1) HEADER

INFORMATION SYSTEMS AND DATABASES – GROUP ASSIGNMENT

Group Number: 23

Member Student Numbers and names:

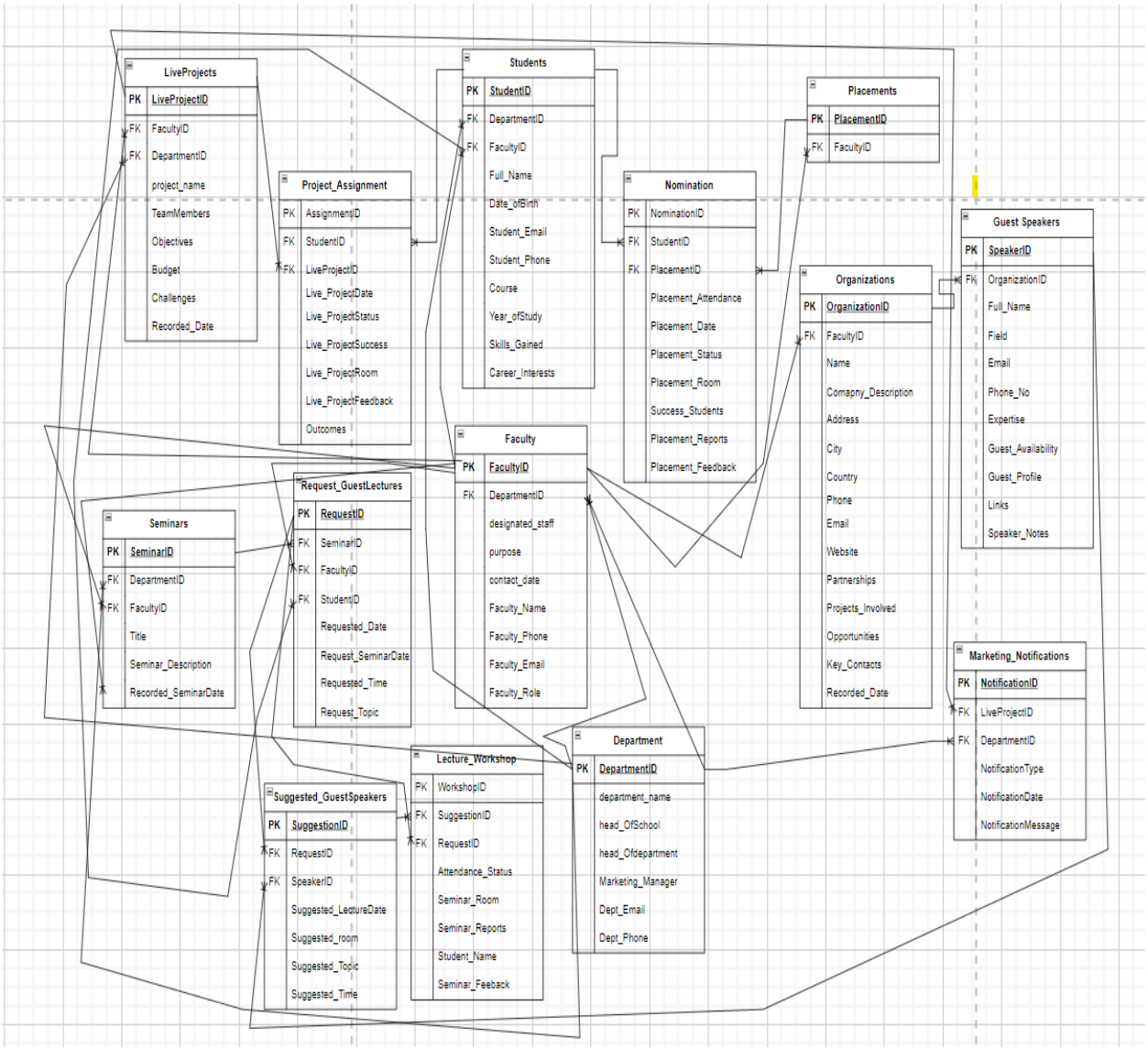
Muhamad Juma Ghanim Usman -32146989
Mohammed Mahim- 32147387
Mohammad Afnan- 32146984
Mohammed Ashfaq- 32147008
Fathima Fida -32147016
Thaspeeha Vahithu- 32146925

