INFORMATION SYSTEMS AND DATABASES
GROUP ASSIGNMENT

Group Number: THUR 3 30 Group 2

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Password: !Groupproject3

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Contents

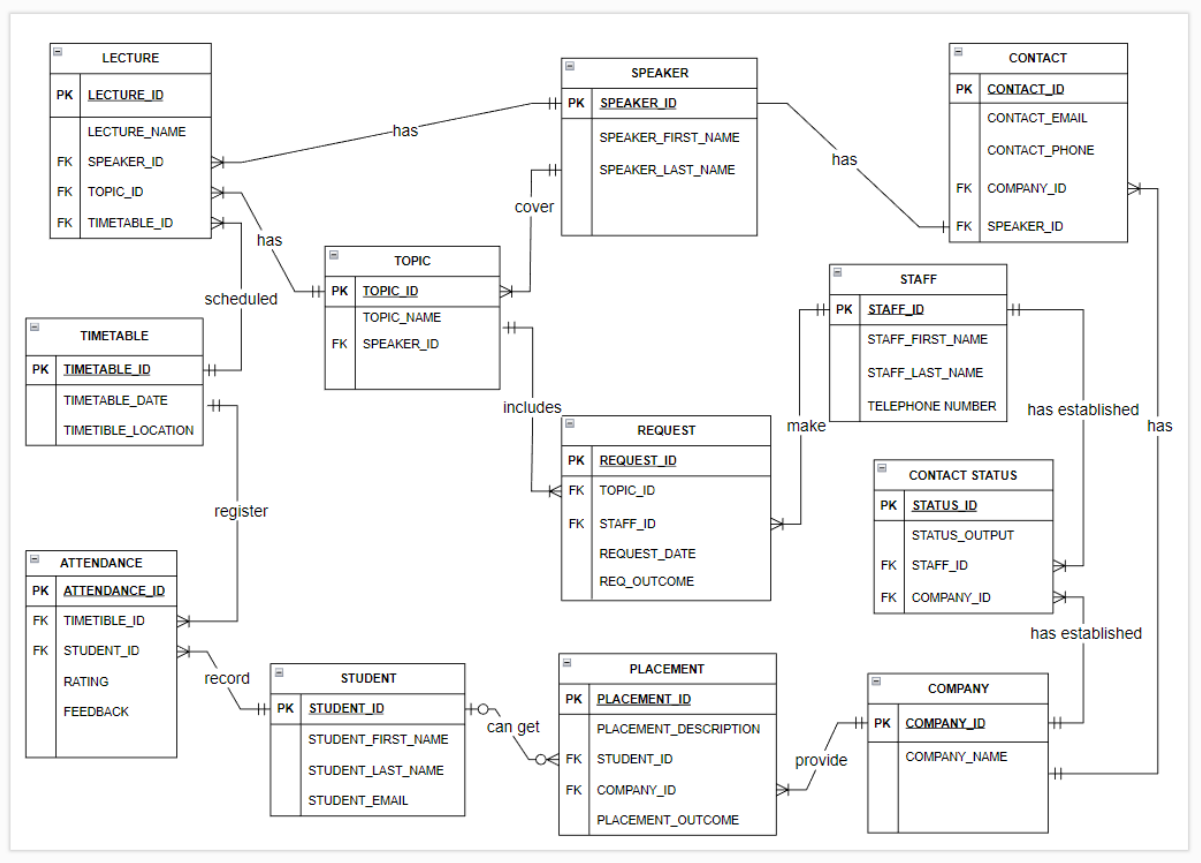
Introduction:

Our group has been assigned to create database for the South London University for managing their external associates. We designed the database based on the needs of the university and management. We have suggested some security measures that will enhance the efficiency of the system. Alternatively, we suggested different type of database technology which we described briefly.

Assumptions/business rules:

1. A speaker is free to organize one or more lectures.
2. Since the university is managing the guest lectures, we only need one timetable to schedule them.
3. One or many students can attend one or many lectures scheduled on the timetable which justifies the need for the link entity called *Attendance*. Also, as per customer requirement, we add the *rating* and *feedback* attributes which are related to the students that have attended a specific lecture.
4. Students can participate in one or many placement jobs and since the company can provide one or many placement jobs, we needed a link entity to dissolve the many-to-many relationships.
5. To avoid any confusion between staff and the company, the creation of a *Contact status* entity is necessary. So, we assume that many staff members can represent many companies and many companies can be contacted by many members of staff.
6. We assume speakers are not associated with any companies; even if they are associated with one, it's irrelevant. Because the speaker's purpose is to provide lectures, while the purpose of companies is to provide placements to the students.
7. One or many staff members can put in a request for one or many topics so we create the linked entity *Request* where one staff member can have many requests and a specific topic can be requested one or many times which dissolves the relationship to two 'one to many'.
8. We created the *Contact* entity to store information for speakers and companies in case we need to contact for future guest lectures or re-run a specific lecture without worrying about losing any contacts.
9. As this database is separate from the regular university database, the staff contact details are not stored directly but on another database.
10. The head of the school has no responsibility or privilege to add, change or delete anything from the database.
11. The timetable will store lectures in a specific week so when the students go to check the lectures, they check by month not by week as the school sees fit.
12. The supervisor for the project is a member of staff, not a different person which explains the absence of a supervisor attribute.
13. For security reasons, access to the database will be limited to and only to the admin, students, marketing managers and Staff members.
14. Feedback and Ratings best describe the student's opinion of the lecture. 1 being bad, 10 being amazing and students are encouraged to leave small feedback to help the school better choose its speakers for future lectures for certain topics.
15. Students can only view their lectures and placements details in the database, no more than that.
16. The database will make sure to identify the students that have a placement from those that don't.
17. No topic can be discussed in two lectures each week. If the speaker wanted to do more than one lecture, he can but for different topics.
18. The school is launching this project with an above-average budget. To ensure that everything is safe, an HTTPS proxy server will be set up accompanied by firewalls and data encryption protocols.
19. A staff member/supervisor can manage multiple student placements at the same time but as the school requested the student is only bound to one supervisor.

ER Diagram


LECTURE
PK LECTURE_ID
LECTURE_NAME
FK SPEAKER_ID
FK TOPIC_ID
FK TIMETABLE_ID
SPEAKER
PK SPEAKER_ID
SPEAKER_FIRST_NAME
SPEAKER_LAST_NAME
CONTACT
PK CONTACT_ID
CONTACT_EMAIL
CONTACT_PHONE
FK COMPANY_ID
FK SPEAKER_ID
has
has
has
cover
has
scheduled
TOPIC
PK TOPIC_ID
TOPIC_NAME
FK SPEAKER_ID
STAFF
PK STAFF_ID
STAFF_FIRST_NAME
STAFF_LAST_NAME
TELEPHONE NUMBER
TIMETABLE
PK TIMETABLE_ID
TIMETABLE_DATE
TIMETIBLE_LOCATION
includes
REQUEST
PK REQUEST_ID
FK TOPIC_ID
FK STAFF_ID
REQUEST_DATE
REQ_OUTCOME
make
has established
has
CONTACT STATUS
PK STATUS_ID
STATUS_OUTPUT
FK STAFF_ID
FK COMPANY_ID
register
ATTENDANCE
PK ATTENDANCE_ID
FK TIMETIBLE_ID
FK STUDENT_ID
RATING
FEEDBACK
has established
record
STUDENT
PK STUDENT_ID
STUDENT_FIRST_NAME
STUDENT_LAST_NAME
STUDENT_EMAIL
can get
PLACEMENT
PK PLACEMENT_ID
PLACEMENT_DESCRIPTION
FK STUDENT_ID
FK COMPANY_ID
PLACEMENT_OUTCOME
provide
COMPANY
PK COMPANY_ID
COMPANY_NAME

