ASSIGNMENT 3

Name : Hrithvik Kondalkar
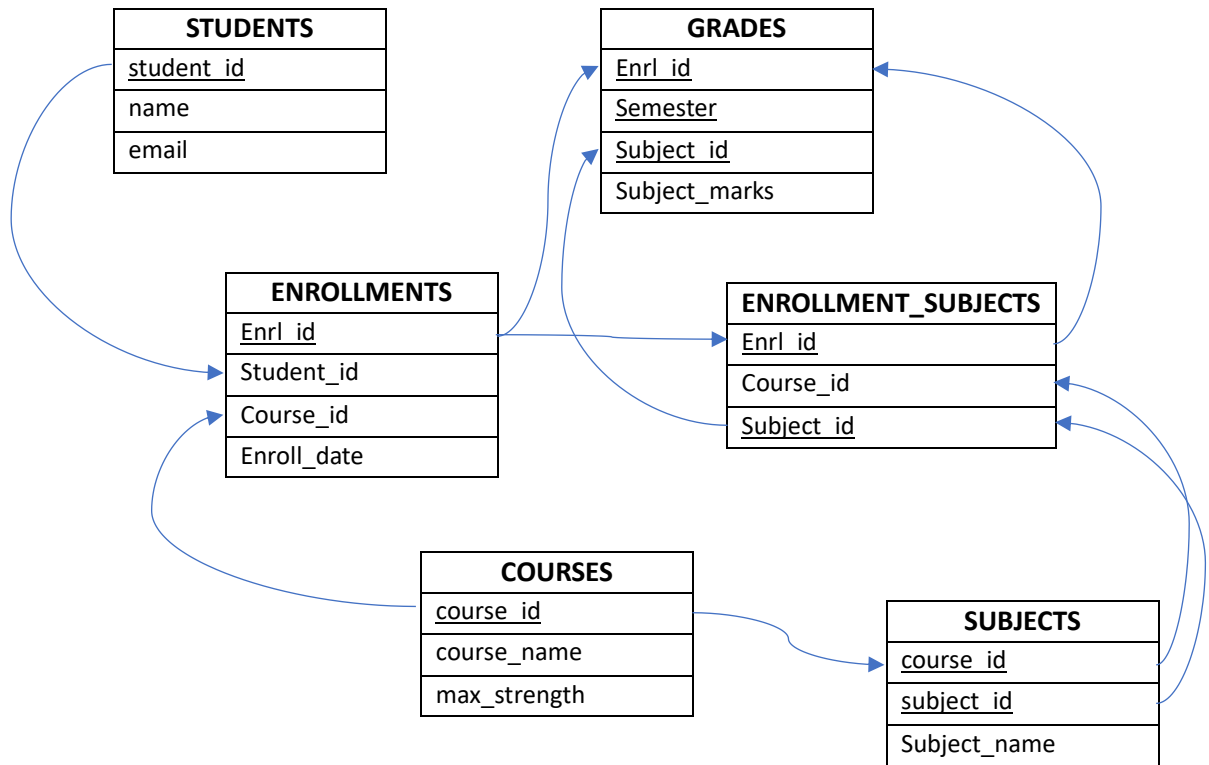Roll : 002211001088