Oracle APEX account containing the database scripts: Workspace name: HARDWORKTHAS, Username: thas9fam4.com@gmail.com, Password: cam.4.872@

2)ASSUMPTIONS/BUSINESS RULES:

1. Each student must be assigned a unique student ID upon enrollment.
2. Only authorized staff members can access and modify student records, including personal details, academic history, and attendance data.
3. External speakers or organizations must be approved and registered in the database before they can conduct guest lectures or provide placements.
4. Faculty members can schedule guest lectures, workshops, or events using available rooms and resources through the timetabling system.
5. Students must register for courses within specified registration periods and meet prerequisites for enrollment.
6. Placement opportunities offered by organizations must be vetted and approved by the placement officer before being advertised to students.
7. Faculty members are responsible for accurately recording student attendance for classes, workshops, and other academic activities.
8. Any changes or updates to student records, course information, or faculty details must be logged and audited for accountability and transparency.
9. The database system must have backup and recovery mechanisms in place to protect against data loss or corruption.
10. Reports generated from the database, such as attendance reports, placement outcomes, and etc, must be accurate, reliable, and accessible to authorized stakeholders.

2) ER DIAGRAM:


LiveProjects
PK LiveProjectID
FK FacultyID
FK DepartmentID
project_name
TeamMembers
Objectives
Budget
Challenges
Recorded_Date
Students
PK StudentID
FK DepartmentID
FK FacultyID
Full_Name
Date_ofBirth
Student_Email
Student_Phone
Course
Year_ofStudy
Skills_Gained
Career_Interests
Placements
PK PlacementID
FK FacultyID
Project_Assignment
PK AssignmentID
FK StudentID
FK LiveProjectID
Live_ProjectDate
Live_ProjectStatus
Live_ProjectSuccess
Live_ProjectRoom
Live_ProjectFeedback
Outcomes
Nomination
PK NominationID
FK StudentID
FK PlacementID
Placement_Attendance
Placement_Date
Placement_Status
Placement_Room
Success_Students
Placement_Reports
Placement_Feedback
Guest Speakers
PK SpeakerID
FK OrganizationID
Full_Name
Field
Email
Phone_No
Expertise
Guest_Availability
Guest_Profile
Links
Speaker_Notes
Organizations
PK OrganizationID
FK FacultyID
Name
Comapny_Description
Address
City
Country
Phone
Email
Website
Partnerships
Projects_Involved
Opportunities
Key_Contacts
Recorded_Date
Faculty
PK FacultyID
FK DepartmentID
designated_staff
purpose
contact_date
Faculty_Name
Faculty_Phone
Faculty_Email
Faculty_Role
Request_GuestLectures
PK RequestID
FK SeminarID
FK FacultyID
FK StudentID
Requested_Date
Request_SeminarDate
Requested_Time
Request_Topic
Seminars
PK SeminarID
FK DepartmentID
FK FacultyID
Title
Seminar_Description
Recorded_SeminarDate
Marketing_Notifications
PK NotificationID
FK LiveProjectID
FK DepartmentID
NotificationType
NotificationDate
NotificationMessage
Department
PK DepartmentID
department_name
head_OfSchool
head_Ofdepartment
Marketing_Manager
Dept_Email
Dept_Phone
Lecture_Workshop
PK WorkshopID
FK SuggestionID
FK RequestID
Attendance_Status
Seminar_Room
Seminar_Reports
Student_Name
Seminar_Feeback
Suggested_GuestSpeakers
PK SuggestionID
FK RequestID
FK SpeakerID
Suggested_LectureDate
Suggested_room
Suggested_Topic
Suggested_Time

4) ENTITY SPECIFICATION FORMS

ENTITY TYPE: **Organizations**
Entity Description: It stores the information of different Organizations

