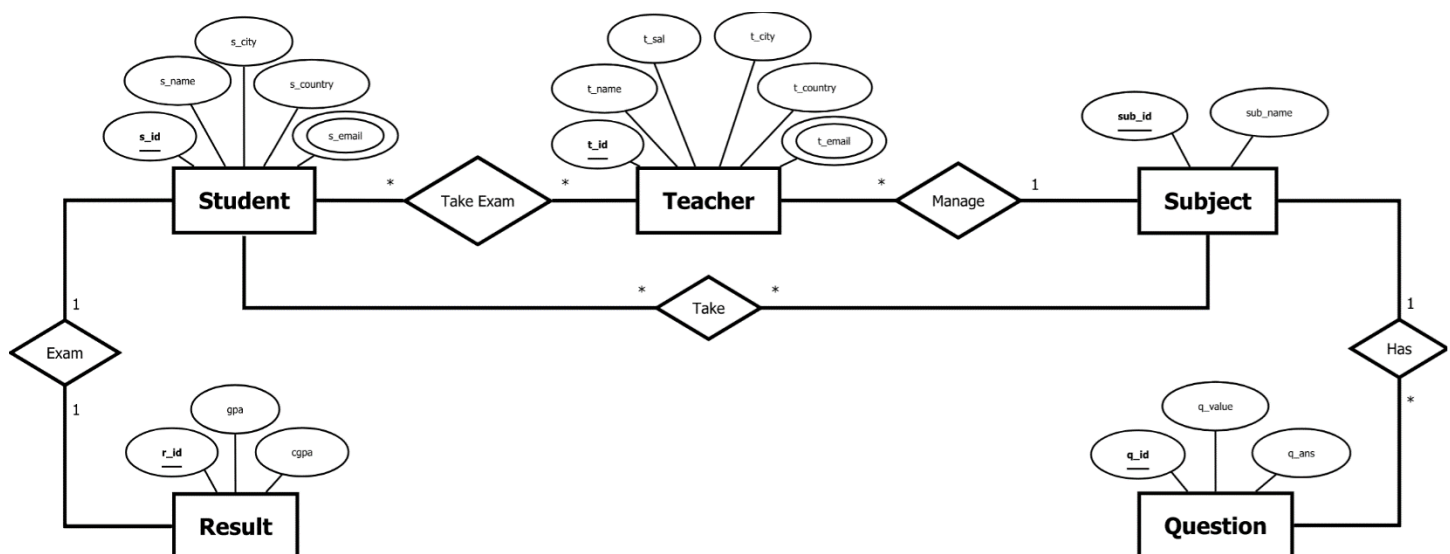


ER-Diagram

Scenario:

1. Each teacher has a unique teacher id, teacher name, monthly salary, email, city & country.
2. Each student has a unique student id, student name, email, city & country.
3. Teacher manages subject & takes exam of students. And student takes subject. Each subject has a name and unique subject id. A student can take more than one subjects.
4. A question can have many answers. Question is identified by question id & it has question value also.
5. Teacher takes exams & students take part in exam. Different exam happens for different subjects. For each student, exam has different results. Each result has unique string id and value.

ER-Diagram:



Normalization

❖ Exam (s_id, s_name, s_email, s_country, s_city, r_id, gpa, cgpa)

○ 1NF:

- s_email is a multivalued attribute

○ 2NF:

- s_id, s_name, s_country, s_city
- s_id, s_email
- adrs_id, city, country
- r_id, gpa, cgpa

○ 3NF:

⇒ s_country, s_city is transitive dependency attributes.

