MAIN REPORT

ER DIAGRAM:

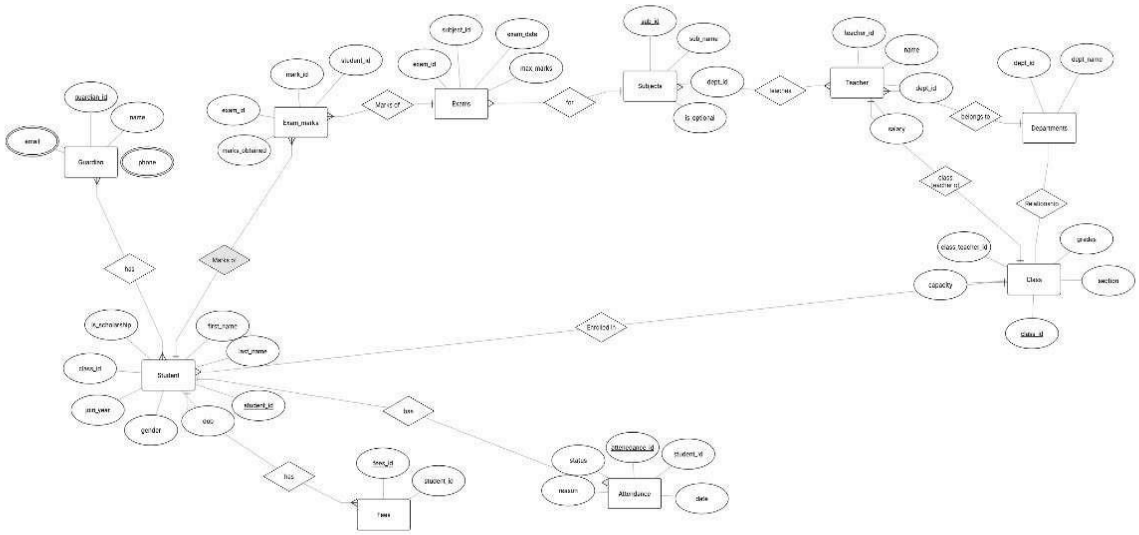


TABLE CREATION:

1)DEPARTMENTS:

CREATE TABLE Departments (dept_id INT PRIMARY KEY, dept_name VARCHAR(50) UNIQUE NOT NULL

);

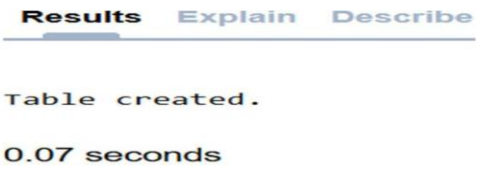
Results Explain Describe Saved SQL History

Table created.

0.09 seconds

2)TEACHERS:

```
CREATE TABLE Teachers (
teacher_id INT PRIMARY KEY,
name VARCHAR(100) NOT NULL,
   dept_id  INT,          salary  DECIMAL(10,2)
CHECK  (salary  >  0),          FOREIGN  KEY
(dept_id)                          REFERENCES
Departments(dept_id)

);
```



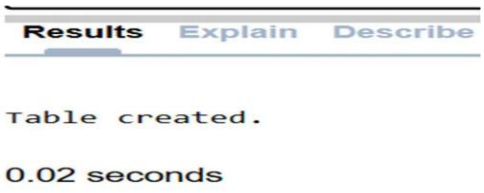
3)CLASSES:

```
CREATE TABLE Classes (     class_id
INT PRIMARY KEY,     grade INT
NOT NULL,     section VARCHAR(5)
NOT NULL,     capacity INT CHECK
(capacity > 0),     class_teacher_id INT
UNIQUE,

   FOREIGN KEY (class_teacher_id) REFERENCES Teachers(teacher_id)
);
```

4)STUDENTS:

```
CREATE TABLE Students (     student_id INT
PRIMARY KEY,     first_name VARCHAR(50) NOT NULL,
```

```
last_name VARCHAR(50) NOT NULL,     dob DATE NOT NULL,
gender VARCHAR(10) CHECK (gender IN ('Male','Female','Other')),
join_year INT NOT NULL,     class_id INT,
   FOREIGN KEY (class_id) REFERENCES Classes(class_id)
);
ALTER TABLE students
ADD is_scholarship NUMBER(1);
```



5)GUARDIANS:

```
CREATE TABLE Guardians (
guardian_id INT PRIMARY KEY,
name VARCHAR(100) NOT NULL,
phone VARCHAR(15) UNIQUE,
email VARCHAR(100) UNIQUE
);
```

6)STUDENT_GUARDIAN(MAPPING TABLE): CREATE TABLE Student_Guardian

```
(     sg_id INT PRIMARY KEY,     student_id
INT,     guardian_id INT,
   FOREIGN KEY (student_id) REFERENCES Students(student_id),
   FOREIGN KEY (guardian_id) REFERENCES Guardians(guardian_id)
```

);


```
Table created.

0.02 seconds
```

7)SUBJECTS: CREATE TABLE Subjects (

subject_id INT PRIMARY KEY, subject_name

VARCHAR(50) UNIQUE NOT NULL,

dept_id INT,

is_optional BOOLEAN DEFAULT FALSE,

FOREIGN KEY (dept_id) REFERENCES Departments(dept_id)

);


```
Table created.

0.01 seconds
```

8)TEACHER_SUBJECT(MAPPING

TABLE): CREATE TABLE Teacher_Subject

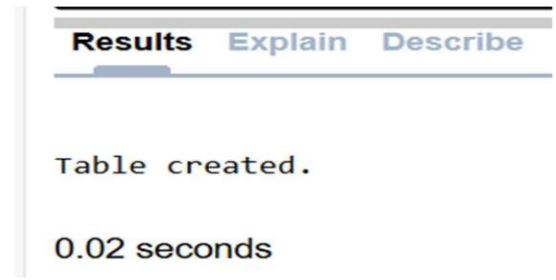
(ts_id INT PRIMARY KEY, teacher_id

INT, subject_id INT,

FOREIGN KEY (teacher_id) REFERENCES Teachers(teacher_id),

FOREIGN KEY (subject_id) REFERENCES Subjects(subject_id)

);

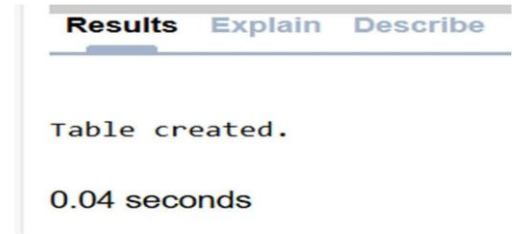


9)ATTENDANCE:

```
CREATE TABLE Attendance (     attendance_id INT PRIMARY KEY,
student_id INT,     att_date DATE NOT NULL,     status
VARCHAR(10) CHECK (status IN ('Present','Absent','Late')),
reason VARCHAR(100),
   FOREIGN KEY (student_id) REFERENCES Students(student_id)
);
```

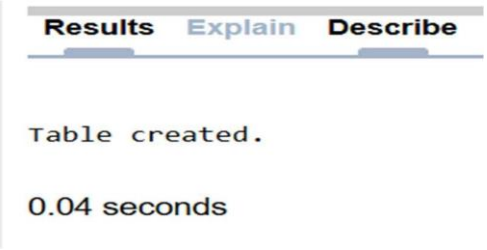
10)EXAMS:

```
CREATE TABLE Exams (
exam_id INT PRIMARY KEY,     subject_id INT,
exam_date DATE NOT NULL,     max_marks
INT CHECK (max_marks <= 100),
   FOREIGN KEY (subject_id) REFERENCES Subjects(subject_id)
);
```



11)EXAM_MARKS:

```
CREATE TABLE Exam_Marks
(     mark_id INT PRIMARY
KEY,     exam_id INT,
student_id INT,
   marks_obtained INT CHECK (marks_obtained <= 100),
   FOREIGN KEY (exam_id) REFERENCES Exams(exam_id),
   FOREIGN KEY (student_id) REFERENCES Students(student_id)
);
```



12)FEES:

```
CREATE TABLE Fees (     fee_id INT
PRIMARY KEY,     student_id INT,
amount DECIMAL(10,2) NOT NULL,
due_date DATE NOT NULL,
paid_date DATE,
   status VARCHAR(10) CHECK (status IN ('paid','pending','overdue')),
   FOREIGN KEY (student_id) REFERENCES Students(student_id)
);
```

INSERTION:

DEPARTMENTS:

```
INSERT INTO Departments (dept_id, dept_name) VALUES
(1, 'Mathematics'),
(2, 'Science'),
(3, 'English'),
(4, 'History'),
(5, 'Computer Science'),
(6, 'Biology'),
(7, 'Chemistry'),
(8, 'Physics'),
(9, 'Economics'),
(10, 'Geography'),
(11, 'Political Science'),
(12, 'Philosophy'),
(13, 'Psychology'),
(14, 'Sociology'),
(15, 'Statistics'),
(16, 'Business Studies'),
(17, 'Accounting'),
(18, 'Fine Arts'),
(19, 'Music'),
(20, 'Drama'),
(21, 'Physical Education'),
(22, 'Environmental Science'),
(23, 'Robotics'),
(24, 'AI & ML'),
(25, 'Data Science'),
(26, 'Cybersecurity'),
```

