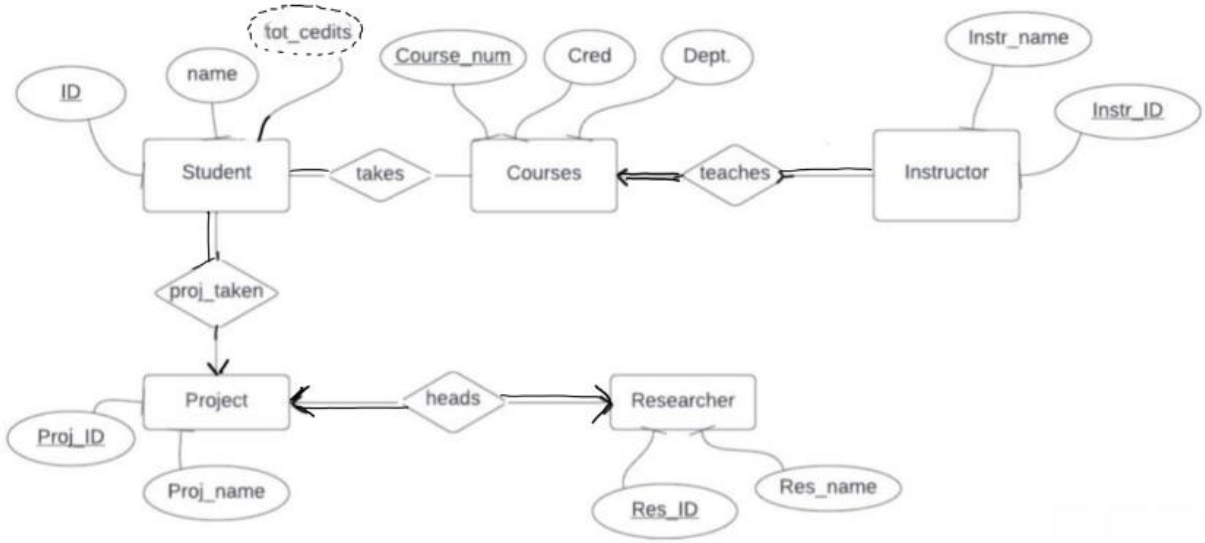
**Birla Institute of Technology & Science, Pilani, K. K. BIRLA Goa campus**
**Database Systems (CS F212)**
**Second Semester 2022-2023**
**Lab-2**

**Note: Copy all the correct SQL queries in a text file with the correct answer numbers. Upload this text file on the Quanta course page. If the answers are found in improper sequence or improper numbering to the answers, the answers will not be evaluated and the student will be marked absent for the lab.**

Run 'script1.sql' in 'db212'.

Study the following ER diagram.




**Answer Q1-Q4 based on the given ER diagram. Note correct running of 'script2.sql' is predicated on correctly answering the following questions.**

Q1. Create a table to facilitate many-many relationship "takes"- modeling registration of students in courses. Take care of relevant referential integrity constraints and cascading constraints. The column names must be as:

```
+------------+------+-
| Field      | Type |
+------------+------+-
| stud_id    | int  |
| course_num | int  |
+------------+------+-
```

Q2. Refer to the ER diagram and implement the mapping cardinality and participation constraints between Student and Project. Take care of relevant referential integrity constraints and cascading constraints.

Q3. Refer to the ER diagram and implement the mapping cardinality and participation constraints between Project and Researcher. Take care of relevant referential integrity constraints and cascading constraints.

Q4. Add the column “teaches” in the relevant table to model instructors teaching a course.

**Run ‘script2.sql’ in ‘db212’.**

Q5.

a. Find the ID of the project headed by "Walter White".
b. Using this ID, Find the names of the students in that project.

Q6

a. Update the tot_credits column in the student table.
b. Find average credits taken by students whose total credits exceed 6.

Q7. Display the names of all students whose at least one course is taught completely/partially by "Ted Mosby".

Q8. Display all students whose total registered credits exceed 10, or are less than or equal to 3.