Entity specification:

ENTITY NAME: STUDENT
ENTITY DESCRIPTION: STORES DATA OF STUDENTS
RELATIONSHIPS:
ONE TO MANY WITH PLACEMENT
ONE TO MANY WITH ATTENDANCE

Attribute	Data type and width	Status*	Validation	Example of input and other relevant info
STUDENT_ID	NUMBER(8,0)	PK		57411863
STUDENT_FIRST_NAME	VARCHAR2(10)	NN		Boris
STUDENT_LAST_NAME	VARCHAR2(10)	NN		Johnson
STUDENT_EMAIL	VARCHAR2(20)	NN		student0001@uni.com

ENTITY NAME: SPEAKER
ENTITY DESCRIPTION: STORES THE DATA OF SPEAKERS
RELATIONSHIP:
ONE TO MANY WITH LECTURE
ONE TO ONE WITH CONTACT
ONE TO MANY WITH TOPIC

Attribute	Data type and width	Status*	Validation	Example of input and other relevant info
SPEAKER_ID	VARCHAR2(6)	PK		SPK001
SPEAKER_FIRST_NAME	VARCHAR2(20)	NN		Ivan
SPEAKER_LAST_NAME	VARCHAR2(20)	NN		Maksimov

ENTITY NAME: STAFF
ENTITY DESCRIPTION: STORES DATA OF STAFF MEMBERS
RELATIONSHIPS:
ONE TO MANY WITH CONTACTSTATUS
ONE TO MANY WITH REQUEST

Attribute	Data type and width	Status*	Validation	Example of input and other relevant info
STAFF_ID	VARCHAR2(4)	PK		A001
STAFF_FIRST_NAME	VARCHAR2(10)	NN		Dancho
STAFF_LAST_NAME	VARCHAR2(10)	NN		Hasanov
TELEPHONE_NUMBER	NUMBER(12,0)	NN		123456789101

ENTITY NAME: TOPIC
ENTITY DESCRIPTION: STORES DATA OF TOPICS
RELATIONSHIP:
ONE TO MANY WITH SPEAKER
ONE TO MANY WITH REQUEST
ONE TO MANY WITH LECTURE

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and other relevant info**
TOPIC_ID	VARCHAR2(6)	PK		TOP001
TOPIC_NAME	VARCHAR2(35)	NN		Databases And Algorithms In The Data Communications
SPEAKER_ID	VARCHAR2(6)	NN		SPK001

ENTITY NAME: TIMETABLE
ENTITY DESCRIPTION: COINTAINS THE INFO OF FUTURE LECTURES, ACCESSED BY STUDENTS
RELATIONSHIPS:
ONE TO MANY WITH LECTURE
ONE TO MANY WITH ATTENDANCE

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and Any other relevant info**
TIMETABLE_ID	NUMBER(4,0)	PK		0100
TIMETABLE_DATE	VARCHAR2(20)	NN		10-FEB-2022 10:00
TIMETABLE_LOCATION	VARCHAR2(20)	NN	FLOOR, ROOM	FLOOR2/ROOM6

ENTITY NAME: COMPANY
ENTITY DESCRIPTION: STORES DATA OF COMPANIES
RELATIONSHIPS:
ONE TO MANY WITH PLACEMENT
ONE TO MANY WITH CONTACT
ONE TO MNY WITH CONTACTSTATUS

Attribute	**Data Type and Width**	**Status***	**Validation**	**Example of input and Other relevant info**
COMPANY_ID	VARCHAR2(6)	PK		COM001
COMPANY_NAME	VARCHAR2(30)	NN		Google Inc

ENTITY NAME: REQUEST
ENTITY DESCRIPTION: STORES DATA OF REQUESTED TOPIC BY STAFF
RELATIONSHIP:
ONE TO MANY WITH STAFF
ONE TO MANY WITH TOPIC

Attribute	**Data type and Width**	**Status***	**Validation**	**Example of input and Relevant info**
REQUEST_ID	VARCHAR2(4)	PK		R001
TOPIC_ID	VARCHAR2(6)	FK		TOP001
STAFF_ID	VARCHAR2(4)	FK		L012
REQUEST_DATE	DATE	NN		10-FEB-2022
REQ_OUTCOME	VARCHAR2(10)	NN	Input limited to: • Accepted • Pending • Declined	Accepted

ENTITY NAME: ATTENDANCE
ENTITY DESCRIPTION: STORES ATTENDANCE OF STUDENTS AND FEEDBACK ON A SPECIFIC LECTURE
RELATIONSHIPS:
ONE TO MANY WITH TIMETABLE
ONE TO MANY WITH STUDENT

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and other relevant info**
ATTENDANCE_ID	VARCHAR2(6)	PK		ATT001
TIMETABLE_ID	NUMBER(4,0)	FK		0100
STUDENT_ID	NUMBER(8,0)	FK		00010002
RATING	NUMBER(2,0)	NN	Input Limited From 0 to 11 (0 Unacceptable, 1 Poor, .., 10 Excellent, 11 Above expectation)	10
FEEDBACK	VARCHAR2(300)	NN		This is a feedback

ENTITY NAME: CONTACT STATUS
ENTITY DESCRIPTION: CONTAINS DATA OF CONTACTS BETWEEN STAFF AND COMPANIES
RELATIONSHIP:
ONE TO MANY WITH COMPANY
ONE TO MANY WITH STAFF

Attribute	**Data width and type**	**Status***	**Validation**	**Example of input and Other relevant info**
STATUS_ID	VARCHAR2(6)	PK		STA01
STATUS_OUTPUT	VARCHAR2(8)	NN	Input limited to: • Accepted • Pending • Declined	Accepted
STAFF_ID	VARCHAR2(4)	FK		J010
COMPANY_ID	VARCHAR2(6)	FK		COM001

ENTITY NAME: CONTACT
ENTITY DESCRIPTION: STORES THE DATA OF CONTACTS
RELATIONSHIP:
ONE TO MANY WITH COMPANY
ONE TO ONE WITH SPEAKER

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and other relevant info**
CONTACT_ID	VARCHAR2(6)	PK		CON001
CONTACT_EMAIL	VARCHAR2(30)	NN		private.email@speaker.com
CONTACT_PHONE	NUMBER(12,0)	NN		0789138506
COMPANY_ID	VARCHAR2(6)	FK		COM001
SPEAKER_ID	VARCHAR2(6)	FK		SPK001

ENTITY NAME: PLACEMENT
ENTITY DESCRIPTION: STORES DATA OF STUDENT PLACEMENT IN A COMPANY
RELATIONSHIPS:
ONE TO MANY WITH COMPANY
ONE TO MANY WITH STUDENT