(27, 'Networking'),

(28, 'Electronics'),

(29, 'Mechanical Engineering'),

(30, 'Civil Engineering'),

(31, 'Architecture'),

(32, 'Law'),

(33, 'Medicine'),

(34, 'Nursing'),

(35, 'Pharmacy'),

(36, 'Dentistry'),

(37, 'Veterinary Science'),

(38, 'Agriculture'),

(39, 'Zoology'),

(40, 'Botany');

2)TEACHERS:

INSERT ALL

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (1, 'Alice Johnson', 1, 45000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (2, 'Bob Smith', 2, 48000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (3, 'Catherine Lee', 3, 47000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (4, 'David Brown', 4, 46000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (5, 'Emily Davis', 5, 50000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (6, 'Frank Wilson', 1, 45500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (7, 'Grace Moore', 2, 48500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (8, 'Hannah Taylor', 3, 47200)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (9, 'Ian Anderson', 4, 46250)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (10, 'Jane Thomas', 5, 50500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (11, 'Kevin White', 1, 45800)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (12, 'Laura Harris', 2, 48800)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (13, 'Mark Martin', 3, 47500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (14, 'Nina Jackson', 4, 46500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (15, 'Oliver Lee', 5, 51000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (16, 'Paula Lewis', 1, 46000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (17, 'Quentin Hall', 2, 49000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (18, 'Rachel Young', 3, 47800)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (19, 'Steven King', 4, 46800)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (20, 'Tina Scott', 5, 51500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (21, 'Uma Baker', 1, 46250)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (22, 'Victor Green', 2, 49250)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (23, 'Wendy Adams', 3, 48000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (24, 'Xavier Nelson', 4, 47000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (25, 'Yvonne Carter', 5, 52000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (26, 'Zachary Mitchell', 1, 46500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (27, 'Amber Perez', 2, 49500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (28, 'Brian Roberts', 3, 48250)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (29, 'Clara Turner', 4, 47250)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (30, 'Derek Phillips', 5, 52500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (31, 'Elena Campbell', 1, 46800)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (32, 'Felix Parker', 2, 49800)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (33, 'Gloria Evans', 3, 48500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (34, 'Henry Edwards', 4, 47500)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (35, 'Isabel Collins', 5, 53000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (36, 'Jack Stewart', 1, 47000)

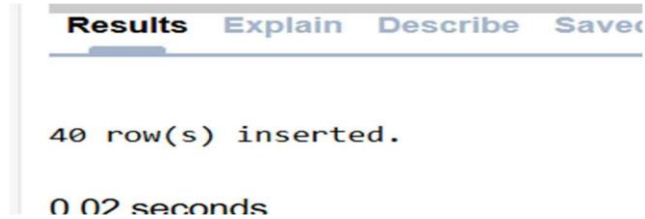
INTO Teachers (teacher_id, name, dept_id, salary) VALUES (37, 'Karen Sanchez', 2, 50000)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (38, 'Liam Morris', 3, 48750)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (39, 'Mia Rogers', 4, 47750)

INTO Teachers (teacher_id, name, dept_id, salary) VALUES (40, 'Noah Reed', 5, 53500)

SELECT * FROM dual;



3)CLASSES:

INSERT ALL

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (1, 1, 'A', 40, 1)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (2, 1, 'B', 40, 2)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (3, 2, 'A', 40, 3)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (4, 2, 'B', 40, 4)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (5, 3, 'A', 40, 5)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (6, 3, 'B', 40, 6)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (7, 4, 'A', 40, 7)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (8, 4, 'B', 40, 8)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (9, 5, 'A', 40, 9)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (10, 5, 'B', 40, 10)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (11, 6, 'A', 40, 11)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (12, 6, 'B', 40, 12)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (13, 7, 'A', 40, 13)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (14, 7, 'B', 40, 14)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (15, 8, 'A', 40, 15)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (16, 8, 'B', 40, 16)
INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (17, 9, 'A', 40, 17)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (18, 9, 'B', 40, 18)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (19, 10, 'A', 40, 19)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (20, 10, 'B', 40, 20)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (21, 11, 'A', 40, 21)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (22, 11, 'B', 40, 22)

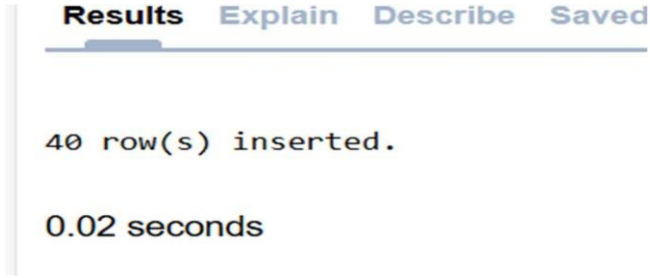
INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (23, 12, 'A', 40, 23)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (24, 12, 'B', 40, 24)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (25, 1, 'C', 40, 25)

INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (26, 2, 'C', 40, 26)

```
   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (27, 3, 'C',
40, 27)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (28, 4, 'C',
40, 28)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (29, 5, 'C',
40, 29)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (30, 6, 'C',
40, 30)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (31, 7, 'C',
40, 31)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (32, 8, 'C',
40, 32)
   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (33, 9, 'C',
40, 33)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (34, 10, 'C',
40, 34)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (35, 11, 'C',
40, 35)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (36, 12, 'C',
40, 36)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (37, 1, 'D',
40, 37)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (38, 2, 'D',
40, 38)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (39, 3, 'D',
40, 39)

   INTO Classes (class_id, grade, section, capacity, class_teacher_id) VALUES (40, 4, 'D',
40, 40)

SELECT * FROM dual;

UPDATE Classes

SET class_teacher_id = NULL

WHERE class_teacher_id NOT IN (1, 2, 3);

UPDATE Classes SET capacity = 10 WHERE class_id IN (1,2);
```



4)STUDENTS:

INSERT ALL

INTO Students VALUES (101,'Aarav','Kumar', TO_DATE('2010-05-11','YYYY-MMDD'),'Male',2022,1)

INTO Students VALUES (102,'Diya','Ramesh', TO_DATE('2011-01-20','YYYY-MMDD'),'Female',2022,1)

INTO Students VALUES (103,'Karthik','Selvan', TO_DATE('2010-03-15','YYYY-MMDD'),'Male',2022,2)

INTO Students VALUES (104,'Harini','Raj', TO_DATE('2011-07-18','YYYY-MMDD'),'Female',2022,2)

INTO Students VALUES (105,'Vikram','Babu', TO_DATE('2010-08-09','YYYY-MMDD'),'Male',2022,3)

INTO Students VALUES (106,'Meera','Suresh', TO_DATE('2010-02-11','YYYY-MMDD'),'Female',2022,3)

INTO Students VALUES (107,'Rahul','Arun', TO_DATE('2010-12-19','YYYY-MMDD'),'Male',2022,4)

INTO Students VALUES (108,'Sahana','Kumar', TO_DATE('2011-04-02','YYYY-MMDD'),'Female',2022,4)

INTO Students VALUES (109,'Pranav','Ravi', TO_DATE('2011-06-06','YYYY-MMDD'),'Male',2022,5)

INTO Students VALUES (110,'Ishita','Mani', TO_DATE('2010-09-21','YYYY-MMDD'),'Female',2022,5)

INTO Students VALUES (111,'Aditya','Gopal', TO_DATE('2010-01-25','YYYY-MMDD'),'Male',2022,6)

INTO Students VALUES (112,'Tanisha','Shankar', TO_DATE('2011-05-30','YYYY-MMDD'),'Female',2022,6)

INTO Students VALUES (113,'Roshan','Dev', TO_DATE('2010-04-15','YYYY-MMDD'),'Male',2022,7)

INTO Students VALUES (114,'Nila','Prakash', TO_DATE('2010-10-10','YYYY-MMDD'),'Female',2022,7)

INTO Students VALUES (115,'Yuva','Rajesh', TO_DATE('2011-11-11','YYYY-MMDD'),'Male',2022,8)

INTO Students VALUES (116,'Aishwarya','Varun', TO_DATE('2011-03-03','YYYY-MMDD'),'Female',2022,8)

INTO Students VALUES (117,'Shiv','Kannan', TO_DATE('2010-07-27','YYYY-MMDD'),'Male',2022,9)

INTO Students VALUES (118,'Pavithra','Sundar', TO_DATE('2011-02-14','YYYY-MMDD'),'Female',2022,9)

INTO Students VALUES (119,'Tejas','Mohan', TO_DATE('2010-04-28','YYYY-MMDD'),'Male',2022,10)

INTO Students VALUES (120,'Maya','Karthik', TO_DATE('2011-01-09','YYYY-MMDD'),'Female',2022,10)

INTO Students VALUES (121,'Rohan','Sankar', TO_DATE('2010-06-17','YYYY-MMDD'),'Male',2023,1)

INTO Students VALUES (122,'Swathi','Naveen', TO_DATE('2011-10-01','YYYY-MMDD'),'Female',2023,2)

INTO Students VALUES (123,'Surya','Muthu', TO_DATE('2010-07-29','YYYY-MMDD'),'Male',2023,3)

INTO Students VALUES (124,'Varsha','Balan', TO_DATE('2011-05-13','YYYY-MMDD'),'Female',2023,4)