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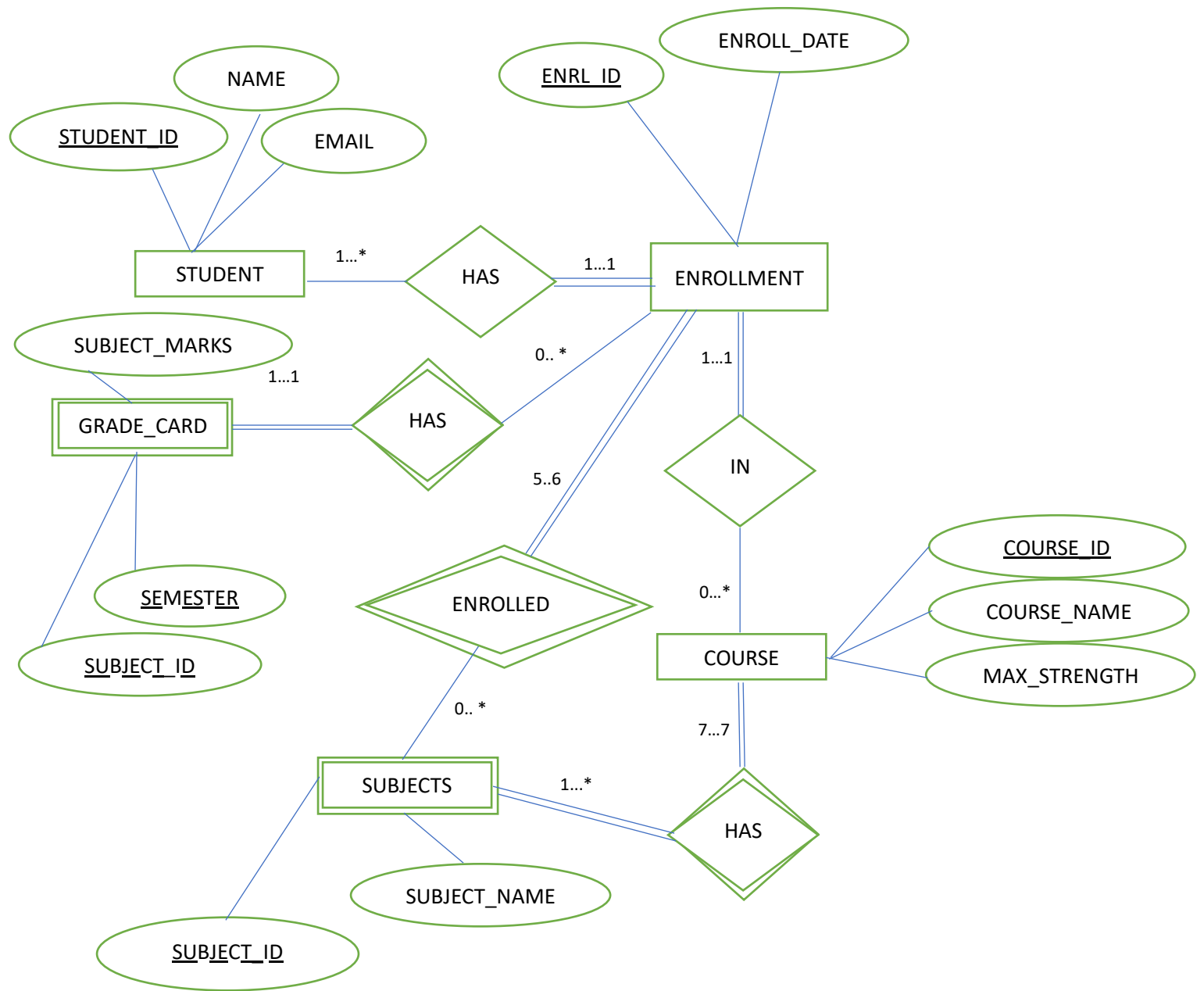
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DATABASE SCHEMA