- s_id, s_name
- s_id, s_email
- adrs_id, city, country
- r_id, gpa, cgpa

⇒ **Exam Relation – Final Tables:**

- s_id, s_name, adrs_id, r_id
- s_id, s_email
- adrs_id, city, country
- r_id, gpa, cgpa

Normalization

❖ Take Exam (s_id, s_name, s_email, s_country, s_city, t_id, t_name, t_sal, t_email, t_country, t_city)

- 1NF:
 - s_email is a multivalued attribute
 - t_email is a multivalued attribute
- 2NF:
 - s_id, s_name, s_country, s_city
 - t_id, t_name, t_sal, t_country, t_city
 - s_id, s_email
 - t_id, t_email
 - adrs_id, city, country
- 3NF:
 - ⇒ s_country, s_city is transitive dependency attributes.
 - ⇒ t_country, t_city is transitive dependency attributes.
 - s_id, s_name
 - t_id, t_name, t_sal,
 - s_id, s_email
 - t_id, t_email
 - adrs_id, city, country

⇒ **Take Exam Relation – Final Tables:**

- s_id, s_name, adrs_id
- t_id, t_name, t_sal, adrs_id
- s_id, s_email
- t_id, t_email
- adrs_id, city, country
- s_id, t_id – Composite Primary Key

Normalization

❖ Take (s_id, s_name, s_email, s_country, s_city, sub_id, sub_name)

- 1NF:
 - s_email is a multivalued attribute
- 2NF:
 - s_id, s_name, s_country, s_city
 - s_id, s_email
 - adrs_id, city, country
 - sub_id, sub_name
- 3NF:
 - ⇒ s_country, s_city is transitive dependency attributes.
 - s_id, s_name
 - s_id, s_email
 - adrs_id, city, country
 - sub_id, sub_name

⇒ **Take Relation – Final Tables:**

- s_id, s_name, adrs_id
- s_id, s_email
- adrs_id, city, country
- sub_id, sub_name
- s_id, sub_id – Composite Primary Key

Normalization

❖ Manage (t_id, t_name, t_sal, t_email, t_country, t_city, sub_id, sub_name)

- 1NF:
 - t_email is a multivalued attribute
- 2NF:
 - t_id, t_name, t_sal, t_country, t_city
 - t_id, t_email
 - adrs_id, city, country
 - sub_id, sub_name
- 3NF:
 - ⇒ t_country, t_city is transitive dependency attributes.
 - t_id, s_name, t_sal,
 - t_id, t_email
 - adrs_id, city, country
 - sub_id, sub_name

⇒ **Manage Relation – Final Tables:**

- t_id, t_name, t_sal, adrs_id, sub_id
- t_id, t_email
- adrs_id, city, country
- sub_id, sub_name

Normalization

❖ Has (**sub_id**, sub_name, q_id, q_value, q_ans)

○ 1NF:

- There are no multivalued attributes.

○ 2NF:

- sub_id, sub_name
- q_id, q_value, q_ans

○ 3NF:

⇒ There are no transitive dependency attributes.

- sub_id, sub_name
- q_id, q_value, q_ans

⇒ **Has Relation – Final Tables:**

- sub_id, sub_name
- q_id, q_value, q_ans, sub_id

Normalization

❖ Final Table:

- i. adrs_id, city, country – address
- ii. r_id, gpa, cgpa – result
- iii. sub_id, sub_name – subject
- iv. s_id, s_name, adrs_id, r_id – student
- v. t_id, t_name, t_sal, adrs_id, sub_id – teacher
- vi. q_id, q_value, q_ans, sub_id – question
- vii. s_id, s_email – std_email
- viii. t_id, t_email – tchr_email
- ix. s_id, t_id – std_tchr – Composite Primary Key
- x. s_id, sub_id – std_sub – Composite Primary Key

DDL and Sequence

❖ Address Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|--------------|----------|---------|-------------|
| ADRS_ID | NUMBER(10,0) | No | - | 1 |
| CITY | VARCHAR2(20) | Yes | - | - |
| COUNTRY | VARCHAR2(20) | No | - | - |
| | | | | 1 - 3 |