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and any other relevant info**
organizationID	NUMBER(4)	pk		3201
facultyID	NUMBER(3)	fk		104
company_name	VARCHAR2(19)	nn		**AI Innovations Ltd.**
company_description	VARCHAR2(127)	nn		Leading AI solutions provider, specializing in machine learning, natural language processing, and computer vision technologies.
address	VARCHAR2(39)	nn		123 Innovation Avenue, Tech Park, 12345
city	VARCHAR2(9)	nn		Cityville
country	VARCHAR2(11)	nn		Countryland
phone	NUMBER(11)	nn		10870787773
email	VARCHAR2(22)	nn		info@aiinnovations.com
website	VARCHAR2(21)	nn		www.aiinnovations.com
partnerships	VARCHAR2(21)	nn		Microsoft and Google.
projects_involved	VARCHAR2(118)	nn		Developing AI-powered chatbots for customer support in the retail sector and implementing computer vision solutions.
opportunities	VARCHAR2(70)	nn		Fields such as IT and healthcare for permanent and contract positions.
key_contacts	VARCHAR2(43)	nn		John Doe (CEO) - john.doe@aiinnovations.com
recorded_date	DATE	nn		2-FEB-2024

ENTITY TYPE: **Faculty**
Entity Description: It stores the information of faculty

Attribute	**Data Type and width**	**Status***	**Validation**	**Example of input any other relevant info**
facultyID	NUMBER(3)	pk		104
departmentID	NUMBER(2)	fk		98
designated_staff	VARCHAR(10)	nn		Hans Jo
faculty_name	VARCHAR(14)	nn		Dr. A. Johnson
faculty_phone	NUMBER(11)	nn		1888999444
faculty_email	VARCHAR(23)	nn		ajohnson@university.edu
faculty_role	VARCHAR(2)	nn I	Input Limited to P(Professor) R(Researcher) L(Lecturer) SD(Staff Dean)	SD

ENTITY TYPE: **Placements**
Entity Description: It stores the information of placements and it's designated staff of the organization.

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input any other relevant info**
placementID	NUMBER(2)	pk		11
facultyID	NUMBER(3)	fk		104

ENTITY TYPE: R**equest_GuestLectures**
Entity Description: It stores the information of staff requesting for a guest speaker on a particular topic.

Attribute	**Date type and width**	**Status***	**Validation**	**Example of input and any other relevant info**
requestID	NUMBER(2)	pk		64
seminarID	NUMBER(1)	fk		1
facultyID	NUMBER(3)	fk		104
studentID	NUMBER(5)	fk		45679
requested_date	DATE	nn		17-APR-2024
request_seminardate	DATE	nn		19-APR-2024
requested_time	VARCHAR2(4)	nn		8 am
request_topic	VARCHAR2(40)	nn		Introduction to Artificial Intelligence

ENTITY TYPE: **Seminars**
Entity Description: It stores the information of different seminars

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and relevant info**
seminarID	NUMBER(1)	pk		1
departmentID	NUMBER(2)	fk		98
facultyID	NUMBER(3)	fk		104
title	VARCHAR2(39)	nn		Introduction to Artificial Intelligence
seminar_description	VARCHAR2(34)	nn		Machine Learning and maths In AI.
recorded_seminardate	DATE	nn		19-APR-2024

ENTITY TYPE: **Department**
Entity Description: It stores the information on the university departments.

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and relevant info**
departmentID	NUMBER(2)	pk		98
department_name	VARCHAR2(17)	nn		Head of Computing
head_ofschool	VARCHAR2(13)	nn		George Thomas
head_ofdepartment	VARCHAR2(11)	nn		Oliver Hans
marketing_manager	VARCHAR2(10)	nn		Jeff Evans

dept_email	VARCHAR2(27)	nn		98HeadofComputing@gmail.com
dept_phone	NUMBER(10)	nn		4000344567

ENTITY TYPE: **Suggested_GuestSpeakers**
Entity Description: It stores the information of suggested guest speakers

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and any other relevant info**
suggestionID	NUMBER(2)	pk		52
requestID	NUMBER(2)	fk		64
speakerID	NUMBER(3)	fk		198
suggested_lecturedate	DATE	nn		19-APR-2024
suggested_room	VARCHAR2(24)	nn		Lecture Hall 8, Block F2
suggested_topic	VARCHAR2(40)	nn		Introduction to Artificial Intelligence
suggested_time	VARCHAR2(4)	nn		8 am