STUDENTS
student_id
name
email

GRADES
Enrl_id
Semester
Subject_id
Subject_marks

ENROLLMENTS
Enrl_id
Student_id
Course_id
Enroll_date

ENROLLMENT_SUBJECTS
Enrl_id
Course_id
Subject_id

COURSES
course_id
course_name
max_strength

SUBJECTS
course_id
subject_id
Subject_name

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TABLE DEFINITION

```
CREATE TABLE students (
  student_id NUMBER(10) NOT NULL,
  name VARCHAR(255) NOT NULL,
  email VARCHAR(255) NOT NULL,
  PRIMARY KEY (student_id)
);


CREATE TABLE courses (
  course_id NUMBER(2) NOT NULL,
  course_name VARCHAR(255),
  max_strength INT NOT NULL,
  PRIMARY KEY (course_id)
);


CREATE TABLE subjects (
  course_id NUMBER(2) NOT NULL,
  subject_id NUMBER(3) NOT NULL,
  subject_name VARCHAR(255) NOT NULL,
  PRIMARY KEY (course_id,subject_id),
  FOREIGN KEY (course_id) REFERENCES
courses(course_id)
ON DELETE CASCADE
);
```

```
CREATE TABLE enrollments (
  enrl_id NUMBER(15) NOT NULL,
  student_id NUMBER(10) NOT NULL,
  course_id NUMBER(3) NOT NULL,
  PRIMARY KEY (enrl_id),
  FOREIGN KEY (student_id) REFERENCES students
(student_id) ON DELETE CASCADE,
  FOREIGN KEY (course_id) REFERENCES courses (course_id)
ON DELETE CASCADE
);

CREATE TABLE enrollment_subjects (
  enrl_id NUMBER(15) NOT NULL,
  course_id NUMBER(3) NOT NULL,
  subject_id NUMBER(3) NOT NULL,
  PRIMARY KEY (enrl_id, subject_id),
  FOREIGN KEY (enrl_id) REFERENCES enrollments (enrl_id)
ON DELETE CASCADE,
  FOREIGN KEY (course_id,subject_id) REFERENCES subjects
(course_id,subject_id)
ON DELETE CASCADE
);

CREATE TABLE grades (
  enrl_id NUMBER(15) NOT NULL,
  semester NUMBER(1) NOT NULL,
  subject_id NUMBER(3) NOT NULL,
  subject_marks NUMBER(4,1) NOT NULL,
  PRIMARY KEY (enrl_id, semester,subject_id),
  FOREIGN KEY (enrl_id) REFERENCES enrollments (enrl_id)
ON DELETE CASCADE,
  FOREIGN KEY (enrl_id, subject_id) REFERENCES
enrollment_subjects(enrl_id, subject_id)
ON DELETE CASCADE
);
```

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1. *Insert at least five tuples in each table.*

```
-- courses TABLE insertion
INSERT INTO courses VALUES (1, 'Math', 50);
INSERT INTO courses VALUES (2, 'History', 30);
INSERT INTO courses VALUES (3, 'Physics', 60);
INSERT INTO courses VALUES (4, 'English', 45);
INSERT INTO courses VALUES (5, 'Computer Science', 55);
```

```
-- subjects TABLE insertion for the first course (Math)
INSERT INTO subjects VALUES  (1, 1, 'Algebra');
INSERT INTO subjects VALUES  (1, 2, 'Geometry');
INSERT INTO subjects VALUES  (1, 3, 'Calculus');
INSERT INTO subjects VALUES  (1, 4, 'Statistics');
INSERT INTO subjects VALUES  (1, 5, 'Linear Algebra');
INSERT INTO subjects VALUES  (1, 6, 'Differential Equations');
INSERT INTO subjects VALUES  (1, 7, 'Number Theory');
-- subjects TABLE insertion for the second course (History)
INSERT INTO subjects VALUES  (2, 8, 'World History');
INSERT INTO subjects VALUES  (2, 9, 'English Literature');
INSERT INTO subjects VALUES  (2, 10, 'Ancient History');
INSERT INTO subjects VALUES  (2, 19, 'Medivial History');
INSERT INTO subjects VALUES  (2, 20, 'Cold War');
INSERT INTO subjects VALUES  (2, 21, 'History elective 1');
INSERT INTO subjects VALUES  (2, 22, 'History elective 2');
-- subjects TABLE insertion for the third course (Physics)
INSERT INTO subjects VALUES  (3, 11, 'Classical Mechanics');
INSERT INTO subjects VALUES  (3, 12, 'Electromagnetism');
INSERT INTO subjects VALUES  (3, 6, 'Differential Equations');
INSERT INTO subjects VALUES  (3, 4, 'Statistics');
INSERT INTO subjects VALUES  (3, 2, 'Geometry');
INSERT INTO subjects VALUES  (3, 18, 'Thermodynamics');
INSERT INTO subjects VALUES  (3, 28, 'Fluid Mechanics');
-- subjects TABLE insertion for the fourth course (English)
INSERT INTO subjects VALUES  (4, 9, 'English Literature');
INSERT INTO subjects VALUES  (4, 13, 'Grammar');
INSERT INTO subjects VALUES  (4, 23, 'Sociology');
INSERT INTO subjects VALUES  (4, 24, 'Play writing');
INSERT INTO subjects VALUES  (4, 25, 'Public speaking');
INSERT INTO subjects VALUES  (4, 26, 'English elective 1');
INSERT INTO subjects VALUES  (4, 27, 'English elective 2');
-- subjects TABLE insertion for the fifth course (Com)
INSERT INTO subjects VALUES  (5, 14, 'Introduction to Object Oriented Programming');
INSERT INTO subjects VALUES  (5, 15, 'Data Structures');
INSERT INTO subjects VALUES  (5, 16, 'Computer Architecture');
INSERT INTO subjects VALUES  (5, 17, 'Database Management');
INSERT INTO subjects VALUES  (5, 3, 'Calculus');
INSERT INTO subjects VALUES  (5, 5, 'Linear Algebra');
INSERT INTO subjects VALUES  (5, 4, 'Statistics');
```