❖ Result Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|--------------|----------|---------|-------------|
| R_ID | NUMBER(10,0) | No | - | 1 |
| GPA | NUMBER(3,2) | No | 0.00 | - |
| CGPA | NUMBER(3,2) | No | 0.00 | - |
| | | | | 1 - 3 |

❖ Subject Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|--------------|----------|---------|-------------|
| SUB_ID | NUMBER(10,0) | No | - | 1 |
| SUB_NAME | VARCHAR2(50) | No | - | - |
| | | | | 1 - 2 |

DDL and Sequence

❖ Teacher Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|--------------|----------|---------|-------------|
| T_ID | NUMBER(10,0) | No | - | 1 |
| T_NAME | VARCHAR2(50) | No | - | - |
| T_SAL | NUMBER(8,2) | No | - | - |
| ADRS_ID | NUMBER(10,0) | Yes | - | - |
| SUB_ID | NUMBER(10,0) | Yes | - | - |
| 1 - 5 | | | | |

○ Teacher-Email Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|--------------|----------|---------|-------------|
| T_ID | NUMBER(10,0) | No | - | 1 |
| T_EMAIL | VARCHAR2(50) | No | - | - |
| 1 - 2 | | | | |

DDL and Sequence

❖ Student Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|--------------|----------|---------|-------------|
| S_ID | NUMBER(10,0) | No | - | 1 |
| S_NAME | VARCHAR2(50) | No | - | - |
| ADRS_ID | NUMBER(10,0) | Yes | - | - |
| R_ID | NUMBER(10,0) | Yes | - | - |
| | | | | 1 - 4 |

○ Student-Email Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|--------------|----------|---------|-------------|
| S_ID | NUMBER(10,0) | No | - | 1 |
| S_EMAIL | VARCHAR2(50) | No | - | - |
| | | | | 1 - 2 |

○ Student-Teacher relation Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|--------------|----------|---------|-------------|
| S_ID | NUMBER(10,0) | No | - | 1 |
| T_ID | NUMBER(10,0) | No | - | 2 |
| | | | | 1 - 2 |

DDL and Sequence

○ Student-Subject relation Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|--------------|----------|---------|-------------|
| S_ID | NUMBER(10,0) | No | - | 1 |
| SUB_ID | NUMBER(10,0) | No | - | 2 |
| | | | | 1 - 2 |

❖ Question Table:

| Column Name | Data Type | Nullable | Default | Primary Key |
|-------------|---------------|----------|---------|-------------|
| Q_ID | NUMBER(10,0) | No | - | 1 |
| Q_VALUE | VARCHAR2(255) | No | - | - |
| Q_ANS | VARCHAR2(255) | No | - | - |
| SUB_ID | NUMBER(10,0) | Yes | - | - |
| | | | | 1 - 4 |

❖ Sequence:

| SEQUENCE_NAME | MIN_VALUE | MAX_VALUE | INCREMENT_BY | CYCLE_FLAG | ORDER_FLAG | CACHE_SIZE | LAST_NUMBER |
|---------------|-----------|-----------|--------------|------------|------------|------------|-------------|
| QUES_SEQ | 1 | 3999 | 1 | N | N | 0 | 3020 |
| STUDENT_SEQ | 1 | 1999 | 10 | N | N | 0 | 1080 |
| TEACHER_SEQ | 1 | 2999 | 10 | N | N | 0 | 2050 |

DML

❖ Address Table:

| ADRS_ID | CITY | COUNTRY |
|---------|------------|------------|
| 100 | Dhaka | Bangladesh |
| 101 | Chittagong | Bangladesh |
| 102 | Khulna | Bangladesh |

❖ Result Table:

| R_ID | GPA | CGPA |
|------|------|------|
| 100 | 3.88 | 3.94 |
| 102 | 3.75 | 3.56 |
| 104 | 3.7 | 3.62 |
| 106 | 3.22 | 3.33 |