ENTITY TYPE: **Lecture_Workshop**
Entity Description: It stores the information on seminar attended by students,speakers,etc

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and any relevant info**
workshopID	NUMBER(2)	pk		85
suggestionID	NUMBER(2)	fk		52
requestID	NUMBER(2)	fk		14
attendance_status	NUMBER(3)	nn		108
attendance_date	DATE	nn		19-APR-2024
seminar_room	VARCHAR2(24)	nn		Lecture Hall 8, Block F2
seminar_reports	VARCHAR2(151)	nn		Faculty Profiles, Research and Publications and Professional Networks and Student Feedback and School's Partnerships and Faculty Awards or recognition.
student_name	VARCHAR2(15)	nn		Safras Ibrahim
seminar_feedback	VARCHAR2(35)	nn		It was the best seminar I heard.

ENTITY NAME: **Marketing_Notifications**
Entity Description: It stores the information of notifications for marketing and let's know the marketing manager

Attribute	Data type and width	Status*	Validation	Example of input and any other relevant info
notificationID	NUMBER(2)	pk		17
live_projectID	NUMBER(5)	fk		20001
departmentID	NUMBER(2)	fk		98
notification_type	VARCHAR2(3)	nn I	Input Limited To SMS E (Email) DEM (Desktop Messages)	DEM
notification_date	DATE	nn		11-APR-2024
notification_message	VARCHAR2(255)	nn		We are pleased to inform you that the latest update for our live project has been successfully deployed to production. This update includes several new features, enhancements, and bug fixes based on user feedback and continuous testing.

Entity Name: **LiveProjects**
Entity Description: Stores information about live projects

Attribute	Data type and width	Status	Validation	Example of input and relevant info
live_projectID	NUMBER(5)	pk		20001
facultyID	VARCHAR2(3)	fk		104
departmentID	NUMBER(2)	fk		98
project _name	VARCHAR2(9)	nn		Local Link
team_members	VARCHAR2(26)	nn		Sai, John, Oliver, Stilton
objectives	VARCHAR2(33)	nn		Relevant, Understanding of Basics
budget	NUMBER(6)	nn		100000
challenges	VARCHAR2(46)	nn		Team Skills, Working of machines in real life.
recorded_date	DATE	nn		8-JUN-2024

Entity Name: **Students**
Entity Description: Stores information about students

Attribute	Data type and width	Status	Validation	Example of input and relevant info
studentID	NUMBER(5)	pk		45679
departmentID	NUMBER(2)	fk		98

facultyID	NUMBER(3)	fk		104
full_name	VARCHAR2(13)	nn		Safras Ibrahim
date_ofbirth	DATE	nn		26-NOV-07
student_email	VARCHAR2(16)	nn		Saf456@gmail.com
student_phone	NUMBER(10)	nn		0534578601
course	VARCHAR2(15)	nn		Computer Science
year_ofstudy	VARCHAR2(9)	nn		2023-2027
skills_gained	VARCHAR2(46)	nn		Problem solving, Critical thinking, Coding,etc
career_interests	VARCHAR2(146)	nn		Advance Technical Expertise in Machine Learning, Publish in Leading AI Journals and Conferences, Develop Interdisciplinary Collaboration Skills.

Entity Name: **Project_Assignment**
Entity Description: It stores the information about student live projects status and outcomes

Attribute	**Data type and width**	**Status**	**Validation**	**Example input and relevant info**
assignmentID	NUMBER(2)	pk		24
studentID	NUMBER(5)	fk		45679
live_projectID	NUMBER(5)	fk		20001
live_projectdate	DATE	nn		8-JUN-24
live_projectstatus	VARCHAR2(9)	nn		Completed
live_projectsuccess	VARCHAR2(2)	nn	Input Limited to NM(notify manager if completed) FL (fail if not completed)	NM
live_projectroom	VARCHAR2(24)	nn		Lecture hall-10, Block C6
live_projectfeedback	VARCHAR2(7)	nn I	Input Limited To SS (Success) FL (Fail)	SS
outcomes	VARCHAR2(49)	nn		Made us to understand the fundamentals and basics.