INTO Students VALUES (125,'Kiran','Raja', TO_DATE('2010-12-25','YYYY-MMDD'),'Male',2023,5)

INTO Students VALUES (126,'Riya','Vimal', TO_DATE('2011-11-07','YYYY-MMDD'),'Female',2023,6)

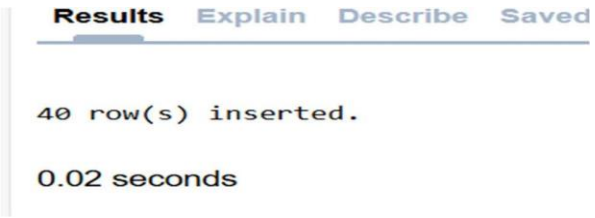
INTO Students VALUES (127,'Arjun','Naresh', TO_DATE('2010-02-18','YYYY-MMDD'),'Male',2023,7)

INTO Students VALUES (128,'Divya','Anand', TO_DATE('2011-03-19','YYYY-MMDD'),'Female',2023,8)

INTO Students VALUES (129,'Siddarth','Yogesh', TO_DATE('2010-09-30','YYYY-MMDD'),'Male',2023,9)

INTO Students VALUES (130,'Keerthi','Madhav', TO_DATE('2011-08-08','YYYY-MMDD'),'Female',2023,10)

```
INTO Students VALUES (131,'Joel','Sathish', TO_DATE('2010-04-01','YYYY-MMDD'),'Male',2024,1)

INTO Students VALUES (132,'Pooja','Ravi', TO_DATE('2011-06-22','YYYY-MMDD'),'Female',2024,2)

INTO Students VALUES (133,'Nithin','Ramesh', TO_DATE('2010-03-09','YYYY-MMDD'),'Male',2024,3)

INTO Students VALUES (134,'Lavanya','Hari', TO_DATE('2011-02-28','YYYY-MMDD'),'Female',2024,4)

INTO Students VALUES (135,'Keshav','Manoj', TO_DATE('2010-12-12','YYYY-MMDD'),'Male',2024,5)

INTO Students VALUES (136,'Jahnavi','Shiva', TO_DATE('2011-04-23','YYYY-MMDD'),'Female',2024,6)

INTO Students VALUES (137,'Ritik','Ashok', TO_DATE('2010-05-19','YYYY-MMDD'),'Male',2024,7)

INTO Students VALUES (138,'Sreeja','Gokul', TO_DATE('2011-07-30','YYYY-MMDD'),'Female',2024,8)

INTO Students VALUES (139,'Aman','Suresh', TO_DATE('2010-09-11','YYYY-MMDD'),'Male',2024,9)

INTO Students VALUES (140,'Krithika','Vijay', TO_DATE('2011-10-15','YYYY-MM-DD'),'Female',2024,10)

SELECT * FROM dual;

UPDATE Students

SET is_scholarship = 1

WHERE student_id BETWEEN 101 AND 110;
```



5)GUARDIANS:

```
INSERT ALL

INTO Guardians (guardian_id, name, phone, email) VALUES (1, 'Ravi Kumar', '9000010001', 'ravi1@mail.com')
```

INTO Guardians (guardian_id, name, phone, email) VALUES (2, 'Lakshmi Devi', '9000010002', 'lakshmi2@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (3, 'Suresh Babu', '9000010003', 'suresh3@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (4, 'Geetha R', '9000010004', 'geetha4@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (5, 'Manoj Kumar', '9000010005', 'manoj5@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (6, 'Priya S', '9000010006', 'priya6@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (7, 'Arun Kumar', '9000010007', 'arun7@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (8, 'Divya M', '9000010008', 'divya8@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (9, 'Ramesh K', '9000010009', 'ramesh9@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (10, 'Shanthi R', '9000010010', 'shanthi10@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (11, 'Naveen Kumar', '9000010011', 'naveen11@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (12, 'Kavitha M', '9000010012', 'kavitha12@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (13, 'Vignesh S', '9000010013', 'vignesh13@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (14, 'Sujatha R', '9000010014', 'sujatha14@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (15, 'Vinod Kumar', '9000010015', 'vinod15@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (16, 'Mahesh Babu', '9000010016', 'mahesh16@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (17, 'Meena S', '9000010017', 'meena17@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (18, 'Karthik R', '9000010018', 'karthik18@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (19, 'Janani P', '9000010019', 'janani19@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (20, 'Sathish Kumar', '9000010020', 'sathish20@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (21, 'Harini R', '9000010021', 'harini21@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (22, 'Ajay Kumar', '9000010022', 'ajay22@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (23, 'Vidhya R', '9000010023', 'vidhya23@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (24, 'Saravanan K', '9000010024', 'saravanan24@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (25, 'Monisha R', '9000010025', 'monisha25@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (26, 'Prakash Kumar', '9000010026', 'prakash26@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (27, 'Kiran Kumar', '9000010027', 'kiran27@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (28, 'Sharmila Devi', '9000010028', 'sharmila28@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (29, 'Aravind R', '9000010029', 'aravind29@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (30, 'Nithya S', '9000010030', 'nithya30@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (31, 'Gopal Krishna', '9000010031', 'gopal31@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (32, 'Pooja Devi', '9000010032', 'pooja32@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (33, 'Sankar Kumar', '9000010033', 'sankar33@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (34, 'Latha R', '9000010034', 'latha34@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (35, 'Jeevan Kumar', '9000010035', 'jeevan35@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (36, 'Anitha S', '9000010036', 'anitha36@mail.com')

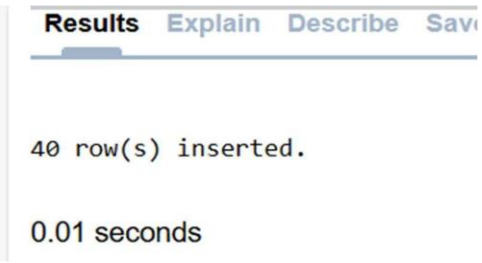
INTO Guardians (guardian_id, name, phone, email) VALUES (37, 'Dinesh R', '9000010037', 'dinesh37@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (38, 'Revathi M', '9000010038', 'revathi38@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (39, 'Mohan Kumar', '9000010039', 'mohan39@mail.com')

INTO Guardians (guardian_id, name, phone, email) VALUES (40, 'Sheryl Priya', '9000010040', 'sheryl40@mail.com')

SELECT * FROM dual;



6)STUDENT_GUARDIAN

INSERT ALL

INTO Student_Guardian (sg_id, student_id, guardian_id) VALUES (1,101,1)

INTO Student_Guardian VALUES (2,102,2)

INTO Student_Guardian VALUES (3,103,3)

INTO Student_Guardian VALUES (4,104,4)

INTO Student_Guardian VALUES (5,105,5)

INTO Student_Guardian VALUES (6,106,6)

INTO Student_Guardian VALUES (7,107,7)

INTO Student_Guardian VALUES (8,108,8)

INTO Student_Guardian VALUES (9,109,9)

INTO Student_Guardian VALUES (10,110,10)

INTO Student_Guardian VALUES (11,111,11)

INTO Student_Guardian VALUES (12,112,12)

INTO Student_Guardian VALUES (13,113,13)

INTO Student_Guardian VALUES (14,114,14)

INTO Student_Guardian VALUES (15,115,15)

INTO Student_Guardian VALUES (16,116,16)

INTO Student_Guardian VALUES (17,117,17)

INTO Student_Guardian VALUES (18,118,18)

INTO Student_Guardian VALUES (19,119,19)

INTO Student_Guardian VALUES (20,120,20)

INTO Student_Guardian VALUES (21,121,21)

INTO Student_Guardian VALUES (22,122,22)

INTO Student_Guardian VALUES (23,123,23)

INTO Student_Guardian VALUES (24,124,24)

INTO Student_Guardian VALUES (25,125,25)

INTO Student_Guardian VALUES (26,126,26)

INTO Student_Guardian VALUES (27,127,27)

INTO Student_Guardian VALUES (28,128,28)

INTO Student_Guardian VALUES (29,129,29)

INTO Student_Guardian VALUES (30,130,30)

INTO Student_Guardian VALUES (31,131,31)

INTO Student_Guardian VALUES (32,132,32)

INTO Student_Guardian VALUES (33,133,33)

INTO Student_Guardian VALUES (34,134,34)

INTO Student_Guardian VALUES (35,135,35)

INTO Student_Guardian VALUES (36,136,36)

INTO Student_Guardian VALUES (37,137,37)

INTO Student_Guardian VALUES (38,138,38)

INTO Student_Guardian VALUES (39,139,39)

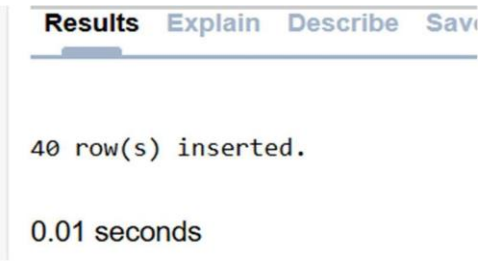
INTO Student_Guardian VALUES (40,140,40)

SELECT * FROM dual;