❖ Subject Table:

| SUB_ID | SUB_NAME |
|--------|-----------|
| 10 | Database |
| 20 | Physics |
| 30 | Chemistry |
| 40 | Math |

DML

❖ Teacher Table:

| T_ID | T_NAME | T_SAL | ADRS_ID | SUB_ID |
|------|-----------------------|-------|---------|--------|
| 2000 | Ratan Kumar Saha | 50000 | 102 | 20 |
| 2010 | Fahmida Alam | 15000 | 100 | 40 |
| 2020 | Sifat Rahman Ahona | 45000 | 102 | 30 |
| 2030 | Rifat Tasnim Anannaya | 35000 | 101 | 10 |
| 2040 | Anika Hossain | 40000 | 102 | 20 |

○ Teacher-Email Table:

| T_ID | T_EMAIL |
|------|-----------------------|
| 2000 | rksaha@gmail.com |
| 2010 | fahmida@aiub.edu |
| 2020 | ahona@aiub.edu |
| 2030 | rifat.tasnim@aiub.edu |
| 2040 | ahanika@gmail.com |

DML

❖ Student Table:

| S_ID | S_NAME | ADRS_ID | R_ID |
|------|--------------------------|---------|------|
| 1000 | Md. Tanvir Alam Niloy | 100 | 106 |
| 1010 | Maliha Rahman Riza | 101 | 104 |
| 1020 | Mehedi Hasan Opi | 102 | 106 |
| 1030 | Md. Shahriar Arif | 100 | 104 |
| 1040 | Nobir Hossain Samuel | 101 | 104 |
| 1050 | Md. Mohibor Rahman Rahat | 102 | 102 |
| 1060 | Khuko Moni | 100 | 106 |
| 1070 | Sarzila Sahrin Jisha | 102 | 100 |

○ Student-Email Table:

| S_ID | S_EMAIL |
|------|-----------------------------|
| 1000 | tnioly0@gmail.com |
| 1010 | maliha2002@gmail.com |
| 1020 | osthiropi@gmail.com |
| 1030 | atomarif343@gmail.com |
| 1040 | nobirfreelencer@gmail.com |
| 1050 | mohibor.rahat@gmail.com |
| 1060 | khukomoni163@gmail.com |
| 1070 | 20-42526-1@student.aiub.edu |

DML

- **Student-Teacher relation Table:**

| S_ID | T_ID |
|------|------|
| 1000 | 2010 |
| 1010 | 2010 |
| 1020 | 2040 |
| 1030 | 2040 |
| 1040 | 2030 |
| 1050 | 2030 |
| 1060 | 2020 |
| 1070 | 2020 |

- **Student-Subject relation Table:**

| S_ID | SUB_ID |
|------|--------|
| 1000 | 40 |
| 1010 | 40 |
| 1020 | 20 |
| 1030 | 20 |
| 1040 | 10 |
| 1050 | 10 |
| 1060 | 30 |
| 1070 | 30 |

DML

❖ Question Table:

| Q_ID | Q_VALUE | Q_ANS | SUB_ID |
|------|--|---------------------------------------|--------|
| 3000 | What's the full form of DBMS? | Database Management System | 10 |
| 3001 | What's the full form of RDBMS? | Relational Database Management System | 10 |
| 3002 | What are the types of normalization in database? | 1NF, 2NF, 3NF | 10 |
| 3003 | What's the full form of DDL? | Data Definition Language | 10 |
| 3004 | What's the full form of DML? | Data Manipulation Language | 10 |
| 3005 | The correct relation between the radius of curvature R and focal length f of a spherical mirror is - ? | $R = 2f$ | 20 |
| 3006 | The instrument used for detecting the presence of electric current in a circuit is - ? | Galvanometer | 20 |
| 3007 | Which one of the following was the first mineral acid discovered? | Sulphuric acid | 20 |
| 3008 | What types of radiations has the smallest wavelength? | X-rays | 20 |
| 3009 | In an incandescent electric bulb, the filament of the bulb is made up of which metal? | Tungsten | 20 |
| 3010 | The chemical used as a fixer in photography is - ? | sodium thiosulphate | 30 |
| 3011 | For which one of the following is the density maximum? | Water | 30 |
| 3012 | The alcohol used in power alcohol is - ? | ethyl alcohol | 30 |
| 3013 | The reaction between methane and chlorine in diffused sunlight is - ? | substitution | 30 |
| 3014 | The alloy of aluminium used for making magnet is - ? | alnico | 30 |
| 3015 | What is the sum of $130+125+191 = ?$ | 446 | 40 |
| 3016 | If we minus 712 from 1500, how much do we get? | 788 | 40 |
| 3017 | 50 times of 8 is equal to = ? | 400 | 40 |
| 3018 | 110 divided by 10 is = ? | 11 | 40 |
| 3019 | Find the missing terms in multiple of 3: 3, 6, 9, __, 15 | 12 | 40 |

10 Question

1. Find the 2nd lowest paid teacher and display the subjects he manages.
2. Count the total students & teachers and display the total given salary from March 2020 to current month except Chemistry teachers.
3. Display the students name, id, email and result except the students whose r_id like %_04. Sort them on result value.
4. Find the subject id along teachers' name, who creates questions of Subject no 10 and display the students name and id who takes this subject. Sort them based on descending teacher's id.
5. Write a query using join to find the teacher's id and the questions they created on it; group by subject.
6. Write a query using join to display all the student's info (name, id, address, result, email) who takes subject under the highest paid teacher except student like %_Rahman.
7. Create sequence named std_id for new students which range (900-950), increment by 6, minvalue 550 and 10 catches.
8. Create a view name Contact from table Student-Email, Teacher-Email & address that contains the student & teachers name, id, address & email and make it read only.
9. Create a view named Salary from table Teacher1 that contains the teacher id and salary. Display the teacher id (who earned more than average salary) with their monthly salary, yearly salary and salary of December with bonus 8,000 from this view.
10. Make teacher id and email unique.

Query Summary

---- ADDRESS ----

```
CREATE TABLE address(  
    adrs_id NUMBER(10),  
    city VARCHAR2(20),  
    country VARCHAR2(20) NOT NULL  
);
```

---- Primary Key ----

```
ALTER TABLE address ADD CONSTRAINT adrs_pk PRIMARY KEY(adrs_id);
```

---- Insert ----

```
INSERT INTO address VALUES(100, 'Dhaka', 'Bangladesh');
```

```
INSERT INTO address VALUES(101, 'Chittagong', 'Bangladesh');
```

```
INSERT INTO address VALUES(102, 'Khulna', 'Bangladesh');
```

Query Summary

---- **RESULT** ----

```
CREATE TABLE result(  
    r_id NUMBER(10),  
    gpa DECIMAL(3, 2) DEFAULT 0.00 NOT NULL,  
    cgpa DECIMAL(3, 2) DEFAULT 0.00 NOT NULL  
);
```

---- Primary Key ----

```
ALTER TABLE result ADD CONSTRAINT res_pk PRIMARY KEY(r_id);
```

---- Check Constraint ----

```
ALTER TABLE result ADD CONSTRAINT result_gpa_chk CHECK (gpa BETWEEN 0.00 AND 4.00);
```

```
ALTER TABLE result ADD CONSTRAINT result_cgpa_chk CHECK (cgpa BETWEEN 0.00 AND 4.00);
```

---- Insert ----

```
INSERT INTO result VALUES(100, 3.88, 3.94);
```

```
INSERT INTO result VALUES(102, 3.75, 3.56);
```

```
INSERT INTO result VALUES(104, 3.70, 3.62);
```

```
INSERT INTO result VALUES(106, 3.22, 3.33);
```