Attribute	Data Type and Width	Status*	Validation	Example of input and Other relevant info
PLACEMENT_ID	VARCHAR2(6)	PK		PLC010
PLACEMENT_DESCRIPTION	VARCHAR2(25)	NN	Input limited to: • Internship • Job experience • Live project	Internship
STUDENT_ID	NUMBER(8)	FK		00010002
COMPANY_ID	VARCHAR2(6)	FK		COM001
PLACEMENT_OUTCOME	VARCHAR2(12)	NN	Input limited to: • Successful • Failed	Successful

ENTITY NAME: LECTURE
ENTITY DESCRIPTION: STORES ALL LECTURES MADE BY SPEAKERS
RELATIONSHIPS:
ONE TO MANY WITH SPEAKER
ONE TO MANY WITH TOPIC
ONE TO MANY WITH TIMETABLE

Attribute	Data type and width	Status*	Validation	Example of input and any other relevant info
LECTURE_ID	VARCHAR2(6)	PK		LEC001
LECTURE_NAME	VARCHAR2(30)	NN		Database Design and Management
SPEAKER_ID	VARCHAR2(6)	FK		SPK001
TOPIC_ID	VARCHAR2(6)	FK		TOP006
TIMETABLE_ID	NUMBER(4,0)	FK		0100

Script:

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--------------------------------------

--  DDL for Table STUDENT

--------------------------------------

CREATE TABLE "STUDENT"
    (
      "STUDENT_ID"         NUMBER(8,0),
      "STUDENT_FIRST_NAME" VARCHAR2(10),
      "STUDENT_LAST_NAME"  VARCHAR2(10),
      "STUDENT_EMAIL"      VARCHAR2(30),
      PRIMARY KEY ("STUDENT_ID")
    )

--------------------------------------

--  DDL for Table STAFF

--------------------------------------

CREATE TABLE "STAFF"
    (
      "STAFF_ID"         VARCHAR2(4),
      "STAFF_FIRST_NAME" VARCHAR2(10),
      "STAFF_LAST_NAME"  VARCHAR2(10),
      "TELEPHONE_NUMBER" NUMBER(12,0),
      PRIMARY KEY ("STAFF_ID")
    )

--------------------------------------

--  DDL for Table SPEAKER

--------------------------------------

CREATE TABLE "SPEAKER"
    (
      "SPEAKER_ID"         VARCHAR2(6),
      "SPEAKER_FIRST_NAME" VARCHAR2(20),
      "SPEAKER_LAST_NAME"  VARCHAR2(20),
      PRIMARY KEY ("SPEAKER_ID")
    )
--------------------------------------

--  DDL for Table TOPIC

--------------------------------------

CREATE TABLE "TOPIC"
    (
      "TOPIC_ID"   VARCHAR2(6),
      "TOPIC_NAME" VARCHAR2(35) NOT NULL ENABLE,
      "SPEAKER_ID" VARCHAR2(6),
      PRIMARY KEY ("TOPIC_ID"),
      FOREIGN KEY ("SPEAKER_ID") REFERENCES "SPEAKER" ("SPEAKER_ID")
    )

--------------------------------------

--  DDL for Table TIMETABLE
```

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CREATE TABLE "TIMETABLE"
    (
      "TIMETABLE_ID"       NUMBER(4,0),
      "TIMETABLE_DATE"     VARCHAR2(20),
      "TIMETABLE_LOCATION" VARCHAR2(20),
      PRIMARY KEY ("TIMETABLE_ID")
    )
-------------------------------------

--  DDL for Table COMPANY

-------------------------------------



CREATE TABLE "COMPANY"
    (
      "COMPANY_ID"  VARCHAR2(6),
      "COMPANY_NAME" VARCHAR2(30),
      PRIMARY KEY ("COMPANY_ID")
    )
-------------------------------------

--  DDL for Table REQUEST

-------------------------------------

CREATE TABLE "REQUEST"
    (
      "REQUEST_ID"   VARCHAR2(4),
      "TOPIC_ID"     VARCHAR2(6),
      "STAFF_ID"     VARCHAR2(4),
      "REQUEST_DATE" DATE,
      "REQ_OUTCOME"   VARCHAR2(10),
      PRIMARY KEY ("REQUEST_ID"),
      FOREIGN KEY ("STAFF_ID") REFERENCES "STAFF" ("STAFF_ID"),
      FOREIGN KEY ("TOPIC_ID") REFERENCES "TOPIC" ("TOPIC_ID"),
            CONSTRAINT CK_REQUEST_OUTCOME CHECK (REQ_OUTCOME IN
('Accepted','Pending','Declined'))
    )
-------------------------------------

--  DDL for Table ATTENDANCE

-------------------------------------

CREATE TABLE "ATTENDANCE"
    (
      "ATTENDANCE_ID" VARCHAR2(6),
      "TIMETABLE_ID"  NUMBER(4,0),
      "STUDENT_ID"    NUMBER(8,0),
      "RATING"        NUMBER(2,0),
      "FEEDBACK"      VARCHAR2(300),
      PRIMARY KEY ("ATTENDANCE_ID"),
      FOREIGN KEY ("TIMETABLE_ID") REFERENCES "TIMETABLE" ("TIMETABLE_ID"),
      FOREIGN KEY ("STUDENT_ID") REFERENCES "STUDENT" ("STUDENT_ID"),
            CONSTRAINT ck_ATTENDANCE_RATING CHECK (RATING BETWEEN 0 AND 11)
    )
-------------------------------------

--  DDL for Table CONTACT STATUS
```

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CREATE TABLE "CONTACT_STATUS"
    (
      "STATUS_ID"     VARCHAR2(6),
      "STATUS_OUTPUT" VARCHAR2(8),
      "STAFF_ID"      VARCHAR2(4),
      "COMPANY_ID"    VARCHAR2(6),
      PRIMARY KEY ("STATUS_ID"),
      FOREIGN KEY ("STAFF_ID") REFERENCES "STAFF" ("STAFF_ID"),
      FOREIGN KEY ("COMPANY_ID") REFERENCES "COMPANY" ("COMPANY_ID"),
            CONSTRAINT CK_CONTACT_STATUS_OUTPUT CHECK (STATUS_OUTPUT IN
('Accepted','Pending','Declined'))
    )
-------------------------------------

--  DDL for Table CONTACT

-------------------------------------

CREATE TABLE "CONTACT"
    (
      "CONTACT_ID"    VARCHAR2(6),
      "CONTACT_EMAIL" VARCHAR2(30),
      "CONTACT_PHONE" NUMBER(12,0),
      "COMPANY_ID"    VARCHAR2(6),
      "SPEAKER_ID"    VARCHAR2(6),
      PRIMARY KEY ("CONTACT_ID"),
      FOREIGN KEY ("SPEAKER_ID") REFERENCES "SPEAKER" ("SPEAKER_ID"),
      FOREIGN KEY ("COMPANY_ID") REFERENCES "COMPANY" ("COMPANY_ID")
    )
-------------------------------------
--  DDL for Table LECTURE
-------------------------------------
CREATE TABLE "LECTURE"
    (
      "LECTURE_ID"   VARCHAR2(6),
      "LECTURE_NAME" VARCHAR2(30),
      "SPEAKER_ID"   VARCHAR2(6),
      "TOPIC_ID"     VARCHAR2(6),
      "TIMETABLE_ID" NUMBER(4,0),
      PRIMARY KEY ("LECTURE_ID"),
      FOREIGN KEY ("SPEAKER_ID") REFERENCES "SPEAKER" ("SPEAKER_ID"),
      FOREIGN KEY ("TOPIC_ID") REFERENCES "TOPIC" ("TOPIC_ID"),
      FOREIGN KEY ("TIMETABLE_ID") REFERENCES "TIMETABLE" ("TIMETABLE_ID")
    )