7)SUBJECTS:

```
INSERT ALL
INTO Subjects VALUES (1, 'Physics', 1, 0)
INTO Subjects VALUES (2, 'Chemistry', 1, 0)
INTO Subjects VALUES (3, 'Biology', 1, 0)
INTO Subjects VALUES (4, 'Mathematics', 2, 0)
INTO Subjects VALUES (5, 'Algebra', 2, 0)
INTO Subjects VALUES (6, 'Geometry', 2, 0)
INTO Subjects VALUES (7, 'Computer Basics', 3, 0)
INTO Subjects VALUES (8, 'Programming Fundamentals', 3, 0)
INTO Subjects VALUES (9, 'Data Structures', 3, 0)
INTO Subjects VALUES (10, 'English', 4, 0)
INTO Subjects VALUES (11, 'Tamil', 4, 0)
INTO Subjects VALUES (12, 'Hindi', 4, 0)
INTO Subjects VALUES (13, 'History', 5, 0)
INTO Subjects VALUES (14, 'Geography', 5, 0)
INTO Subjects VALUES (15, 'Civics', 5, 0)
INTO Subjects VALUES (16, 'Music', 4, 1)
INTO Subjects VALUES (17, 'Drawing', 4, 1)
INTO Subjects VALUES (18, 'Dance', 4, 1)
INTO Subjects VALUES (19, 'Physical Education', 1, 1)
INTO Subjects VALUES (20, 'Yoga', 1, 1)
INTO Subjects VALUES (21, 'Environmental Science', 1, 1)
INTO Subjects VALUES (22, 'Robotics', 3, 1)
INTO Subjects VALUES (23, 'Web Development', 3, 1)
```

```
INTO Subjects VALUES (24, 'Artificial Intelligence Basics', 3, 1)
INTO Subjects VALUES (25, 'Advanced Math Lab', 2, 1)
INTO Subjects VALUES (26, 'Creative Writing', 4, 1)
INTO Subjects VALUES (27, 'Public Speaking', 4, 1)

INTO Subjects VALUES (28, 'Photography', 3, 1)
INTO Subjects VALUES (29, 'Film Studies', 4, 1)
INTO Subjects VALUES (30, 'Sports Science', 1, 1)
INTO Subjects VALUES (31, 'Statistics', 2, 0)
INTO Subjects VALUES (32, 'Trigonometry', 2, 0)
INTO Subjects VALUES (33, 'Organic Chemistry', 1, 0)
INTO Subjects VALUES (34, 'Inorganic Chemistry', 1, 0)
INTO Subjects VALUES (35, 'Botany', 1, 0)
INTO Subjects VALUES (36, 'Zoology', 1, 0)
INTO Subjects VALUES (37, 'World History', 5, 0)
INTO Subjects VALUES (38, 'Economics', 5, 0)
INTO Subjects VALUES (39, 'Political Science', 5, 0)
INTO Subjects VALUES (40, 'Ethics', 5, 1)
SELECT * FROM dual;
```



8)TEACHER_SUBJECTS:

```
INSERT ALL
  INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (1, 1, 1)
  INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (2, 1, 2)
  INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (3, 2, 3)
```

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (4, 2, 4)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (5, 3, 5)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (6, 3, 6)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (7, 4, 7)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (8, 4, 8)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (9, 5, 9)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (10, 5, 10)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (11, 6, 11)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (12, 6, 12)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (13, 7, 13)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (14, 7, 14)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (15, 8, 15)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (16, 8, 16)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (17, 9, 17)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (18, 9, 18)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (19, 10, 19)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (20, 10, 20)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (21, 11, 1)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (22, 11, 2)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (23, 12, 3)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (24, 12, 4)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (25, 13, 5)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (26, 13, 6)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (27, 14, 7)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (28, 14, 8)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (29, 15, 9)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (30, 15, 10)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (31, 16, 11)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (32, 16, 12)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (33, 17, 13)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (34, 17, 14)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (35, 18, 15)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (36, 18, 16)

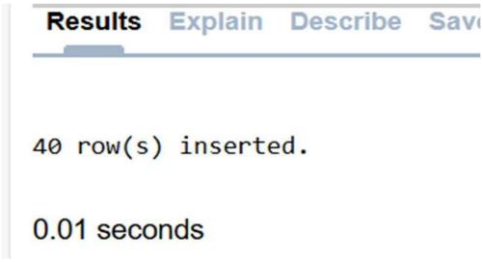
INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (37, 19, 17)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (38, 19, 18)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (39, 20, 19)

INTO TEACHER_SUBJECT (TS_ID, TEACHER_ID, SUBJECT_ID) VALUES (40, 20,

20) SELECT * FROM dual;



9)ATTENDANCE:

INSERT ALL

INTO Attendance VALUES (1, 101, TO_DATE('01-JAN-2024','DD-MON-YYYY'), 'Present', NULL)

INTO Attendance VALUES (2, 102, TO_DATE('01-JAN-2024','DD-MON-YYYY'), 'Absent', 'Medical Leave')

```
INTO Attendance VALUES (3, 103, TO_DATE('01-JAN-2024','DD-MON-YYYY'), 'Late',
'Bus Delay')

INTO Attendance VALUES (4, 104, TO_DATE('01-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (5, 105, TO_DATE('01-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (6, 106, TO_DATE('02-JAN-2024','DD-MON-YYYY'), 'Absent',
'Fever')

INTO Attendance VALUES (7, 107, TO_DATE('02-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (8, 108, TO_DATE('02-JAN-2024','DD-MON-YYYY'), 'Late',
'Tra ic')

INTO Attendance VALUES (9, 109, TO_DATE('02-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (10, 110, TO_DATE('02-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (11, 111, TO_DATE('03-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (12, 112, TO_DATE('03-JAN-2024','DD-MON-YYYY'),
'Absent', 'Medical Leave')

INTO Attendance VALUES (13, 113, TO_DATE('03-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (14, 114, TO_DATE('03-JAN-2024','DD-MON-YYYY'), 'Late',
'Overslept')

INTO Attendance VALUES (15, 115, TO_DATE('03-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (16, 116, TO_DATE('04-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (17, 117, TO_DATE('04-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (18, 118, TO_DATE('04-JAN-2024','DD-MON-YYYY'),
'Absent', 'Cold')

INTO Attendance VALUES (19, 119, TO_DATE('04-JAN-2024','DD-MON-YYYY'),
'Present', NULL)
```

```
INTO Attendance VALUES (20, 120, TO_DATE('04-JAN-2024','DD-MON-YYYY'), 'Late',
'Bus Breakdown')

INTO Attendance VALUES (21, 121, TO_DATE('05-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (22, 122, TO_DATE('05-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (23, 123, TO_DATE('05-JAN-2024','DD-MON-YYYY'),
'Absent', 'Family Function')

INTO Attendance VALUES (24, 124, TO_DATE('05-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (25, 125, TO_DATE('05-JAN-2024','DD-MON-YYYY'), 'Late',
'Rain')
INTO Attendance VALUES (26, 126, TO_DATE('06-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (27, 127, TO_DATE('06-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (28, 128, TO_DATE('06-JAN-2024','DD-MON-YYYY'),
'Absent', 'Medical Leave')

INTO Attendance VALUES (29, 129, TO_DATE('06-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (30, 130, TO_DATE('06-JAN-2024','DD-MON-YYYY'), 'Late',
'Missed Bus')

INTO Attendance VALUES (31, 131, TO_DATE('07-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (32, 132, TO_DATE('07-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (33, 133, TO_DATE('07-JAN-2024','DD-MON-YYYY'),
'Absent', 'Fever')

INTO Attendance VALUES (34, 134, TO_DATE('07-JAN-2024','DD-MON-YYYY'), 'Late',
'Tra ic Jam')

INTO Attendance VALUES (35, 135, TO_DATE('07-JAN-2024','DD-MON-YYYY'),
'Present', NULL)

INTO Attendance VALUES (36, 136, TO_DATE('08-JAN-2024','DD-MON-YYYY'),
'Present', NULL)
```

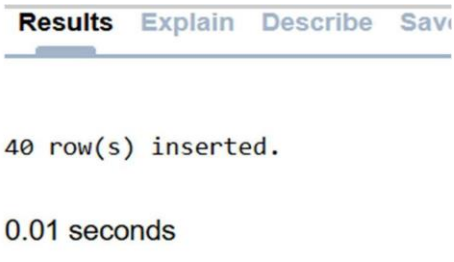
INTO Attendance VALUES (37, 137, TO_DATE('08-JAN-2024','DD-MON-YYYY'), 'Late', 'Bus Delay')

INTO Attendance VALUES (38, 138, TO_DATE('08-JAN-2024','DD-MON-YYYY'), 'Present', NULL)

INTO Attendance VALUES (39, 139, TO_DATE('08-JAN-2024','DD-MON-YYYY'), 'Absent', 'Headache')

INTO Attendance VALUES (40, 140, TO_DATE('08-JAN-2024','DD-MON-YYYY'), 'Present', NULL)

SELECT * FROM dual;



10)EXAMS:

INSERT ALL

INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (1, 1, TO_DATE('2025-01-10','YYYY-MM-DD'), 100)

INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (2, 2, TO_DATE('2025-01-12','YYYY-MM-DD'), 100)

INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (3, 3, TO_DATE('2025-01-15','YYYY-MM-DD'), 100)

INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (4, 4, TO_DATE('2025-01-18','YYYY-MM-DD'), 100)

INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (5, 5, TO_DATE('2025-01-20','YYYY-MM-DD'), 100)

INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (6, 1, TO_DATE('2025-02-01','YYYY-MM-DD'), 90)

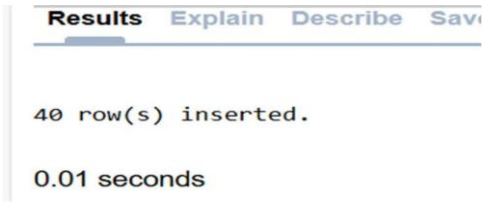
INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (7, 2, TO_DATE('2025-02-03','YYYY-MM-DD'), 90)

INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (8, 3, TO_DATE('2025-02-05','YYYY-MM-DD'), 90)

INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (9, 4, TO_DATE('2025-02-07','YYYY-MM-DD'), 90)

```
 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(10, 5, TO_DATE('2025-02-09','YYYY-MM-DD'), 90)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES (11,
1, TO_DATE('2025-02-12','YYYY-MM-DD'), 80)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(12, 2, TO_DATE('2025-02-15','YYYY-MM-DD'), 80)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(13, 3,
TO_DATE('2025-02-18','YYYY-MM-DD'), 80)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(14, 4, TO_DATE('2025-02-21','YYYY-MM-DD'), 80)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(15, 5, TO_DATE('2025-02-24','YYYY-MM-DD'), 80)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(16, 1, TO_DATE('2025-03-01','YYYY-MM-DD'), 70)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(17, 2, TO_DATE('2025-03-03','YYYY-MM-DD'), 70)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(18, 3, TO_DATE('2025-03-05','YYYY-MM-DD'), 70)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(19, 4, TO_DATE('2025-03-07','YYYY-MM-DD'), 70)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(20, 5, TO_DATE('2025-03-09','YYYY-MM-DD'), 70)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(21, 1, TO_DATE('2025-03-12','YYYY-MM-DD'), 60)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(22, 2, TO_DATE('2025-03-15','YYYY-MM-DD'), 60)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(23, 3, TO_DATE('2025-03-18','YYYY-MM-DD'), 60)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(24, 4, TO_DATE('2025-03-21','YYYY-MM-DD'), 60)

 INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(25, 5, TO_DATE('2025-03-24','YYYY-MM-DD'), 60)
```

```
  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(26, 1, TO_DATE('2025-03-27','YYYY-MM-DD'), 50)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(27, 2, TO_DATE('2025-03-30','YYYY-MM-DD'), 50)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(28, 3, TO_DATE('2025-04-02','YYYY-MM-DD'), 50)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(29, 4,
TO_DATE('2025-04-05','YYYY-MM-DD'), 50)
  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(30, 5, TO_DATE('2025-04-08','YYYY-MM-DD'), 50)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(31, 1, TO_DATE('2025-04-11','YYYY-MM-DD'), 40)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(32, 2, TO_DATE('2025-04-14','YYYY-MM-DD'), 40)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(33, 3, TO_DATE('2025-04-17','YYYY-MM-DD'), 40)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(34, 4, TO_DATE('2025-04-20','YYYY-MM-DD'), 40)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(35, 5, TO_DATE('2025-04-23','YYYY-MM-DD'), 40)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(36, 1, TO_DATE('2025-04-26','YYYY-MM-DD'), 30)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(37, 2, TO_DATE('2025-04-29','YYYY-MM-DD'), 30)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(38, 3, TO_DATE('2025-05-02','YYYY-MM-DD'), 30)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(39, 4, TO_DATE('2025-05-05','YYYY-MM-DD'), 30)

  INTO EXAMS (EXAM_ID, SUBJECT_ID, EXAM_DATE, MAX_MARKS) VALUES
(40, 5, TO_DATE('2025-05-08','YYYY-MM-DD'), 30)

SELECT * FROM dual;
```

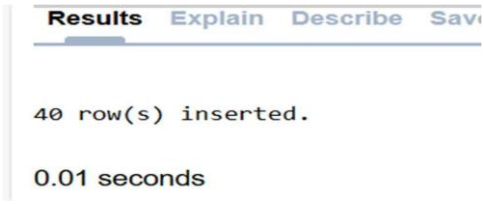


11)EXAM_MARKS:

```
INSERT ALL
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (1, 1, 101, 85)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (2, 1, 102, 90)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (3, 1, 103, 78)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (4, 1, 104, 88)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (5, 1, 105, 95)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (6, 1, 106, 80)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (7, 1, 107, 92)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (8, 1, 108, 87)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (9, 1, 109, 100)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (10, 1, 110, 76)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (11, 2, 101, 84)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (12, 2, 102, 91)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (13, 2, 103, 79)
  INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (14, 2, 104, 88)
```

```
 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (15, 2, 105,
95)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (16, 2, 106,
82)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (17, 2,
107, 90)
 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (18, 2, 108,
86)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (19, 2, 109,
100)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (20, 2, 110,
77)

INSERT ALL

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (21, 3, 101,
88)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (22, 3, 102,
92)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (23, 3, 103,
81)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (24, 3, 104,
85)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (25, 3, 105,
90)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (26, 3, 106,
87)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (27, 3, 107,
94)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (28, 3, 108,
89)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (29, 3, 109,
96)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (30, 3, 110,
83)
```

```
 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (31, 4, 101, 80)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (32, 4, 102, 85)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (33, 4, 103, 88)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (34, 4, 104, 92)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (35, 4, 105, 86)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (36, 4, 106, 91)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (37, 4, 107, 89)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (38, 4, 108, 94)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (39, 4, 109, 87)

 INTO Exam_Marks (mark_id, exam_id, student_id, marks_obtained) VALUES (40, 4, 110, 90)

SELECT * FROM dual;
```



12)FEES:

```
INSERT ALL

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (1, 101, 5000.00, TO_DATE('2025-01-10','YYYY-MM-DD'), TO_DATE('2025-01-10','YYYY-MM-DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (2, 102, 5200.00, TO_DATE('2025-01-12','YYYY-MM-DD'), NULL, 'pending')
```

```
 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (3, 103,
4800.00, TO_DATE('2025-01-15','YYYY-MM-DD'), TO_DATE('2025-01-16','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (4, 104,
5000.00, TO_DATE('2025-01-18','YYYY-MM-DD'), NULL, 'overdue')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (5, 105,
5100.00, TO_DATE('2025-01-20','YYYY-MM-DD'), TO_DATE('2025-01-20','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (6, 106,
4950.00, TO_DATE('2025-02-01','YYYY-MM-DD'), NULL, 'pending')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (7, 107,
5050.00, TO_DATE('2025-02-03','YYYY-MM-DD'), TO_DATE('2025-02-04','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (8, 108,
5000.00, TO_DATE('2025-02-05','YYYY-MM-DD'), NULL, 'overdue')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (9, 109,
5200.00, TO_DATE('2025-02-07','YYYY-MM-DD'), TO_DATE('2025-02-07','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (10, 110,
4800.00, TO_DATE('2025-02-09','YYYY-MM-DD'), NULL, 'pending')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (11, 101,
5000.00, TO_DATE('2025-02-10','YYYY-MM-DD'), TO_DATE('2025-02-11','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (12, 102,
5100.00, TO_DATE('2025-02-12','YYYY-MM-DD'), NULL, 'overdue')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (13, 103,
4950.00, TO_DATE('2025-02-15','YYYY-MM-DD'), TO_DATE('2025-02-16','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (14, 104,
5050.00, TO_DATE('2025-02-18','YYYY-MM-DD'), NULL, 'pending')
```

