Assigment 3

1. use db_1;

select Name, Email from Student;

	Name	Email
١	John Doe	john.doe@example.com
	Jane Smith	jane.smith@example.com
	Robert Johnson	robert.j@example.com
	Emily White	emily.white@example.com
	Michael Lee	michael.lee@example.com
	Sarah Brown	sarah.brown@example.com
	David Clark	david clark@example.com
	Melissa Turner	melissa.turner@example.com

2. select CourseName,Credits from course where credits>3;

	CourseName	Credits
•	History	4
	Chemistry	4
	Physics	4
	Biology	4

3. select ExamID,ExamDate from exam where ExamDate> '2023-11-15';

	ExamID	ExamDate
•	204	2023-11-18
	205	2023-11-20
	NULL	NULL

4. select * from faculty where department='Mathematics';

	FacultyID	Name	Email	Phone	Department
•	301	Dr. Smith	smith@example.com	111-222-3333	Mathematics
	NULL	NULL	NULL	NULL	HULL

5. SELECT Student.Name, Course.CourseName

FROM Student

JOIN Enrollment ON Student.StudentID = Enrollment.StudentID JOIN Course ON Enrollment.CourseID = Course.CourseID;

	Name	CourseName
•	John Doe	Mathematics
	John Doe	History
	Jane Smith	Mathematics
	Robert Johnson	Computer science
	Emily White	Literature
	Michael Lee	Chemistry
	Sarah Brown	Physics
	David Clark	Economics
	Melissa Turner	Biology

6. SELECT ExamID, AVG(Score) AS AverageScore FROM ExamResults

GROUP BY ExamID;

	ExamID	AverageScore
•	201	89.333333
	202	95.500000
	203	89.000000
	204	94.500000
	205	91.000000

7. SELECT DISTINCT Student.Name, ExamResults.Score

FROM Student

JOIN ExamResults ON Student.StudentID = ExamResults.StudentID

WHERE Score > 90;

	Name	Score
•	John Doe	92.50
	Robert Johnson	95.50
	Michael Lee	94.50
	Sarah Brown	91.00

8. SELECT Faculty.Name, COUNT(*) AS CourseCount

FROM Teaching

JOIN Faculty ON Teaching. Faculty ID = Faculty. Faculty ID

GROUP BY Faculty.FacultyID

HAVING CourseCount > 1;



9. SELECT Student.Name

FROM Student

WHERE StudentID NOT IN (SELECT StudentID FROM ExamRegistration);



10. SELECT Course.CourseName, COUNT(Enrollment.CourseID) AS TotalEnrollments FROM Course

LEFT JOIN Enrollment ON Course.CourseID = Enrollment.CourseID GROUP BY Course.CourseID;

	CourseName	TotalEnrollments
•	Mathematics	2
	History	1
	Computer science	1
	Literature	1
	Chemistry	1
	Physics	1
	Economics	1
	Biology	1

11. SELECT Student.Name

FROM Student

JOIN Enrollment ON Student.StudentID = Enrollment.StudentID
JOIN Course ON Enrollment.CourseID = Course.CourseID
WHERE Course.CourseName = 'History';

	Name	CourseName
•	John Doe	History

12. SELECT ExamID, ExamDate, Location

FROM Exam

WHERE YEAR(ExamDate) = 2023 AND MONTH(ExamDate) = 11;

	ExamID	ExamDate	Location
•	201	2023-11-10	Exam Hall A
	202	2023-11-12	Exam Hall B
	203	2023-11-15	Exam Hall C
	204	2023-11-18	Exam Hall D
	205	2023-11-20	Exam Hall E
	NULL	NULL	NULL

13. SELECT c.CourseName, MAX(e.Enrollments) AS MaxEnrollments

FROM Course c

LEFT JOIN (

SELECT CourseID, COUNT(StudentID) AS Enrollments

FROM Enrollment

GROUP BY CourseID

) e ON c.CourseID = e.CourseID

GROUP BY c.CourseName;

	CourseName	MaxEnrollments
•	Mathematics	2
	History	1
	Computer science	1
	Literature	1
	Chemistry	1
	Physics	1
	Economics	1
	Biology	1

14. SELECT Student.Name, AVG(Score) AS AverageScore

FROM Student

JOIN ExamResults ON Student.StudentID = ExamResults.StudentID GROUP BY Student.StudentID;

	Name	AverageScore
•	John Doe	92.500000
	Jane Smith	88.000000
	Robert Johnson	95.500000
	Emily White	89.000000
	Michael Lee	94.500000
	Sarah Brown	91.000000
	David Clark	87.500000

15. SELECT E.ExamID, E.ExamDate

FROM Exam E

LEFT JOIN ExamRegistration ER ON E.ExamID = ER.ExamID WHERE ER.ExamID IS NULL;



16. SELECT Faculty. Name

FROM Faculty

LEFT JOIN Teaching ON Faculty.FacultyID = Teaching.FacultyID WHERE Teaching.FacultyID IS NULL;



17. SELECT Student.Name

FROM Student

JOIN Enrollment ON Student.StudentID = Enrollment.StudentID

JOIN Course ON Enrollment.CourseID = Course.CourseID

JOIN Teaching ON Course.CourseID = Teaching.CourseID

JOIN Faculty ON Teaching. Faculty ID = Faculty. Faculty ID

WHERE Faculty. Department IN ('Mathematics', 'Computer Science')

GROUP BY Student.StudentID

HAVING COUNT(DISTINCT Faculty.Department) = 2;



18. SELECT ExamResults.ExamID, Student.Name, ExamResults.Score FROM ExamResults

JOIN Student ON ExamResults.StudentID = Student.StudentID WHERE (ExamResults.ExamID, ExamResults.Score) IN (

SELECT ExamID, MAX(Score)

FROM ExamResults

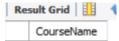
GROUP BY ExamID);

	ExamID	Name	Score
•	201	John Doe	92.50
	202	Robert Johnson	95.50
	203	Emily White	89.00
	204	Michael Lee	94.50
	205	Sarah Brown	91.00

19. SELECT CourseName

FROM Course

LEFT JOIN Enrollment ON Course.CourseID = Enrollment.CourseID WHERE Enrollment.StudentID IS NULL;



20. SELECT Faculty.Name, AVG(Enrollments) AS AverageEnrollments

FROM Faculty

JOIN Teaching ON Faculty.FacultyID = Teaching.FacultyID JOIN (

SELECT Course.CourseID, COUNT(Enrollment.StudentID) AS Enrollments FROM Course

LEFT JOIN Enrollment ON Course.CourseID = Enrollment.CourseID GROUP BY Course.CourseID

) AS CourseEnrollments ON Teaching.CourseID = CourseEnrollments.CourseID GROUP BY Faculty.Name

HAVING AVG(Enrollments) > 10;