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```sql
-- students TABLE insertion
INSERT INTO students (student_id, name, email) VALUES   (2022001, 'Sarah Johnson', 'sarah.j@gmail.com');
INSERT INTO students (student_id, name, email) VALUES   (2022002, 'Michael Brown', 'michael.b@gmail.com');
INSERT INTO students (student_id, name, email) VALUES   (2021001, 'Emily Davis', 'emily.d@gmail.com');
INSERT INTO students (student_id, name, email) VALUES   (2022003, 'Daniel Smith', 'daniel.s@gmail.com');
INSERT INTO students (student_id, name, email) VALUES   (2021002, 'Olivia Wilson', 'olivia.w@gmail.com');
INSERT INTO students (student_id, name, email) VALUES   (2021003, 'Liam Martinez', 'liam.m@gmail.com');
INSERT INTO students (student_id, name, email) VALUES   (2021004, 'Sophia Garcia', 'sophia.g@gmail.com');
INSERT INTO students (student_id, name, email) VALUES   (2022004, 'Matthew Lee', 'matthew.l@gmail.com');
INSERT INTO students (student_id, name, email) VALUES   (2022005, 'Ava Rodriguez', 'ava.r@gmail.com');
INSERT INTO students (student_id, name, email) VALUES   (2021005, 'Ethan Harris', 'ethan.h@gmail.com');
```

```sql
-- enrollments TABLE insertion
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1001, 2021001, 1, '19-FEB-2021');
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1002, 2021002, 2, '20-FEB-2021');
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1003, 2021003, 3, '21-FEB-2021');
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1004, 2021004, 3, '21-FEB-2021');
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1005, 2021005, 5, '23-FEB-2021');
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1006, 2022001, 1, '19-FEB-2022');
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1007, 2022002, 4, '20-FEB-2022');
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1008, 2022003, 3, '21-FEB-2022');
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1009, 2022004, 5, '22-FEB-2022');
INSERT INTO enrollments (enrl_id, student_id, course_id, enroll_date ) VALUES   (1010, 2022005, 5, '22-FEB-2022');
```

```sql
-- Add subjects to enrollment_subjects for students
-- Student 2021001 (Emily Davis) enrolled in Math (course_id 1)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1001, 1, 1);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1001, 1, 2);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1001, 1, 3);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1001, 1, 4);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1001, 1, 5);

-- Student 2021002 (Olivia Wilson) enrolled in History (course_id 2)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1002, 2, 8);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1002, 2, 9);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1002, 2, 10);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1002, 2, 19);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1002, 2, 20);