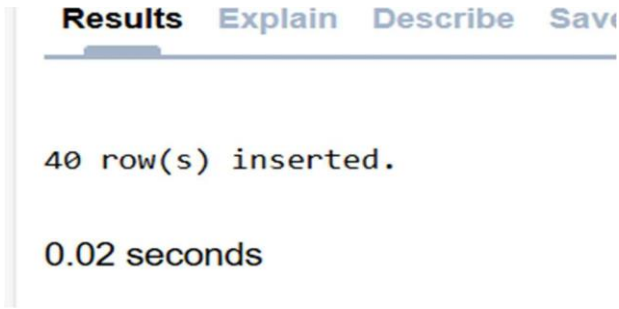
```
 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (15, 105,
5000.00, TO_DATE('2025-02-20','YYYY-MM-DD'), TO_DATE('2025-02-20','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (16, 106,
5200.00, TO_DATE('2025-02-22','YYYY-MM-DD'), NULL, 'overdue')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (17, 107,
4800.00, TO_DATE('2025-02-25','YYYY-MM-DD'), TO_DATE('2025-02-26','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (18, 108,
5000.00, TO_DATE('2025-02-28','YYYY-MM-DD'), NULL, 'pending')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (19, 109,
5100.00, TO_DATE('2025-03-01','YYYY-MM-DD'), TO_DATE('2025-03-02','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (20, 110,
4950.00, TO_DATE('2025-03-03','YYYY-MM-DD'), NULL, 'overdue')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (21, 101,
5050.00, TO_DATE('2025-03-05','YYYY-MM-DD'), TO_DATE('2025-03-06','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (22, 102,
5000.00, TO_DATE('2025-03-07','YYYY-MM-DD'), NULL, 'pending')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (23, 103,
5200.00, TO_DATE('2025-03-09','YYYY-MM-DD'), TO_DATE('2025-03-10','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (24, 104,
4800.00, TO_DATE('2025-03-11','YYYY-MM-DD'), NULL, 'overdue')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (25, 105,
5000.00, TO_DATE('2025-03-13','YYYY-MM-DD'), TO_DATE('2025-03-14','YYYY-MM-
DD'),
'paid')

 INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (26, 106,
5100.00, TO_DATE('2025-03-15','YYYY-MM-DD'), NULL, 'pending')
```

```
  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (27, 107,
4950.00, TO_DATE('2025-03-17','YYYY-MM-DD'), TO_DATE('2025-03-18','YYYY-MM-
DD'),
'paid')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (28, 108,
5050.00, TO_DATE('2025-03-19','YYYY-MM-DD'), NULL, 'overdue')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (29, 109,
5000.00, TO_DATE('2025-03-21','YYYY-MM-DD'), TO_DATE('2025-03-22','YYYY-MM-
DD'),
'paid')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (30, 110,
5200.00, TO_DATE('2025-03-23','YYYY-MM-DD'), NULL, 'pending')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (31, 101,
4800.00, TO_DATE('2025-03-25','YYYY-MM-DD'), TO_DATE('2025-03-26','YYYY-MM-
DD'),
'paid')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (32, 102,
5000.00, TO_DATE('2025-03-27','YYYY-MM-DD'), NULL, 'overdue')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (33, 103,
5100.00, TO_DATE('2025-03-29','YYYY-MM-DD'), TO_DATE('2025-03-30','YYYY-MM-
DD'),
'paid')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (34, 104,
4950.00, TO_DATE('2025-03-31','YYYY-MM-DD'), NULL, 'pending')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (35, 105,
5050.00, TO_DATE('2025-04-02','YYYY-MM-DD'), TO_DATE('2025-04-03','YYYY-MM-
DD'),
'paid')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (36, 106,
5000.00, TO_DATE('2025-04-04','YYYY-MM-DD'), NULL, 'overdue')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (37, 107,
5200.00, TO_DATE('2025-04-06','YYYY-MM-DD'), TO_DATE('2025-04-07','YYYY-MM-
DD'),
'paid')

  INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (38, 108,
4800.00, TO_DATE('2025-04-08','YYYY-MM-DD'), NULL, 'pending')
```

INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (39, 109, 5000.00, TO_DATE('2025-04-10','YYYY-MM-DD'), TO_DATE('2025-04-11','YYYY-MM-DD'),
'paid')

INTO Fees (fee_id, student_id, amount, due_date, paid_date, status) VALUES (40, 110, 5100.00, TO_DATE('2025-04-12','YYYY-MM-DD'), NULL, 'overdue')

SELECT * FROM dual;



BASIC QUERIES:

1. List students who joined in the year 2024:

SELECT *

FROM Students

WHERE join_year = 2024;

Results Explain Describe Saved SQL History

STUDENT_ID	FIRST_NAME	LAST_NAME	DOB	GENDER	JOIN_YEAR	CLASS_ID
131	Joel	Sathish	04/01/2010	Male	2024	1
132	Pooja	Ravi	06/22/2011	Female	2024	2
133	Nithin	Ramesh	03/09/2010	Male	2024	3
134	Lavanya	Hari	02/28/2011	Female	2024	4
135	Keshav	Manoj	12/12/2010	Male	2024	5
136	Jahnavi	Shiva	04/23/2011	Female	2024	6
137	Ritik	Ashok	05/19/2010	Male	2024	7
138	Sreeja	Gokul	07/30/2011	Female	2024	8
139	Aman	Suresh	09/11/2010	Male	2024	9
140	Krithika	Vijay	10/15/2011	Female	2024	10

10 rows returned in 0.00 seconds Download

2. Find teachers NOT assigned as Class Teachers:

SELECT t.teacher_id, t.name

FROM Teachers t

LEFT JOIN Classes c ON t.teacher_id = c.class_teacher_id WHERE

c.class_teacher_id IS NULL;

Results Explain Describe Saved SQL History

TEACHER_ID	NAME
4	David Brown
5	Emily Davis
6	Frank Wilson
7	Grace Moore
8	Hannah Taylor
9	Ian Anderson
10	Jane Thomas
11	Kevin White
12	Laura Harris
13	Mark Martin

3. Retrieve optional/elective subject:
   SELECT subject_id, subject_name
   FROM Subjects
   WHERE is_optional = 1;

SUBJECT_ID	SUBJECT_NAME
16	Music
17	Drawing
18	Dance
19	Physical Education
20	Yoga
21	Environmental Science
22	Robotics
23	Web Development
24	Artificial Intelligence Basics
25	Advanced Math Lab

More than 10 rows available. Increase rows selector to view more rows.

4. List students with attendance reason = 'Medical Leave':

SELECT s.student_id, s.first_name, s.last_name

FROM Students s

JOIN Attendance a ON s.student_id = a.student_id

WHERE a.reason = 'Medical Leave';

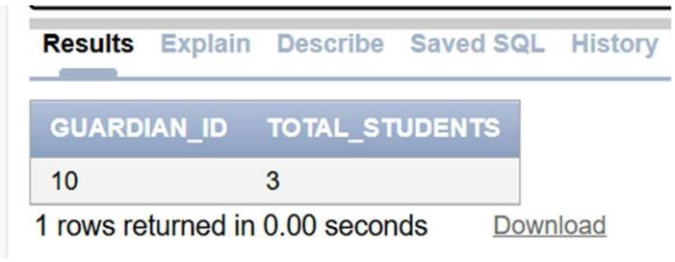
Results Explain Describe Saved SQL History

STUDENT_ID	FIRST_NAME	LAST_NAME
102	Diya	Ramesh
112	Tanisha	Shankar
128	Divya	Anand

3 rows returned in 0.01 seconds Download

5. Guardians linked to more than 2 students:

```
SELECT guardian_id, COUNT(student_id) AS total_students
FROM Student_Guardian
GROUP BY guardian_id
HAVING COUNT(student_id) > 2;
```



Results | Explain | Describe | Saved SQL | History

GUARDIAN_ID	TOTAL_STUDENTS
10	3

1 rows returned in 0.00 seconds Download

JOINS & SUBQUERIES:

6. Student + Class Teacher + Guardian details:

```
SELECT s.student_id, s.first_name, ct.name AS class_teacher,
    g.name AS guardian_name
FROM Students s
JOIN Classes c ON s.class_id = c.class_id
JOIN Teachers ct ON c.class_teacher_id = ct.teacher_id
JOIN Student_Guardian sg ON s.student_id = sg.student_id
JOIN Guardians g ON sg.guardian_id = g.guardian_id;
```

STUDENT_ID	FIRST_NAME	CLASS_TEACHER	GUARDIAN_NAME
101	Aarav	Alice Johnson	Ravi Kumar
102	Diya	Alice Johnson	Lakshmi Devi
103	Karthik	Bob Smith	Suresh Babu
104	Harini	Bob Smith	Geetha R
105	Vikram	Catherine Lee	Manoj Kumar
106	Meera	Catherine Lee	Priya S
107	Rahul	David Brown	Arun Kumar
108	Sahana	David Brown	Divya M
109	Pranav	Emily Davis	Ramesh K
122	Swathi	Bob Smith	Shanthi R

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.01 seconds Download

7. Students scoring below class average in Mathematics:

```
SELECT m.student_id, m.marks_obtained
FROM Exam_Marks m
JOIN Exams e ON m.exam_id = e.exam_id
```

```
JOIN Subjects s ON s.subject_id = e.subject_id
WHERE s.subject_name = 'Mathematics'
AND m.marks_obtained <
   (SELECT AVG(m2.marks_obtained)
    FROM Exam_Marks m2
    JOIN Exams e2 ON m2.exam_id = e2.exam_id
    JOIN Subjects s2 ON s2.subject_id = e2.subject_id
WHERE s2.subject_name = 'Mathematics');
```

STUDENT_ID	MARKS_OBTAINED
101	80
102	85
103	88
105	86
109	87

5 rows returned in 0.02 seconds Download

8. Teachers who teach BOTH Physics and Chemistry

```
SELECT teacher_id
FROM Teacher_Subject ts
JOIN Subjects s ON ts.subject_id = s.subject_id
WHERE s.subject_name IN ('Physics', 'Chemistry')
GROUP BY teacher_id
HAVING COUNT(DISTINCT s.subject_name) = 2;
```

Results Explain Describe Sa

TEACHER_ID
1
11

2 rows returned in 0.01 seconds

9. Classrooms exceeding capacity:

```
SELECT c.class_id, c.capacity, COUNT(s.student_id) AS student_count
FROM Classes c
JOIN Students s ON c.class_id = s.class_id
GROUP BY c.class_id, c.capacity
HAVING COUNT(s.student_id) > c.capacity;
```

Results Explain Describe Saved SQL History

CLASS_ID	CAPACITY	STUDENT_COUNT
1	2	4
2	2	4

2 rows returned in 0.00 seconds Download

10. Students who never paid after due date

```
SELECT s.student_id, s.first_name
FROM Students s
```

```
WHERE s.student_id NOT IN (
   SELECT student_id
   FROM Fees
   WHERE paid_date > due_date
);
```