-------------------------------------
--  DDL for Table PLACEMENT
-------------------------------------
CREATE TABLE "PLACEMENT"
    (
      "PLACEMENT_ID"          VARCHAR2(6),
      "PLACEMENT_DESCRIPTION" VARCHAR2(25),
      "STUDENT_ID"            NUMBER(8),
      "COMPANY_ID"            VARCHAR2(6),
      "PLACEMENT_OUTCOME"     VARCHAR(12),
      PRIMARY KEY ("PLACEMENT_ID"),
      FOREIGN KEY ("STUDENT_ID") REFERENCES "STUDENT" ("STUDENT_ID"),
      FOREIGN KEY ("COMPANY_ID") REFERENCES "COMPANY" ("COMPANY_ID"),
            CONSTRAINT CK_PLACEMENT_OUTCOME CHECK (PLACEMENT_OUTCOME IN
('Successful','Ongoing','Failed'))
```

```
    )
/
Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(57411863,'Nathaniel','Wallace','57411863@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(93054215,'Isabelle','Montgomery','93054215@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(71753738,'Eliana','Barrett','71753738@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(53521024,'Matthias','Reynolds','53521024@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(98059440,'Aaliyah','Porter','98059440@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(98641346,'Emilia','Edwards','98641346@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(26645692,'Landon','Davidson','26645692@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(30642894,'Kaitlyn','Cooper','30642894@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(67481209,'Levi','Riley','67481209@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(90321745,'Scarlett','Powell','90321745@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(12654398,'Graham','Hamilton','12654398@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(43890567,'Mia','Perez','43890567@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(78932104,'Jaxon','Jenkins','78932104@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(50216793,'Anastasia','Greene','50216793@student.uwl.com');
```

```
Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(84950673,'Cooper','Harris','84950673@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(21986437,'Piper','Gibson','21986437@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(35170826,'Santiago','Gomez','35170826@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(61780593,'Ava','Wood','61780593@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(92741056,'Wesley','Carter','92741056@student.uwl.com');

Insert into STUDENT
(STUDENT_ID,STUDENT_FIRST_NAME,STUDENT_LAST_NAME,STUDENT_EMAIL) values
(74513978,'Olivia','Wild','74513978@student.uwl.com');

/

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('A001','Stanley','Edwards',7545677128);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('B002','Ibrahim','Rahman',7535877156);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('C003','Michael','Jackson',3014968305);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('D004','Jason','Malcovich',9708345126);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('E005','Alice','Biorn',4236987405);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('F006','Ava','Cooper',5087431269);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('G007','Maximilian','Pegasus',9376408549);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('H008','Seto','Kaiba',1897032654);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('I009','Yo','Asakura',2856712597);
```

```
Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('J010','Tao','Ren',4531897756);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('K011','Jan','Batist',5799842654);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('L012','Josepe','Stone',4985761245);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('M013','Tamara','Black',2584123789);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('N014','John','Smith',2567898423);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('O015','Justina','Popovich',3554879185);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('P016','Ivan','Karamazov',1589782246);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('Q017','Paulina','Borkowska',4890929230);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('R018','Ana-Laura','Radu',9654604887);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('S019','Nikolay','Sokolov',1356097507);

Insert into STAFF
(STAFF_ID,STAFF_FIRST_NAME,STAFF_LAST_NAME,TELEPHONE_NUMBER) values
('T020','Nina','Mikhailova',5992645097);

/

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK015','John','Conner');

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK002','John','Doe');

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK001','Jane','Smith');

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK011','Sara','Williams');

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK006','Mike','Davis');

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK013','Karen','Wilson');
```

```
Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK005','Dave','Brown');

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK007','Linda','Jones');

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK014','Tom','Taylor');

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK010','Carla','Lee');

Insert into SPEAKER (SPEAKER_ID,SPEAKER_FIRST_NAME,SPEAKER_LAST_NAME) values
('SPK004','Bob','Johnson');

/

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP001','Mathematics','SPK015');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP002','English','SPK011');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP003','Programming Languages','SPK006');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP004','History','SPK002');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP005','Biology','SPK001');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP006','Databases','SPK013');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP007','Chemistry','SPK005');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP008','Psychology','SPK007');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP009','Science','SPK014');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP010','Nursing','SPK004');

Insert into TOPIC (TOPIC_ID,TOPIC_NAME,SPEAKER_ID) values
('TOP011','Astronomy','SPK010');

/

Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0100,'10-FEB-2023 14:30','FLOOR3/ROOM18');

Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0200,'06-MARCH-2023 11:00','FLOOR1/ROOM4');

Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0300,'12-APR-2023 10:00','FLOOR3/ROOM18');

Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0400,'25-MAY-2023 15:30','FLOOR3/ROOM18');
```

```
Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0500,'15-FEB-2023 13:00','FLOOR2/ROOM5');

Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0600,'17-MAY-2023 11:30','FLOOR1/ROOM17');

Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0700,'12-APR-2023 13:30','FLOOR2/ROOM6');

Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0800,'11-APR-2023 18:00','FLOOR4/ROOM8');

Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0900,'28-MARCH-2023 09:00','FLOOR2/ROOM6');

Insert into TIMETABLE (TIMETABLE_ID,TIMETABLE_DATE,TIMETABLE_LOCATION)
values (0110,'06-JUN-2023 13:00','FLOOR2/ROOM6');

/

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP12','SoftCorp');

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP03','Acme
Corporation');

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP02','Globex
Industries');

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP01','Initech
Corporation');

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP05','Stark
Industries');

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP08','Wayne
Enterprises');

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP11','Oscorp
Industries');

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP06','Umbrella
Corporation');

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP09','Weyland-
Yutani Corporation');

Insert into COMPANY (COMPANY_ID,COMPANY_NAME) values ('COMP04','Tyrell
Corporation');

/

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R001','TOP005','L012',to_date('12-MAY-23','DD-MON-RR'),'Accepted');


Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R002','TOP001','J010',to_date('10-OCT-23','DD-MON-RR'),'Declined');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R003','TOP004','F006',to_date('03-MARCH-23','DD-MON-
RR'),'Declined');
```

```
Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R004','TOP001','E005',to_date('15-FEB-23','DD-MON-RR'),'Declined');


Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R005','TOP002','N014',to_date('17-APR-23','DD-MON-RR'),'Pending');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R006','TOP003','K011',to_date('18-JAN-23','DD-MON-RR'),'Pending');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R007','TOP006','M013',to_date('15-APR-23','DD-MON-RR'),'Accepted');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R008','TOP007','P016',to_date('01-MAY-23','DD-MON-RR'),'Declined');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R009','TOP008','I009',to_date('14-FEB-23','DD-MON-RR'),'Accepted');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R010','TOP009','D004',to_date('18-NOV-23','DD-MON-RR'),'Declined');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R011','TOP010','E005',to_date('05-DEC-23','DD-MON-RR'),'Accepted');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R012','TOP005','C003',to_date('15-OCT-23','DD-MON-RR'),'Pending');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R013','TOP007','S019',to_date('01-JUNE-23','DD-MON-
RR'),'Accepted');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R014','TOP011','T020',to_date('23-JAN-23','DD-MON-RR'),'Pending');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R015','TOP003','L012',to_date('17-FEB-23','DD-MON-RR'),'Accepted');


Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R016','TOP004','G007',to_date('21-MARCH-23','DD-MON-
RR'),'Pending');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R017','TOP010','Q017',to_date('30-APR-23','DD-MON-RR'),'Pending');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R018','TOP009','I009',to_date('14-MAY-23','DD-MON-RR'),'Declined');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R019','TOP008','A001',to_date('18-DEC-23','DD-MON-RR'),'Pending');

Insert into REQUEST (REQUEST_ID,TOPIC_ID,STAFF_ID,REQUEST_DATE,REQ_OUTCOME)
values ('R020','TOP002','H008',to_date('30-SEP-23','DD-MON-RR'),'Declined');


/

Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT020',0100,57411863,10,'It was an excellent lecture');
```

```
Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT030',0200,93054215,9,'It was an very good lecture, but it could be
improved upon student interaction');

Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT040',0300,71753738,8,'It was an good lecture');

Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT050',0400,53521024,7,'It was an good lecture but the teacher could be
more accurate on teaching');

Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT060',0500,98059440,2,'It was an poor lecture because the teacher was
explaining too generic and boring ');

Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT070',0600,98641346,9,'It was an excellent lecture');

Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT080',0700,26645692,10,'It was an excellent lecture');

Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT090',0800,67481209,1,'It was total disaster replacement tutor did not
what was she teaching');

Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT085',0900,90321745,10,'It was an excellent lecture');

Insert into ATTENDANCE
(ATTENDANCE_ID,TIMETABLE_ID,STUDENT_ID,RATING,FEEDBACK) values
('ATT088',0110,12654398,9,'It was good to be good bad to be bad');

/

Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA01','Accepted','J010','COMP12');

Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA02','Declined','L012','COMP03');

Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA03','Declined','F006','COMP02');

Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA04','Pending','E005','COMP01');

Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA05','Accepted','N014','COMP05');

Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA06','Accepted','K011','COMP08');

Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA07','Pending','M013','COMP11');
```

```
Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA08','Accepted','P016','COMP06');

Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA09','Declined','I009','COMP09');

Insert into CONTACT_STATUS(STATUS_ID,STATUS_OUTPUT,STAFF_ID,COMPANY_ID)
values ('STA99','Accepted','D004','COMP04');

/

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON01', 'john.conner@email.com', '0789138506',
'COMP12', 'SPK015');

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON02', 'jane.smith@hotmail.com', '0789567812',
'COMP03', 'SPK001');

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON03', 'mike.davis@gmail.com', '0712345678', 'COMP02',
'SPK006');

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON04', 'karen.wilson@yahoo.com', '0798765432',
'COMP01', 'SPK013');

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON05', 'dave.brown@outlook.com', '0723456789',
'COMP05', 'SPK005');

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON06', 'linda.jones@gmail.com', '0790123456',
'COMP08', 'SPK007');

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON07', 'tom.taylor@yahoo.com', '0712345678', 'COMP11',
'SPK014');

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON08', 'carla.lee@hotmail.com', '0798765432',
'COMP06', 'SPK010');

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON09', 'bob.johnson@email.com', '0723456789',
'COMP09', 'SPK004');

INSERT INTO CONTACT (CONTACT_ID, CONTACT_EMAIL, CONTACT_PHONE, COMPANY_ID,
SPEAKER_ID) VALUES ('CON10', 'john.doe@yahoo.com', '0790123456', 'COMP04',
'SPK002');

/

Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC001','Database Design and Management','SPK013','TOP006',0100);

Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC002','Learn relational database','SPK013','TOP006',0300);
```

```
Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC003','How to Learn Database Design','SPK013','TOP006',0400);

Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC004','Featherweight Java','SPK006','TOP003',0200);

Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC005','Cartesian Geometry','SPK015','TOP001',0500);

Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC006','The Evolution of Galaxies','SPK010','TOP011',0700);

Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC007','The Birth of Stars','SPK010','TOP011',0900);

Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC008','Ancient Egypt','SPK002','TOP004',0600);

Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC009','Genetic Engineering','SPK001','TOP005',0800);

Insert into LECTURE
(LECTURE_ID,LECTURE_NAME,SPEAKER_ID,TOPIC_ID,TIMETABLE_ID) values
('LEC010','Emotional adjustment','SPK007','TOP008',0110);

/

Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC001','Job experience',93054215,'COMP12','Successful');

Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC002','Live Project',71753738,'COMP03','Failed');

Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC003','Internship',53521024,'COMP02','Successful');

Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC004','Live Project',98059440,'COMP01','Successful');

Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC005','Job experience',98641346,'COMP05','Failed');

Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC006','Job experience',26645692,'COMP08','Successful');

Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC007','Internship',30642894,'COMP11','Failed');
```

```
Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC008','Job experience',67481209,'COMP06','Successful');

Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC009','Live Project',12654398,'COMP09','Failed');