-- Student 2021003 (Liam Martinez) enrolled in Physics (course_id 3)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1003, 3, 11);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1003, 3, 12);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1003, 3, 6);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1003, 3, 4);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1003, 3, 2);
```

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```sql
-- Student 2021004 (Sophia Garcia) also enrolled in Physics (course_id 3)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1004, 3, 11);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1004, 3, 12);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1004, 3, 6);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1004, 3, 4);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1004, 3, 18);

-- Student 2021005 (Ethan Harris) enrolled in Computer Science (course_id 5)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1005, 5, 14);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1005, 5, 15);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1005, 5, 16);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1005, 5, 17);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1005, 5, 3);

-- Student 2022001 (Sarah Johnson) enrolled in Math (course_id 1)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1006, 1, 1);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1006, 1, 2);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1006, 1, 3);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1006, 1, 4);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1006, 1, 5);

-- Student 2022002 (Michael Brown) enrolled in English (course_id 4)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1007, 4, 9);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1007, 4, 13);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1007, 4, 23);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1007, 4, 24);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1007, 4, 25);

-- Student 2022003 (Daniel Smith) also enrolled in Physics (course_id 3)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1008, 3, 11);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1008, 3, 12);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1008, 3, 6);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1008, 3, 4);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1008, 3, 28);

-- Student 2022004 (Matthew Lee) also enrolled in Computer Science (course_id 5)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1009, 5, 14);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1009, 5, 15);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1009, 5, 16);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1009, 5, 17);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1009, 5, 3);

-- Student 2022005 (Ava Rodriguez) also enrolled in Computer Science (course_id 5)
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1010, 5, 14);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1010, 5, 15);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1010, 5, 16);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1010, 5, 17);
INSERT INTO enrollment_subjects (enrl_id, course_id, subject_id) VALUES   (1010, 5, 4);
```

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```sql
-- Grades for Student 2021001 (Emily Davis)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1001, 1, 1, 85.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1001, 1, 2, 78.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1001, 2, 3, 92.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1001, 2, 4, 88.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1001, 2, 5, 94.0);

-- Grades for Student 2021002 (Olivia Wilson)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1002, 1, 8, 76.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1002, 1, 9, 82.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1002, 2, 10, 88.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1002, 2, 19, 90.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1002, 2, 20, 79.0);

-- Grades for Student 2021003 (Liam Martinez)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1003, 1, 11, 95.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1003, 1, 12, 88.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1003, 2, 4, 91.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1003, 2, 2, 94.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1003, 2, 6, 85.0);

-- Grades for Student 2021004 (Sophia Garcia)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1004, 1, 11, 90.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1004, 1, 12, 84.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1004, 2, 18, 92.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1004, 2, 4, 87.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1004, 2, 6, 86.5);

-- Grades for Student 2021005 (Ethan Harris)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1005, 1, 14, 91.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1005, 1, 15, 86.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1005, 2, 3, 88.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1005, 2, 17, 92.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1005, 2, 16, 87.0);

-- Grades for Student 2022001 (Sarah Johnson)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1006, 1, 1, 87.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES  (1006, 1, 2, 84.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1006, 2, 3, 90.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1006, 2, 4, 88.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1006, 2, 5, 92.0);

-- Grades for Student 2022002 (Michael Brown)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1007, 1, 9, 82.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1007, 1, 13, 76.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1007, 2, 24, 81.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1007, 2, 23, 88.0);
 INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES  (1007, 2, 25, 84.5);
```

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```
-- Grades for Student 2022003 (Daniel Smith)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1008, 1, 11, 88.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1008, 1, 12, 84.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1008, 2, 6, 92.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1008, 2, 4, 87.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1008, 2, 28, 86.5);


-- Grades for Student 2022004 (Matthew Lee)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1009, 1, 14, 89.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1009, 1, 15, 87.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1009, 2, 3, 86.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1009, 2, 17, 91.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1009, 2, 16, 88.5);

-- Grades for Student 2022005 (Ava Rodriguez)
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1010, 1, 14, 92.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1010, 1, 15, 88.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1010, 2, 4, 87.0);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1010, 2, 17, 90.5);
INSERT INTO grades (enrl_id, semester, subject_id, subject_marks) VALUES   (1010, 2, 16, 88.0);
```

2. *At the time of creation if we forget to create a field enrollment date (ENROLL_DATE) in ENROLL table so add the field.*

   ALTER TABLE enrollments ADD enroll_date DATE;

   Table altered.

3. *Course name cannot be blank, therefore add the criteria in the specific table.*

   ALTER TABLE courses MODIFY course_name VARCHAR(255) NOT NULL;

   Table altered.

4. *Find the Course which has 3 or more students.*

   SELECT course_name, cnt count_enrollments FROM (SELECT course_id, COUNT(course_id) cnt FROM enrollments GROUP BY course_id) NATURAL JOIN courses ;

COURSE_NAME	COUNT_ENROLLMENTS
Computer Science	3
Physics	3

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5. Give the details of a STUDENT with all Subjects and Grade where he/she enroll (Enter the sid value as input).