Results Explain Describe Saved SQL History

STUDENT_ID	FIRST_NAME
121	Rohan
112	Tanisha
125	Kiran
136	Jahnavi
133	Nithin
110	Ishita
123	Surya
104	Harini
122	Swathi
129	Siddarth

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.01 seconds Download

AGGREGATION & REPORTS

11. Top 5 students by average percentage:

```
SELECT *
FROM (
   SELECT student_id,
        AVG(marks_obtained) AS avg_score
   FROM Exam_Marks
   GROUP BY student_id
   ORDER BY avg_score DESC
)
WHERE ROWNUM <= 5;
```

Results Explain Describe Saved SQL History

STUDENT_ID	AVG_SCORE
109	95.75
105	91.5
107	91.25
102	89.5
108	89

5 rows returned in 0.00 seconds Download

12. Total fees collected + average pending per grade:

```
SELECT c.grade,
      SUM(p.amount) AS total_collected,
      AVG(pe.amount) AS avg_pending
FROM Classes c
JOIN Students s ON s.class_id = c.class_id
```

```
LEFT JOIN Fees p ON p.student_id = s.student_id AND p.status = 'paid'
LEFT JOIN Fees pe ON pe.student_id = s.student_id AND pe.status = 'pending'
GROUP BY c.grade;
```

Results Explain Describe Saved SQL History

GRADE	TOTAL_COLLECTED	AVG_PENDING
1	39900	5050
2	40150	4962.5
3	20300	5000

3 rows returned in 0.03 seconds Download

13. Busiest teacher :

```
SELECT *
FROM (
   SELECT t.teacher_id, t.name,
        COUNT(DISTINCT ts.subject_id) AS subjects_taught
   FROM Teachers t
   JOIN Teacher_Subject ts ON ts.teacher_id = t.teacher_id
   GROUP BY t.teacher_id, t.name
   ORDER BY subjects_taught DESC
)
WHERE ROWNUM = 1;
```

Results Explain Describe Saved SQL History

TEACHER_ID	NAME	SUBJECTS_TAUGHT
13	Mark Martin	2

1 rows returned in 0.01 seconds Download

14. Attendance percentage per month

```
SELECT a.student_id,
      EXTRACT(MONTH FROM a.att_date) AS month,
      (COUNT(p.att_date) * 100.0 / COUNT(*)) AS attendance_percent
FROM Attendance a
LEFT JOIN Attendance p
      ON p.student_id = a.student_id
     AND EXTRACT(MONTH FROM p.att_date) = EXTRACT(MONTH FROM
a.att_date)
     AND p.status = 'Present'
GROUP BY a.student_id, EXTRACT(MONTH FROM a.att_date);
```

Results Explain Describe Saved SQL History

STUDENT_ID	MONTH	ATTENDANCE_PERCENT
102	1	0
106	1	0
118	1	0
124	1	100
135	1	100
139	1	0
110	1	100
113	1	100
114	1	0
121	1	100

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.00 seconds Download

15. Classes with repeated average test score < 50:

```
SELECT c.class_id
FROM Classes c
JOIN Students s ON s.class_id = c.class_id
JOIN Exam_Marks m ON m.student_id = s.student_id
GROUP BY c.class_id
HAVING AVG(m.marks_obtained) < 50;
```

Results Explain Describe Saved SQL History

CLASS_ID
3

1 rows returned in 0.00 seconds Download

ADVANCED QUERIES:

16. Monthly salary report:

```
SELECT EXTRACT(MONTH FROM CURRENT_DATE) AS month,
    COUNT(*) AS sta _count,
    SUM(salary) AS total_payout
FROM Teachers;
```

Results Explain Describe Saved SQL History

MONTH	STAFF_COUNT	TOTAL_PAYOUT
12	40	1933750

1 rows returned in 0.00 seconds Download

17. Teachers earning above dept average:

```
SELECT t.teacher_id, t.name, t.salary
FROM Teachers t
JOIN Departments d ON d.dept_id = t.dept_id
WHERE t.salary >
    (SELECT AVG(t2.salary)
     FROM Teachers t2
     WHERE t2.dept_id = t.dept_id);
```

Results | Explain | Describe | Saved SQL | History

TEACHER_ID	NAME	SALARY
21	Uma Baker	46250
22	Victor Green	49250
23	Wendy Adams	48000
24	Xavier Nelson	47000
25	Yvonne Carter	52000
26	Zachary Mitchell	46500
27	Amber Perez	49500
28	Brian Roberts	48250
29	Clara Turner	47250
30	Derek Phillips	52500

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.02 seconds Download

18. Students with above global average performance:

```
SELECT student_id, AVG(marks_obtained) AS avg_marks
FROM Exam_Marks
GROUP BY student_id
HAVING AVG(marks_obtained) >
    (SELECT AVG(marks_obtained) FROM Exam_Marks);
```

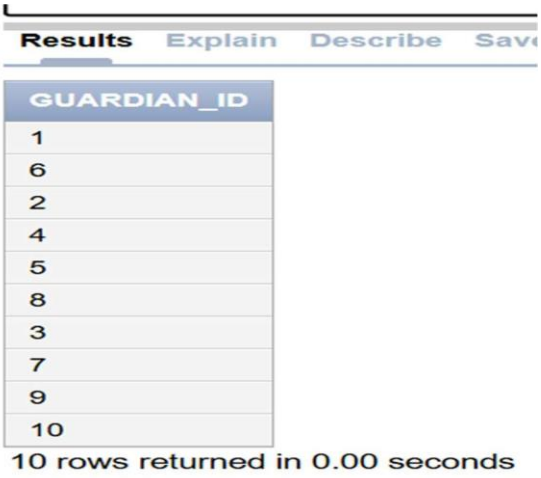
Results | Explain | Describe | Saved SQL | History

STUDENT_ID	AVG_MARKS
108	89
102	89.5
110	81.5
101	84.25
107	91.25
104	88.25
109	95.75
103	81.5

8 rows returned in 0.00 seconds Download

19. Guardians linked ONLY to scholarship students:

```
SELECT guardian_id
FROM Student_Guardian sg
JOIN Students s ON s.student_id = sg.student_id
GROUP BY guardian_id
HAVING MIN(s.is_scholarship) = 1;
```



Results Explain Describe Sav

GUARDIAN_ID
1
6
2
4
5
8
3
7
9
10

10 rows returned in 0.00 seconds

20. View: Student Name + Attendance % + Fee Status + GPA:

```
CREATE VIEW Student_Report AS
SELECT s.student_id,
    s.first_name || ' ' || s.last_name AS student_name,

    (SELECT (SUM(CASE WHEN status = 'Present' THEN 1 ELSE 0 END) * 100.0
/
        COUNT(*))
     FROM Attendance a
     WHERE a.student_id = s.student_id) AS attendance_percent,

    (SELECT f.status
     FROM Fees f
     WHERE f.student_id = s.student_id
      AND f.due_date = (SELECT MAX(f2.due_date)
                FROM Fees f2
                WHERE f2.student_id = s.student_id)
    ) AS fee_status,

    (SELECT AVG(m.marks_obtained) / 10
     FROM Exam_Marks m
     WHERE m.student_id = s.student_id) AS gpa
FROM Students s;
```

```
View created.

0.01 seconds
```

Indexing & Query Optimization:

Create indexes on student_id, exam_date, and fee_status.

```
CREATE INDEX idx_student_id ON Students(student_id)

CREATE INDEX idx_exam_date ON Exams(exam_date)

CREATE INDEX idx_fee_status ON Fees(status)
```

Optimized Queries :

1)

```
SELECT exam_id, subject_id, exam_date
FROM Exams
WHERE exam_date >= DATE '2025-01-01'
  AND exam_date <= DATE '2025-12-31';
```

Results Explain Describe Saved SQL History

EXAM_ID	SUBJECT_ID	EXAM_DATE
1	1	01/10/2025
2	2	01/12/2025
3	3	01/15/2025
4	4	01/18/2025
5	5	01/20/2025
6	1	02/01/2025
7	2	02/03/2025
8	3	02/05/2025
9	4	02/07/2025
10	5	02/09/2025

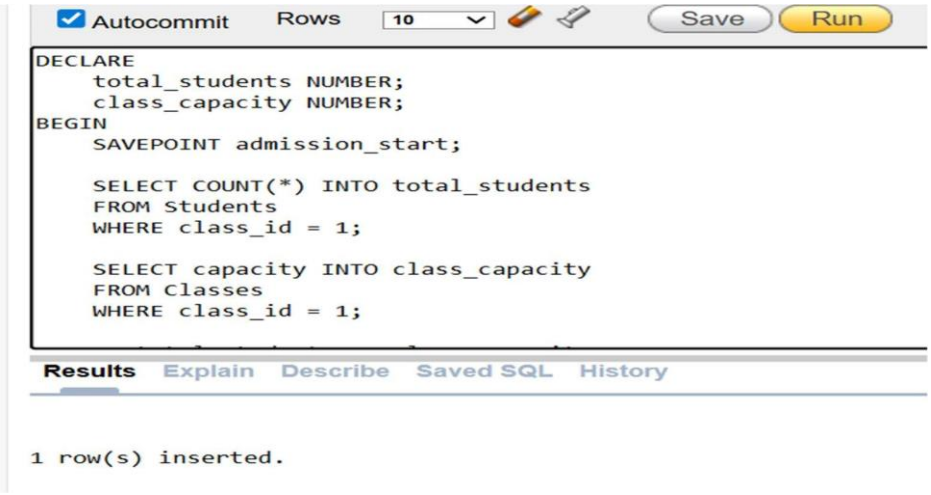
More than 10 rows available. Increase rows selector to view more rows.

```
SELECT fee_id, student_id, amount, status
FROM Fees
WHERE status = 'overdue';
```