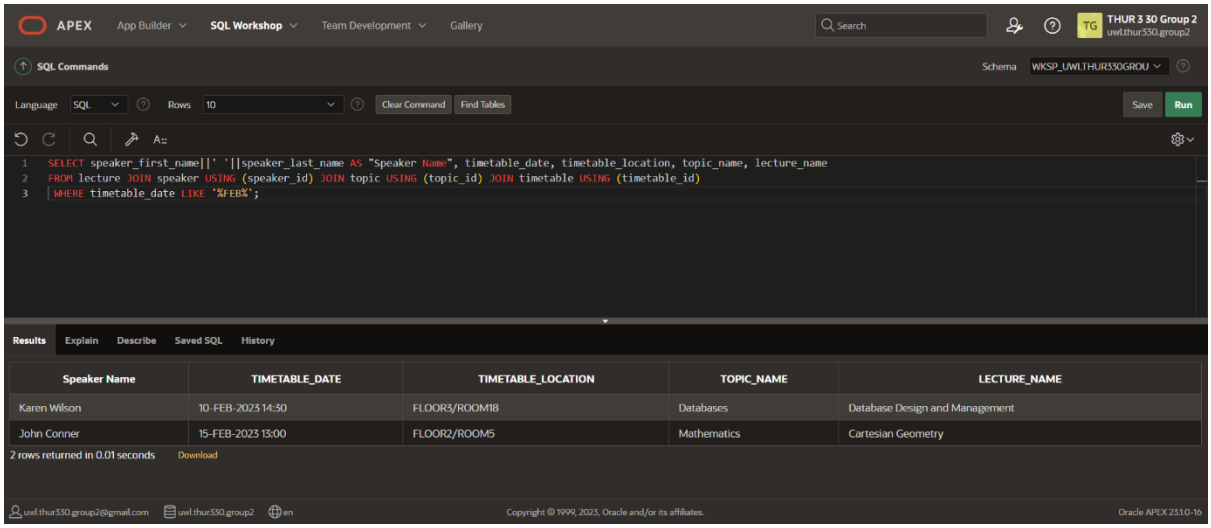
Insert into PLACEMENT
(PLACEMENT_ID,PLACEMENT_DESCRIPTION,STUDENT_ID,COMPANY_ID,PLACEMENT_OUTCOME)
values ('PLC010','Internship',84950673,'COMP04','Failed');
```

Queries :

1st query

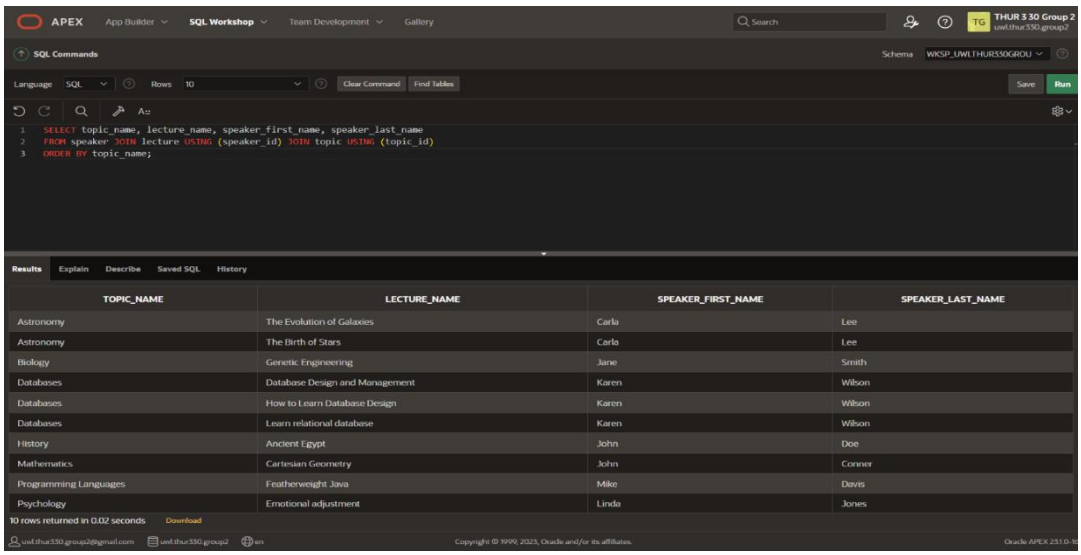
One of the main issues of the university was the fact that there wasn't a timetable where staff or students could access to check if any lecture has been arranged for a specific topic.

In context, to solve this issue the next query select specific lectures during a specific determined month:



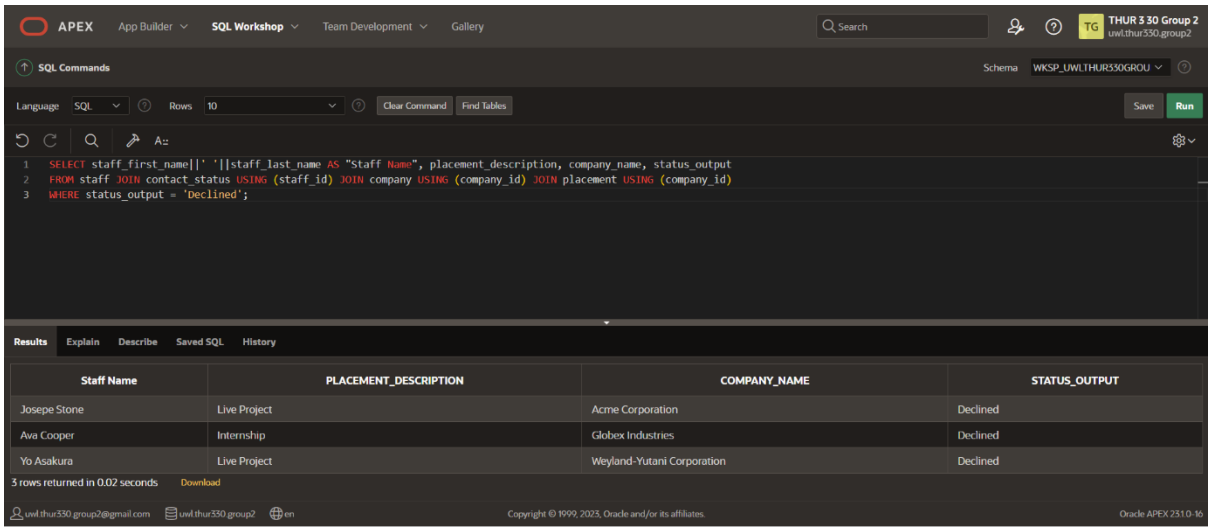
2nd query

Another issue was the repetitiveness of a topic already scheduled in same week.



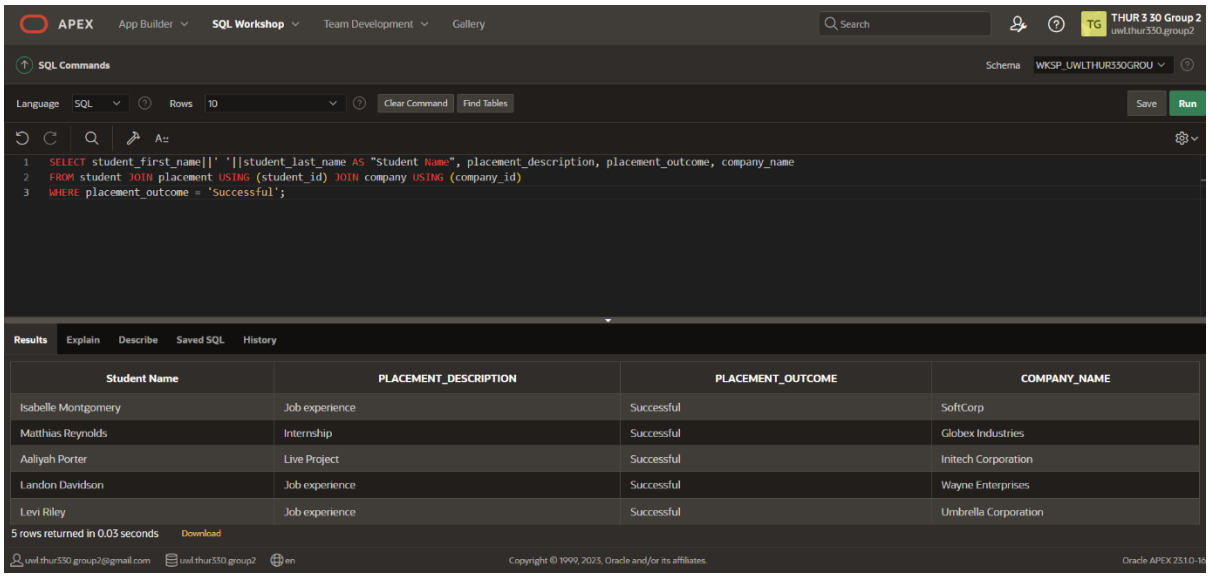
3rd query

Another problem was keeping records of prior contact with companies and the placements that they are offering if any.



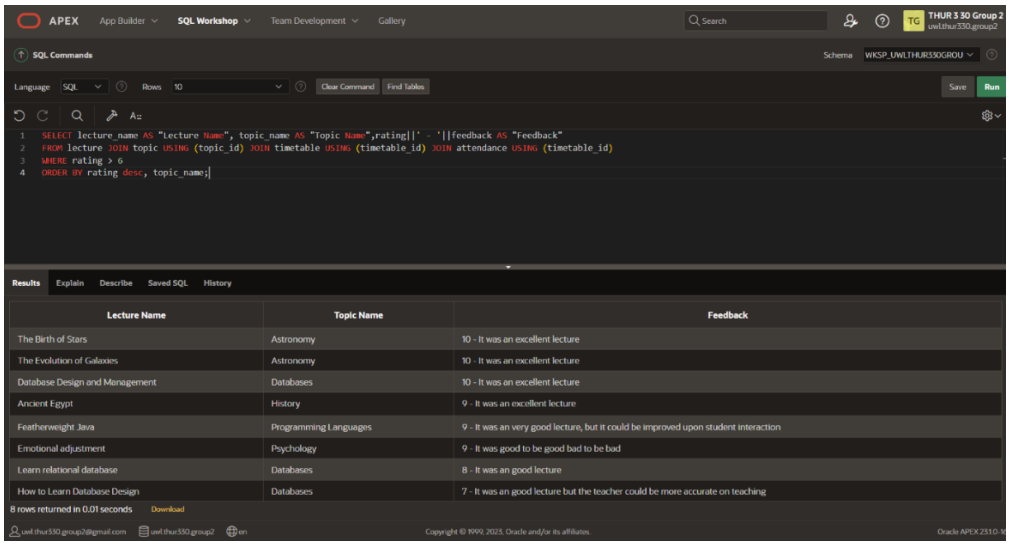
4th query

The next query provides for the marketing manager information about successfully completed live project, placements by students.



5th query

The query below helps management to make decision to whether to re-run a specific lecture based on feedback provided by the students.