   SELECT enrl_id, name, course_id, subject_id, subject_name, semester, subject_marks, email FROM enrollment_subjects NATURAL JOIN grades NATURAL JOIN subjects NATURAL JOIN enrollments NATURAL JOIN students WHERE enrl_id = 1008 ORDER BY semester;

ENRL_ID	NAME	COURSE_ID	SUBJECT_ID	SUBJECT_NAME	SEMESTER	SUBJECT_MARKS	EMAIL
1008	Daniel Smith	3	12	Electromagnetism	1	84.5	daniel.s@gmail.com
1008	Daniel Smith	3	11	Classical Mechanics	1	88	daniel.s@gmail.com
1008	Daniel Smith	3	4	Statistics	2	87	daniel.s@gmail.com
1008	Daniel Smith	3	28	Fluid Mechanics	2	86.5	daniel.s@gmail.com
1008	Daniel Smith	3	6	Differential Equations	2	92.5	daniel.s@gmail.com

6. Display the course where the maximum number of students enrols.

   select * from (select row_number() over(order by cnt desc) rno, course_name, cnt count_enrollments from(select course_id, count(course_id) cnt from enrollments group by course_id) natural join courses) where rno=1;

RNO	COURSE_NAME	COUNT_ENROLLMENTS
1	Computer Science	3

7. Find out the course where no student is enrolled.

   select * from (select course_id, count(course_id) cnt from enrollments group by course_id) natural left join courses where cnt = NULL;

                         no data found

8. Delete Course no 3 from COURSES table.

   delete from courses WHERE course_id =3;

                         1 row(s) deleted.

9. Rename the COURSES table as DEPARTMENTS.

   ALTER TABLE courses RENAME TO departments;

                         Table altered.

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10. *Change the Marks of Students from "A" to "B" who is Enroll in the subject "Database Management".*

> **update grades set subject_marks = (subject_marks-10) where (enrl_id, subject_id) in (select enrl_id, subject_id from grades natural join subjects where subject_name = 'Database Management');**

<div align="center">3 row(s) updated.</div>

> **select enrl_id, subject_marks,subject_id, subject_name from grades natural join subjects where subject_name = 'Database Management';**

Previous view:

ENRL_ID	SUBJECT_MARKS	SUBJECT_ID	SUBJECT_NAME
1005	92.5	17	Database Management
1009	91.5	17	Database Management
1010	90.5	17	Database Management

Updated view:

ENRL_ID	SUBJECT_MARKS	SUBJECT_ID	SUBJECT_NAME
1005	82.5	17	Database Management
1009	81.5	17	Database Management
1010	80.5	17	Database Management

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11. *Delete the record of the student who is enrolled in the course 'Math'.*

delete from enrollments where (enrl_id, course_id) in (select enrl_id, course_id from enrollments natural join departments where course_name = 'Math'and enrl_id = 1001);

1 row(s) deleted.

Select * from enrollments natural join departments where course_name = 'Math';

Previous view:

COURSE_ID	ENRL_ID	STUDENT_ID	ENROLL_DATE	COURSE_NAME	MAX_STRENGTH
1	1006	2022001	19-FEB-22	Math	50
1	1001	2021001	19-FEB-21	Math	50

Updated view:

COURSE_ID	ENRL_ID	STUDENT_ID	ENROLL_DATE	COURSE_NAME	MAX_STRENGTH
1	1006	2022001	19-FEB-22	Math	50

12. *Change the enroll date to '16-08-2018' whose student id is 2022001.*

update enrollments set enroll_date = to_date('16-08-2018','DD-MM-RRRR') where student_id = 2022001;

1 row(s) updated.

select * from enrollments where student_id = 2022001;

Previous view:

ENRL_ID	STUDENT_ID	COURSE_ID	ENROLL_DATE
1006	2022001	1	19-FEB-22

Updated view:

ENRL_ID	STUDENT_ID	COURSE_ID	ENROLL_DATE
1006	2022001	1	16-AUG-18