Entity Name: **Nomination**
Entity Description: Stores information of attendance and feedback of students.

Attribute	**Data type and width**	**Status**	**Validation**	**Relevant info**

nominationID	NUMBER(2)	pk		89
studentID	NUMBER(5)	fk		45679
placementID	NUMBER(2)	fk		11
placement_attendance	VARCHAR2(7)	nn		Present
placement_date	DATE	nn		23-JUL-24
placement_status	VARCHAR2(9)	nn		Completed
placement_room	VARCHAR2(23)	nn		Lecture Hall-9, Block F1
success_students	VARCHAR2(41)	nn		Achievers invited to talk for student cohort.
placement_reports	VARCHAR2(139)	nn		Faculty Profiles, Research and Publications, Professional Networks, Student Feedback, School's Partnerships, Faculty Awards and Recognition
placement_feedback	VARCHAR2(2)	nn I	Input limited to SS (Success) FL (Fail)	SS

ENTITY TYPE: **Guest_Speakers**
Entity Descritption: It stores complete profile of guest speakers

Attribute	**Data type and width**	**Status***	**Validation**	**Example of input and relevant info**
speakerID	NUMBER(3)	pk		198
organizationID	NUMBER(4)	fk		3201
full_name	VARCHAR2(14)	nn		Dr.Sophia Chen
field	VARCHAR2(16)	nn		Machine Learning
email	VARCHAR2(27)	nn		sophia.chen@aiexpertise.com
phone_no	NUMBER(12)	nn		443330008970
expertise	VARCHAR2(20)	nn		AI, Machine Learning
guest_availability	VARCHAR2(8)	nn		7am-10pm
guest_profile	VARCHAR2(89)	nn		Ph.D. in CS, Stanford University M.S. in AI, (MIT) B.S. in Computer Science, (CAMBRIDGE)
links	VARCHAR2(130)	nn		Advancements in Deep Learning Architectures for Image Classification- Published in the Journal of Machine Learning Research.
speaker_notes	VARCHAR2(40)	nn		Best to learn Machine Learning