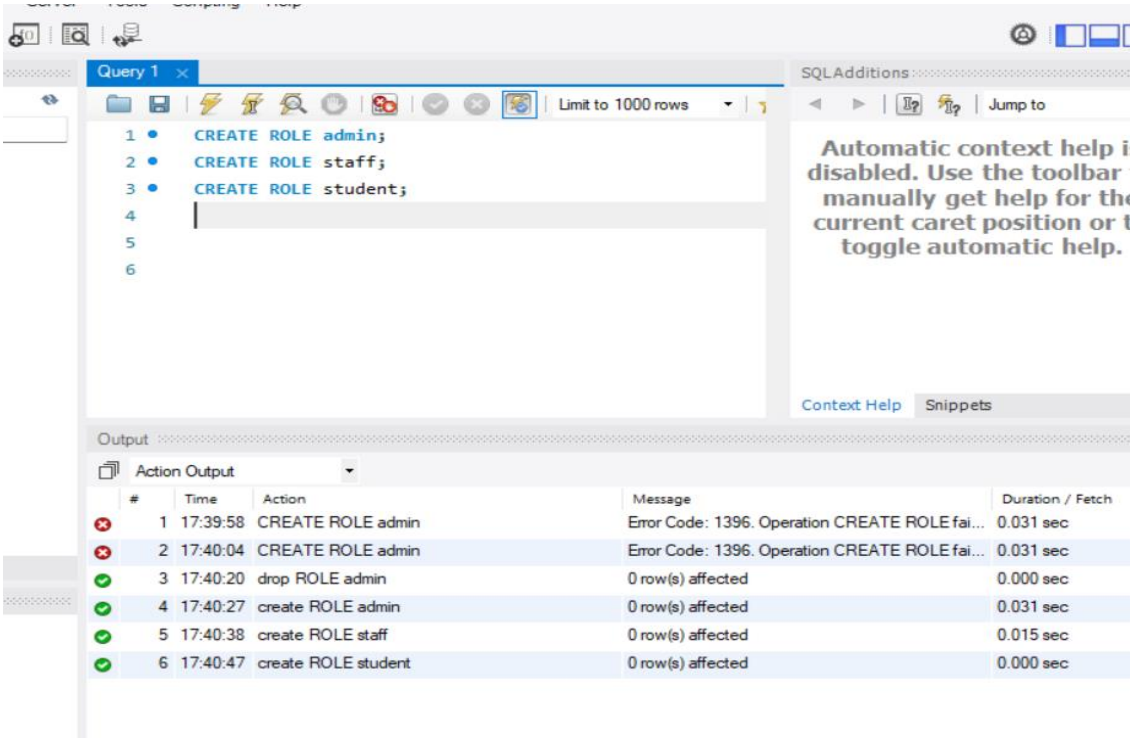
Results Explain Describe Saved SQL History

FEE_ID	STUDENT_ID	AMOUNT	STATUS
4	104	5000	overdue
8	108	5000	overdue
12	102	5100	overdue
16	106	5200	overdue
20	110	4950	overdue
24	104	4800	overdue
28	108	5050	overdue
32	102	5000	overdue
36	106	5000	overdue
40	110	5100	overdue

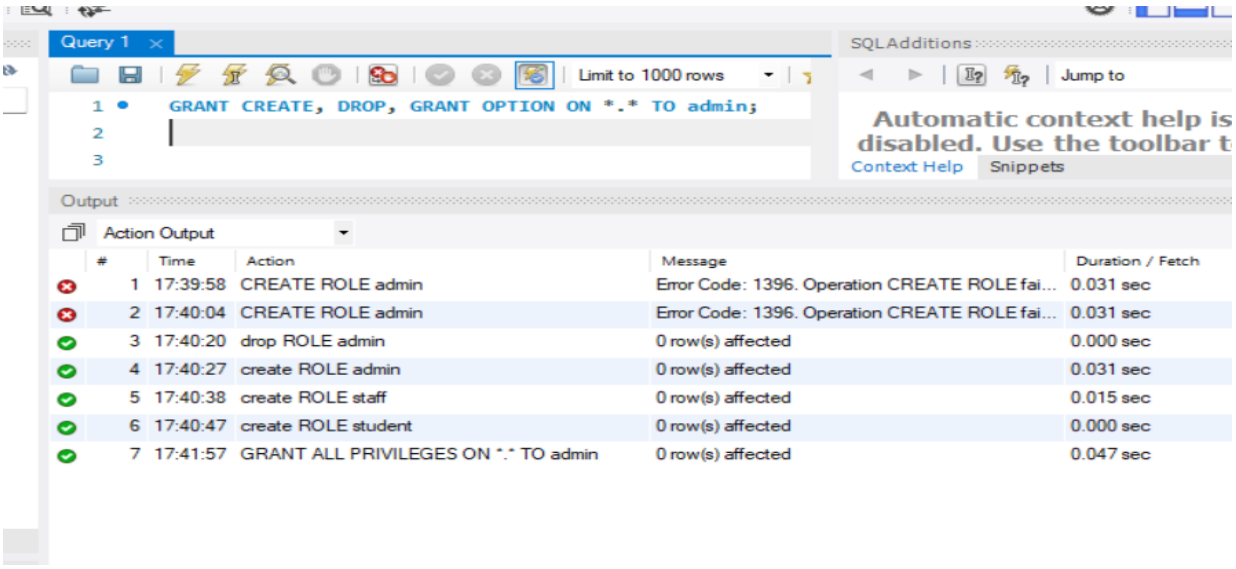
Transactions & Recovery:



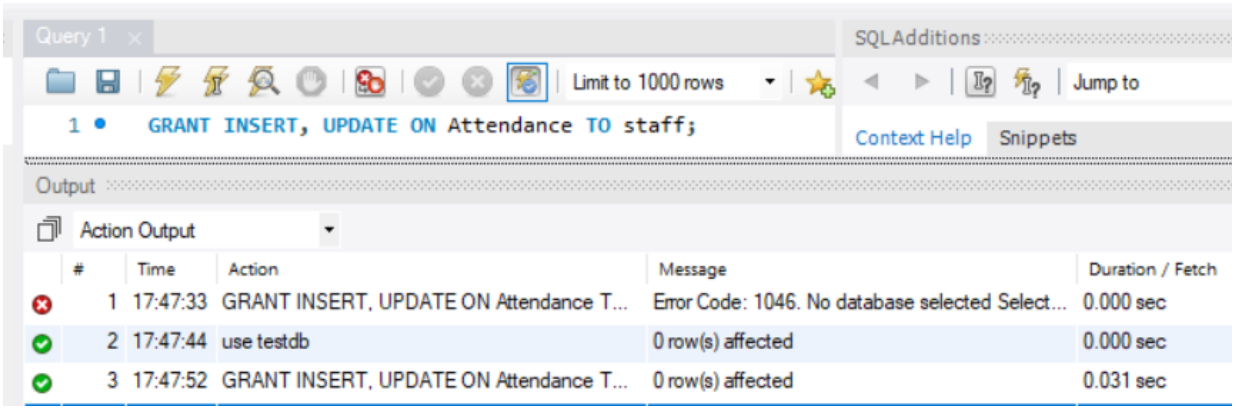
Database Security:

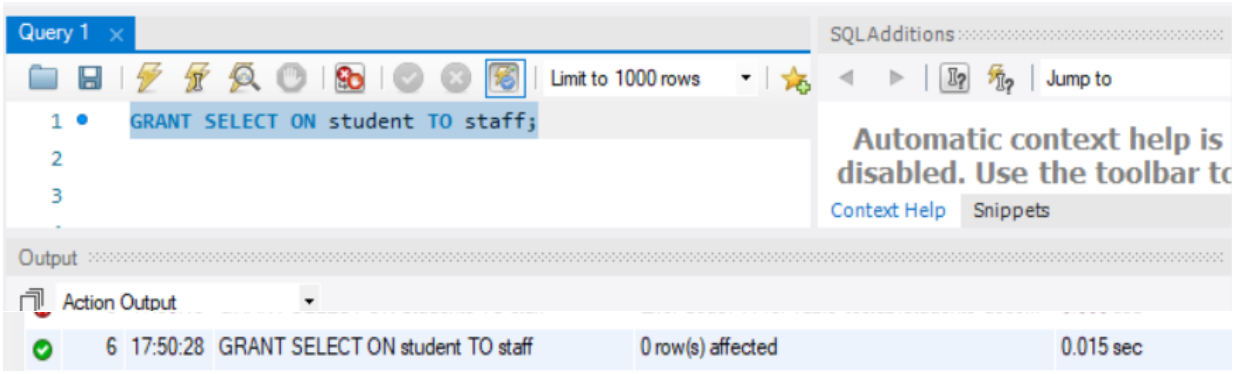


Admin - Full privileges (CREATE, DROP, GRANT).



Staff/Teacher - INSERT/UPDATE on Attendance/Marks, SELECT on Students





Student - SELECT only on their own Profile/Result