Query Summary

---- SUBJECT ----

```
CREATE TABLE subject(  
    sub_id NUMBER(10),  
    sub_name VARCHAR2(50) NOT NULL  
);
```

---- Primary Key ----

```
ALTER TABLE subject ADD CONSTRAINT sub_pk PRIMARY KEY(sub_id);
```

---- Insert ----

```
INSERT INTO subject VALUES(10, 'Database');  
INSERT INTO subject VALUES(20, 'Physics');  
INSERT INTO subject VALUES(30, 'Chemistry');  
INSERT INTO subject VALUES(40, 'Math');
```

Query Summary

---- **TEACHER** ----

```
CREATE TABLE teacher(  
    t_id NUMBER(10),  
    t_name VARCHAR2(50) NOT NULL,  
    t_sal DECIMAL(8, 2) NOT NULL,  
    adrs_id NUMBER(10),  
    sub_id NUMBER(10)  
);
```

```
CREATE TABLE tchr_email(  
    t_id NUMBER(10),  
    t_email VARCHAR2(50) NOT NULL  
);
```

---- Primary Key ----

```
ALTER TABLE teacher ADD CONSTRAINT tchr_pk PRIMARY KEY(t_id);  
ALTER TABLE tchr_email ADD CONSTRAINT tchr_email_pk PRIMARY KEY(t_id);
```

---- Foreign Key ----

```
ALTER TABLE teacher ADD CONSTRAINT tchr_adrs_fk FOREIGN KEY(adrs_id) REFERENCES address(adrs_id);  
ALTER TABLE teacher ADD CONSTRAINT tchr_res_fk FOREIGN KEY(sub_id) REFERENCES subject(sub_id);
```

---- Teacher ID Sequence ----

```
CREATE SEQUENCE teacher_sq START WITH 2000 INCREMENT BY 10 MAXVALUE 2999 NOCYCLE NOCACHE;
```

Query Summary

---- Insert ----

```
INSERT INTO teacher VALUES(teacher_sq.NEXTVAL, 'Ratan Kumar Saha', 50000.00, 102, 20);
```

```
INSERT INTO tchr_email VALUES(teacher_sq.CURRVAL, 'rksaha@gmail.com');
```

```
INSERT INTO teacher VALUES(teacher_sq.NEXTVAL, 'Fahmida Alam', 15000.00, 100, 40);
```

```
INSERT INTO tchr_email VALUES(teacher_sq.CURRVAL, 'fahmida@aiub.edu');
```

```
INSERT INTO teacher VALUES(teacher_sq.NEXTVAL, 'Sifat Rahman Ahona', 45000.00, 102, 30);
```

```
INSERT INTO tchr_email VALUES(teacher_sq.CURRVAL, 'ahona@aiub.edu');
```

```
INSERT INTO teacher VALUES(teacher_sq.NEXTVAL, 'Rifat Tasnim Anannaya', 35000.00, 101, 10);
```

```
INSERT INTO tchr_email VALUES(teacher_sq.CURRVAL, 'rifat.tasnim@aiub.edu');
```

```
INSERT INTO teacher VALUES(teacher_sq.NEXTVAL, 'Anika Hossain', 40000.00, 102, 20);
```

```
INSERT INTO tchr_email VALUES(teacher_sq.CURRVAL, 'ahanika@gmail.com');
```

Query Summary

---- STUDENT ----

```
CREATE TABLE student(  
    s_id NUMBER(10),  
    s_name VARCHAR2(50) NOT NULL,  
    adrs_id NUMBER(10),  
    r_id NUMBER(10)  
);
```

```
CREATE TABLE std_email(  
    s_id NUMBER(10),  
    s_email VARCHAR2(50) NOT NULL  
);
```

```
CREATE TABLE std_tchr(  
    s_id NUMBER(10) NOT NULL,  
    t_id NUMBER(10) NOT NULL  
);
```

```
CREATE TABLE std_sub(  
    s_id NUMBER(10) NOT NULL,  
    sub_id NUMBER(10) NOT NULL  
);
```