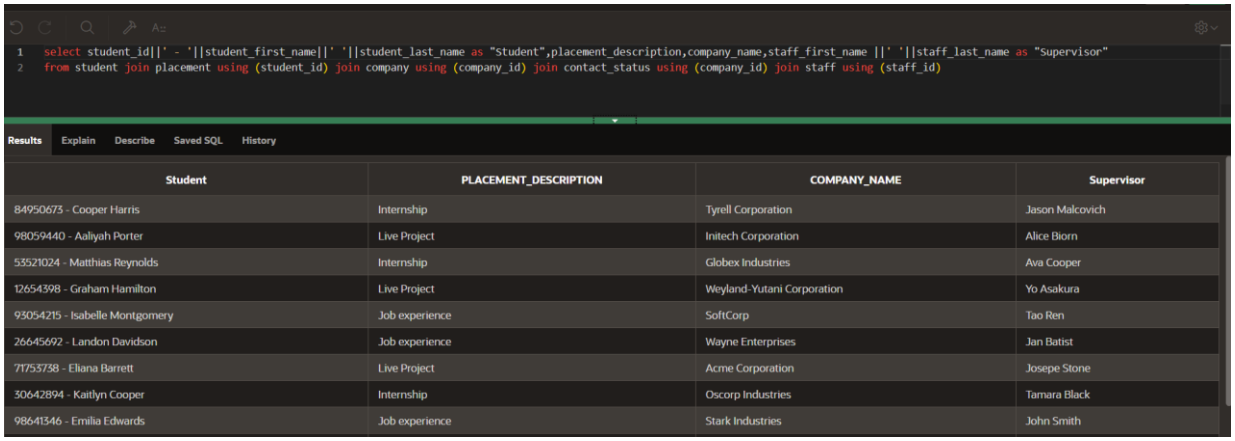
```
SELECT lecture_name AS "Lecture Name", topic_name AS "Topic Name",rating||' - '||feedback AS "Feedback"
FROM lecture JOIN topic USING (topic_id) JOIN timetable USING (timetable_id) JOIN attendance USING (timetable_id)
WHERE rating > 6
ORDER BY rating desc, topic_name;
```

Lecture Name	Topic Name	Feedback
The Birth of Stars	Astronomy	10 - It was an excellent lecture
The Evolution of Galaxies	Astronomy	10 - It was an excellent lecture
Database Design and Management	Databases	10 - It was an excellent lecture
Ancient Egypt	History	9 - It was an excellent lecture
Featherweight Java	Programming Languages	9 - It was an very good lecture, but it could be improved upon student interaction
Emotional adjustment	Psychology	9 - It was good to be good bad to be bad
Learn relational database	Databases	8 - It was an good lecture
How to Learn Database Design	Databases	7 - It was an good lecture but the teacher could be more accurate on teaching

8 rows returned in 0.01 seconds Download

6th query:

The query below shows which students has been approved for a placement in a company and their supervisors.

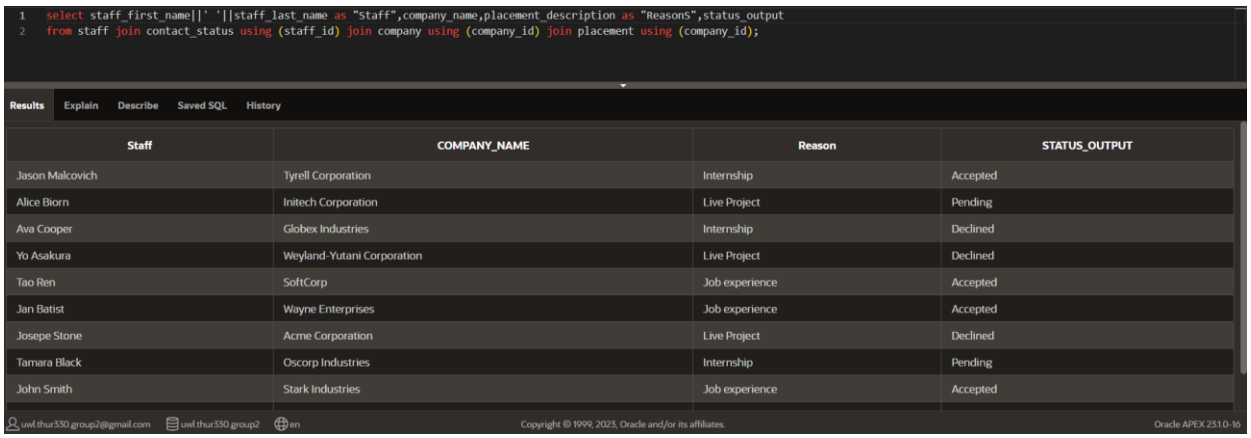


