National University of Computer and Emerging Sciences

Program: BS(CS)	**Total Marks:** 10 marks
Section: ____	**Time Allowed:** 10 minutes
Date: October 4, 2023	**Instructor:** Bilal Khalid Dar
Student Name: _____	**Student Signature:**
Roll No . _____	_____

Important Instructions for attempting Quiz

READ ALL QUESTIONS AND INSTRUCTIONS CAREFULLY

- Carrying of Mobile phone, digital dairies, digital watch or any electronic device is not allowed.
- Use only Black/Blue color pen. Sharing of anything is forbidden.
- CUTTING IS NOT ALLOWED. Write your answer in provided space
- All questions are self-explanatory and require no further explanations during exam time
- **RETURN the Quiz paper after completion.**

Quiz 4 – DB

Consider the following database. The database has two sample tables (Students and Courses), where the student ID in the table course is a foreign key. If a query requires a join, you must use it (using join is mandatory).

```
CREATE TABLE Students (
    StudentID INT PRIMARY KEY,
    StudentName VARCHAR(50),
    Age INT
);
```

```
StudentID | StudentName | Age
-------------------------------
1         | Alice       | 20
2         | Bob         | 22
3         | Carol       | 21
4         | David       | 23
```

```
CREATE TABLE Courses (
    CourseID INT PRIMARY KEY,
    CourseName VARCHAR(50),
    StudentID INT
);
```

```
CourseID | CourseName | StudentID
-------------------------------
101      | Math       | 1
102      | History    | 2
103      | Science    | 3
104      | Literature | 1
105      | Art        | 4
```

Write SQL queries to retrieve specific information from the database.

Get the list of courses and the students who are enrolled in them. Include courses with no enrolled students.
SELECT Courses.CourseName, Students.StudentName FROM Courses LEFT JOIN Students ON Courses.StudentID = Students.StudentID;
List all courses and the students who are enrolled in them. Include students who are not enrolled in any courses.
SELECT Courses.CourseName, Students.StudentName FROM Courses RIGHT JOIN Students ON Courses.StudentID = Students.StudentID;
List the names of students and the courses they are enrolled in.
SELECT Students.StudentName, Courses.CourseName FROM Students INNER JOIN Courses ON Students.StudentID = Courses.StudentID;
Retrieve the names of students who are enrolled in the "Math" course.
SELECT Students.StudentName FROM Students INNER JOIN Courses ON Students.StudentID = Courses.StudentID WHERE Courses.CourseName = 'Math';
Find the names of all students, along with the courses they are enrolled in. Include students who are not enrolled in any courses.
SELECT Students.StudentName, Courses.CourseName FROM Students LEFT JOIN Courses ON Students.StudentID = Courses.StudentID;
Display the names of students and the courses they are enrolled in. Include courses with no enrolled students.
SELECT Students.StudentName, Courses.CourseName FROM Students RIGHT JOIN Courses ON Students.StudentID = Courses.StudentID;