---- Primary Key ----

```
ALTER TABLE student ADD CONSTRAINT std_pk PRIMARY KEY(s_id);
```

```
ALTER TABLE std_email ADD CONSTRAINT std_email_pk PRIMARY KEY(s_id);
```

Query Summary

---- Composite Primary Key (Many to Many relation) ----

```
ALTER TABLE std_tchr ADD CONSTRAINT std_tchr_ck PRIMARY KEY(s_id, t_id);
ALTER TABLE std_sub ADD CONSTRAINT std_sub_ck PRIMARY KEY(s_id, sub_id);
```

---- Foreign Key ----

```
ALTER TABLE student ADD CONSTRAINT std_adrs_fk FOREIGN KEY(adrs_id) REFERENCES address(adrs_id);
ALTER TABLE student ADD CONSTRAINT std_res_fk FOREIGN KEY(r_id) REFERENCES result(r_id);
```

---- Student ID Sequence ----

```
CREATE SEQUENCE student_sq START WITH 1000 INCREMENT BY 10 MAXVALUE 1999 NOCYCLE NOCACHE;
```

---- Insert ----

```
INSERT INTO student VALUES(student_sq.NEXTVAL, 'Md. Tanvir Alam Niloy', 100, 106);
INSERT INTO std_email VALUES(student_sq.CURRVAL, 'tnioly0@gmail.com');
INSERT INTO std_tchr VALUES(student_sq.CURRVAL, 2010);
INSERT INTO std_sub VALUES(student_sq.CURRVAL, 40);
```

```
INSERT INTO student VALUES(student_sq.NEXTVAL, 'Maliha Rahman Riza', 101, 104);
INSERT INTO std_email VALUES(student_sq.CURRVAL, 'maliha2002@gmail.com');
INSERT INTO std_tchr VALUES(student_sq.CURRVAL, 2010);
INSERT INTO std_sub VALUES(student_sq.CURRVAL, 40);
```

```
INSERT INTO student VALUES(student_sq.NEXTVAL, 'Mehedi Hasan Opi', 102, 106);
INSERT INTO std_email VALUES(student_sq.CURRVAL, 'osthiropi@gmail.com');
INSERT INTO std_tchr VALUES(student_sq.CURRVAL, 2040);
INSERT INTO std_sub VALUES(student_sq.CURRVAL, 20);
```

```
INSERT INTO student VALUES(student_sq.NEXTVAL, 'Md. Shahriar Arif', 100, 104);
```


Query Summary

```
INSERT INTO std_email VALUES(student_sq.CURRVAL, 'atomarif343@gmail.com');
```

```
INSERT INTO std_tchr VALUES(student_sq.CURRVAL, 2040);
```

```
INSERT INTO std_sub VALUES(student_sq.CURRVAL, 20);
```

```
INSERT INTO student VALUES(student_sq.NEXTVAL, 'Nobir Hossain Samuel', 101, 104);
```

```
INSERT INTO std_email VALUES(student_sq.CURRVAL, 'nobirfreelencer@gmail.com');
```

```
INSERT INTO std_tchr VALUES(student_sq.CURRVAL, 2030);
```

```
INSERT INTO std_sub VALUES(student_sq.CURRVAL, 10);
```

```
INSERT INTO student VALUES(student_sq.NEXTVAL, 'Md. Mohibor Rahman Rahat', 102, 102);
```

```
INSERT INTO std_email VALUES(student_sq.CURRVAL, 'mohibor.rahat@gmail.com');
```

```
INSERT INTO std_tchr VALUES(student_sq.CURRVAL, 2030);
```

```
INSERT INTO std_sub VALUES(student_sq.CURRVAL, 10);
```

```
INSERT INTO student VALUES(student_sq.NEXTVAL, 'Khuko Moni', 100, 106);
```

```
INSERT INTO std_email VALUES(student_sq.CURRVAL, 'khukomoni163@gmail.com');
```

```
INSERT INTO std_tchr VALUES(student_sq.CURRVAL, 2020);
```

```
INSERT INTO std_sub VALUES(student_sq.CURRVAL, 30);
```

```
INSERT INTO student VALUES(student_sq.NEXTVAL, 'Sarzila Sahrin Jisha', 102, 100);
```

```
INSERT INTO std_email VALUES(student_sq.CURRVAL, '20-42526-1@student.aiub.edu');
```

```
INSERT INTO std_tchr VALUES(student_sq.CURRVAL, 2020);
```

```
INSERT INTO std_sub VALUES(student_sq.CURRVAL, 30);
```