```
select student_id||' - '||student_first_name||' '||student_last_name as "Student",placement_description,company_name,staff_first_name ||' '||staff_last_name as "Supervisor"
from student join placement using (student_id) join company using (company_id) join contact_status using (company_id) join staff using (staff_id)
```

Student	PLACEMENT_DESCRIPTION	COMPANY_NAME	Supervisor
84950673 - Cooper Harris	Internship	Tyrell Corporation	Jason Malcovich
98059440 - Aaliyah Porter	Live Project	Initech Corporation	Alice Biorn
53521024 - Matthias Reynolds	Internship	Globex Industries	Ava Cooper
12654398 - Graham Hamilton	Live Project	Weyland-Yutani Corporation	Yo Asakura
93054215 - Isabelle Montgomery	Job experience	SoftCorp	Tao Ren
26645692 - Landon Davidson	Job experience	Wayne Enterprises	Jan Batist
71753738 - Eliana Barrett	Live Project	Acme Corporation	Josepe Stone
30642894 - Kaitlyn Cooper	Internship	Oscorp Industries	Tamara Black
98641346 - Emilia Edwards	Job experience	Stark Industries	John Smith

7th query

With the query below, the head of school will be able to see which staff member has been assigned to which company and the reason of contact.



```
select staff_first_name||' '||staff_last_name as "Staff",company_name,placement_description as "Reasons",status_output
from staff join contact_status using (staff_id) join company using (company_id) join placement using (company_id);
```

Staff	COMPANY_NAME	Reason	STATUS_OUTPUT
Jason Malcovich	Tyrell Corporation	Internship	Accepted
Alice Biorn	Initech Corporation	Live Project	Pending
Ava Cooper	Globex Industries	Internship	Declined
Yo Asakura	Weyland-Yutani Corporation	Live Project	Declined
Tao Ren	SoftCorp	Job experience	Accepted
Jan Batist	Wayne Enterprises	Job experience	Accepted
Josepe Stone	Acme Corporation	Live Project	Declined
Tamara Black	Oscorp Industries	Internship	Pending
John Smith	Stark Industries	Job experience	Accepted

8th query

This query is regarding about staff requesting topics and the outcome of the request including its date.

```
select staff_id||' - '||staff_first_name||' '||staff_last_name as "Staff",topic_name,request_date as "Requested on",req_outcome
from staff join request using (staff_id) join topic using (topic_id)
```

Results | Explain | Describe | Saved SQL | History

Staff	TOPIC_NAME	Requested on	REQ_OUTCOME
A001 - Stanley Edwards	Psychology	12/18/2023	Pending
C003 - Michael Jackson	Biology	10/15/2023	Pending
D004 - Jason Malcovich	Science	11/18/2023	Declined
E005 - Alice Biorn	Mathematics	02/15/2023	Declined
E005 - Alice Biorn	Nursing	12/05/2023	Accepted
F006 - Ava Cooper	History	03/03/2023	Declined
G007 - Maximilian Pegasus	History	03/21/2023	Pending
H008 - Seto Kaiba	English	09/30/2023	Declined
I009 - Yo Asakura	Psychology	02/14/2023	Accepted

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9th query

This query is regarding about the accepted request and the speaker details covering that topic.

```
select staff_id||' - '||staff_first_name||' '||staff_last_name as "Staff",topic_name,request_date as "Requested on",speaker_first_name||' '||speaker_last_name as "Speaker",contact_phone
from staff join request using (staff_id) join topic using (topic_id) join speaker using (speaker_id) join contact using (speaker_id)
where req_outcome = 'Accepted'
order by topic_name;$
```

Results | Explain | Describe | Saved SQL | History

Staff	TOPIC_NAME	Requested on	Speaker	CONTACT_PHONE
L012 - Josepe Stone	Biology	05/12/2023	Jane Smith	789567812
S019 - Nikolay Sokolov	Chemistry	06/01/2023	Dave Brown	723456789
M013 - Tamara Black	Databases	04/15/2023	Karen Wilson	798765432
E005 - Alice Biorn	Nursing	12/05/2023	Bob Johnson	723456789
L012 - Josepe Stone	Programming Languages	02/17/2023	Mike Davis	712345678
I009 - Yo Asakura	Psychology	02/14/2023	Linda Jones	790123456

6 rows returned in 0.05 seconds Download

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Securities:

Our Database lacks security, and our Head of School doesn't want this data to go into the wrong hands, we are suggesting some security measures to prevent this: Theft and fraud, loss of confidentiality/privacy/availability.

So, we will have a Database admin who will provide specific access to the database corresponding to their roles:

Figure1:

	User Roles															
	DB Admin				Marketing Manager				Staff Members				Students			
Tables	c	r	u	d	c	r	u	d	c	r	u	d	c	r	u	d
Lecture	x	x	x	x		x				x						
Timetable	x	x	x	x		x				x	x			x		
Attendance	x	x	x	x		x				x						
Student	x	x	x	x		x				x				x		
Placement	x	x	x	x		x				x				x		
Company	x	x	x	x		x				x						
Contact_status	x	x	x	x		x			x	x	x					
Staff	x	x	x	x		x				x						
Request	x	x	x	x		x			x	x	x					
Topic	x	x	x	x		x				x						
Speaker	x	x	x	x		x				x				S		
Contact	x	x	x	x		x				x						

Data Base Administrator will have full access to the database.

```
CREATE ROLE Staff; (Creates the role)

The 'Staff' role can then be granted privileges to appropriate tables:
GRANT SELECT, UPDATE (REQUEST_DATE, REQ_OUTCOME)
    ON request
    TO Staff;
```

By running the command, we will create the roles that will be assigned to the users giving them specific access to the database.

```
CREATE USER username                    CREATE USER fred1
IDENTIFIED BY password                  IDENTIFIED BY fred123
[PASSWORD EXPIRE]                       PASSWORD EXPIRE

To reset password:

ALTER USER username                     ALTER USER fred1
IDENTIFIED BY newPassword               IDENTIFIED BY wxyz
```

Running this command will create the username and password to access the database

```
GRANT : gives access privileges

GRANT {ALL | SELECT | INSERT| UPDATE | DELETE} [WITH
  GRANT OPTION]
ON {<tablename> | <viewname>}
TO {<user name>|<role>|PUBLIC}
```

By running this command will grant a particular user different privilege level, based on their roles.

By using these commands, we can show just an example of how to protect our database from outside interferences. To increase proper security measures, we could provide proper training to the staff that are supposed to use the database. Some other security measures that we could take may be backing up regularly the database in case of data corruption or humans' mistakes. To strengthen our security measures, we can implement 2 factor authentication method.

Suggestion for other database technology/info system:
NoSQL:

Another alternative to relational database is NoSQL database. Designed to handle large-scale of data and their scalability is horizontal which means they can distribute data across multiple servers which provides efficient handling of large amounts of data and endures high traffic loads. NoSQL provides flexible schema designs and lets you store different types of data such as: structured, unstructured, semi-structured, polymorphic and more. This flexible design becomes beneficial when dealing with evolving and undefined data. In most cases, NoSQL is optimized mostly for high-speed reading and writing data by using specific data access patterns. This database is sharable across multiple nodes, which makes the data available to anyone requesting it and makes it resilient to hardware failures. This type of database is very applicable to real-time analytics, content management systems social networks Internet of Things (IoT), that's because most of those applications are working with large amounts of rapidly changing data and they benefit from NoSQL database design.

Conclusion
The database created satisfy all the requirements requested by the head of school and solves the problems outlined by administration improving management and organizational efficiency. Ongoing maintenance and monitoring are essential for long-term effectiveness and security.