment is an individual assignment.
- Clearly mention any assumption you have made.

TOPIC: SQL Queries

Consider the following database schema, primary keys (PKs) are underlined and foreign keys (FKs) are in *italic* font.

Student (StudID, StudName, *DeptID*, Age, GPA)
Course (CourseID, CourseName, *InstructorID*)
Department (DeptID, DeptName, Location)
Instructor (InstructorID, InstructorName, *DeptID*)
Section (SectionID, SectionName, Time, *RoomID*, *CourseID*, *InstructorID*)
Room (RoomID, RoomName, Location)
Enrolled (*StudID, SectionID*)

Write SQL query statement to answer each of the following queries:

1. Find the names of all students who have GPA > 3.00 and are enrolled in a class taught by Ishaq.
2. Find the names of all the instructors that belong to Computer Science department.
3. Find the average GPA of students enrolled in section 12345678.
4. Find the age of the oldest student whose department is Management Sciences.
5. Find the age of the oldest student whose Department is Computer Science and enrolled in a course taught by Ishaq.
6. Find the names of all sections that either meet in room CS-3 or have fifty or more students enrolled.
7. Find the names of all students who are enrolled in two classes that meet at the same time.
8. Find the names of Instructors who teach in every room in which some section is taught.
9. Find the names of Instructors for whom the combined enrollment of the courses that they teach is less than hundred.
10. For each GPA, print the GPA and the average age of the students for that GPA.
11. For all GPA's except 2.0, print the GPA and the average age of students for that GPA.
12. For each Instructor that has taught classes only in room CS-3, print the Instructor's name and the total number of sections she or he has taught.
13. Find the names of students enrolled in the maximum number of sections.
14. Find the names of students not enrolled in any section.
15. For each age value that appears in Students, find the GPA value that appears most often. For example, if there are more 3.0 GPA students aged 18 than 2.0, 2,33, 2.67, 3.33, or etc. students aged 18 then you should print the pair (18, 3.0).