Query Summary

 ---- QUESTION ----

```
CREATE TABLE question(
  q_id NUMBER(10),
  q_value VARCHAR2(255) NOT NULL,
  q_ans VARCHAR2(255) NOT NULL,
  sub_id NUMBER(10)
);
```

---- Primary Key ----

```
ALTER TABLE question ADD CONSTRAINT ques_pk PRIMARY KEY(q_id);
```

---- Foreign Key ----

```
ALTER TABLE question ADD CONSTRAINT question_fk FOREIGN KEY(sub_id) REFERENCES subject(sub_id);
```

---- Question ID Sequence ----

```
CREATE SEQUENCE ques_sq START WITH 3000 INCREMENT BY 1 MAXVALUE 3999 NOCYCLE NOCACHE;
```

---- Insert ----

```
INSERT INTO question VALUES(ques_sq.NEXTVAL, 'What''s the full form of DBMS?', 'Database Management System', 10);
```

```
INSERT INTO question VALUES(ques_sq.NEXTVAL, 'What''s the full form of RDBMS?', 'Relational Database Management System', 10);
```

```
INSERT INTO question VALUES(ques_sq.NEXTVAL, 'What are the types of normalization in database?', '1NF, 2NF, 3NF', 10);
```

```
INSERT INTO question VALUES(ques_sq.NEXTVAL, 'What''s the full form of DDL?', 'Data Definition Language', 10);
```

```
INSERT INTO question VALUES(ques_sq.NEXTVAL, 'What''s the full form of DML?', 'Data Manipulation Language', 10);
```

```
INSERT INTO question VALUES(ques_sq.NEXTVAL, 'The correct relation between the radius of curvature R and focal length f of a spherical mirror is - ?', 'R = 2f', 20);
```

Query Summary

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'The instrument used for detecting the presence of electric current in a circuit is - ?', 'Galvanometer', 20);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'Which one of the following was the first mineral acid discovered?', 'Sulphuric acid', 20);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'What types of radiations has the smallest wavelength?', 'X-rays', 20);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'In an incandescent electric bulb, the filament of the bulb is made up of which metal?', 'Tungsten', 20);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'The chemical used as a fixer in photography is - ?', 'sodium thiosulphate', 30);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'For which one of the following is the density maximum?', 'Water', 30);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'The alcohol used in power alcohol is - ?', 'ethyl alcohol', 30);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'The reaction between methane and chlorine in diffused sunlight is - ?', 'substitution', 30);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'The alloy of aluminium used for making magnet is - ?', 'alnico', 30);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'What is the sum of $130+125+191 = ?$ ', '446', 40);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'If we minus 712 from 1500, how much do we get?', '788', 40);

INSERT INTO question VALUES(ques_sq.NEXTVAL, '50 times of 8 is equal to = ?', '400', 40);

INSERT INTO question VALUES(ques_sq.NEXTVAL, '110 divided by 10 is = ?', '11', 40);

INSERT INTO question VALUES(ques_sq.NEXTVAL, 'Find the missing terms in multiple of 3: 3, 6, 9, __, 15', '12', 40);