5) SQL TABLE CREATION SCRIPTS

```
CREATE TABLE Organizations (
   organizationID NUMBER(4) PRIMARY KEY,
   facultyID NUMBER(3) CONSTRAINT fk_Organizations_facultyID foreign key (facultyid) REFERENCES Faculty
(facultyID),
   company_name VARCHAR2(19) NOT NULL,
   company_description VARCHAR2(127) NOT NULL,
   address VARCHAR2(39) NOT NULL,
   city VARCHAR2(9) NOT NULL,
   country VARCHAR2(11) NOT NULL,
   phone NUMBER(11) NOT NULL,
   email VARCHAR2(22) NOT NULL,
   website VARCHAR2(21) NOT NULL,
   partnerships VARCHAR2(21) NOT NULL,
   projects_involved VARCHAR2(118) NOT NULL,
   opportunities VARCHAR2(70) NOT NULL,
   key_contacts VARCHAR2(43) NOT NULL,
   recorded_date DATE NOT NULL
);

CREATE TABLE Department (
   departmentID NUMBER(2) PRIMARY KEY,
   department_name VARCHAR2(17) NOT NULL,
   head_ofschool VARCHAR2(13) NOT NULL,
   head_ofdepartment VARCHAR2(11) NOT NULL,
   marketing_manager VARCHAR2(10) NOT NULL,
   dept_email VARCHAR2(27) NOT NULL,
   dept_phone NUMBER(10) NOT NULL
);
CREATE TABLE Faculty (
   facultyID NUMBER(3) PRIMARY KEY,
   departmentID NUMBER(2) CONSTRAINT fk_Faculty_departmentID foreign key (departmentID) REFERENCES
Department(departmentID),
   designated_staff VARCHAR2(20) NOT NULL,
   purpose VARCHAR2(30) NOT NULL,
   contact_date DATE NOT NULL,
   faculty_name VARCHAR2(14) NOT NULL,
   faculty_phone NUMBER(11) NOT NULL,
   faculty_email VARCHAR2(23) NOT NULL,
   faculty_role VARCHAR2(2) CONSTRAINT ck_Faculty_faculty_role CHECK (faculty_role IN ('P', 'R', 'L', 'SD')) NOT
NULL
);

CREATE TABLE Students (
   studentID NUMBER(5) PRIMARY KEY,
   departmentID NUMBER(2) CONSTRAINT fk_Students_departmentID foreign key (departmentid) REFERENCES
Department (departmentID),
   facultyID NUMBER(2) CONSTRAINT fk_Students_facultyID foreign key (facultyid) REFERENCES Faculty (facultyID),
   full_name VARCHAR2(100) NOT NULL,
   date_ofbirth DATE NOT NULL,
```

```
   student_email VARCHAR2(16) NOT NULL,
   student_phone NUMBER(10) NOT NULL,
   course VARCHAR2(15) NOT NULL,
   year_ofstudy VARCHAR2(9) NOT NULL,
   skills_gained VARCHAR2(46) NOT NULL,
   career_interests VARCHAR2(146) NOT NULL
);
CREATE TABLE Placements (
   placementID NUMBER(2) PRIMARY KEY,
   facultyID NUMBER(3) CONSTRAINT fk_Placements_facultyID foreign key (facultyid) REFERENCES Faculty
(facultyID)
);

CREATE TABLE Nomination (
   nominationID NUMBER(2) PRIMARY KEY,
   studentID NUMBER(5) CONSTRAINT fk_Nomination_studentID foreign key (studentid) REFERENCES Students
(studentID),
   placementID NUMBER(2) CONSTRAINT fk_Nomination_placementID foreign key (placementid) REFERENCES
Placements (placementID),
   placement_attendance VARCHAR2(7),
   placement_date DATE NOT NULL,
   placement_status VARCHAR2(9) NOT NULL,
   placement_room VARCHAR2(23) NOT NULL,
   success_students VARCHAR2(41) NOT NULL,
   placement_reports VARCHAR2(139) NOT NULL,
   placement_feedback VARCHAR2(2) CONSTRAINT ck_Nomination_placement_feedback CHECK
(placement_feedback IN ('SS', 'FL'))
);
CREATE TABLE LiveProjects (
   live_projectID NUMBER(5) PRIMARY KEY,
   facultyID NUMBER(3) CONSTRAINT fk_LiveProjects_facultyID foreign key (facultyid) REFERENCES Faculty
(facultyID),
   departmentID NUMBER(2) CONSTRAINT fk_LiveProjects_departmentID foreign key (departmentid)  REFERENCES
Department (departmentID),
   project_name VARCHAR2(100) NOT NULL,
   team_members VARCHAR2(100) NOT NULL,
   objectives VARCHAR2(33) NOT NULL,
   budget VARCHAR2(6) NOT NULL,
   challenges VARCHAR2(46) NOT NULL,
   recorded_date DATE NOT NULL
);
CREATE TABLE Project_Assignment (
   assignmentID NUMBER(2) PRIMARY KEY,
   studentID NUMBER(5) CONSTRAINT fk_Project_Assignment_studentID foreign key (studentid) REFERENCES
Students (studentID),
   live_projectID NUMBER(5) CONSTRAINT fk_Project_Assignment_live_projectID foreign key ( live_projectID)
REFERENCES LiveProjects (live_projectID),
   live_projectdate DATE NOT NULL,
   live_projectstatus VARCHAR2(9) NOT NULL,
   live_projectsuccess VARCHAR2(14) CONSTRAINT ck_Project_Assignment_live_projectsuccess CHECK
(live_projectsuccess IN ('NM', 'FL')),
   live_projectroom VARCHAR2(24) NOT NULL,
```

```
   live_projectfeedback VARCHAR2(7) CONSTRAINT ck_Project_Assignment_live_projectfeedback CHECK
(live_projectfeedback IN ('SS', 'FL')),
   outcomes VARCHAR2(49) NOT NULL
);

CREATE TABLE Guest_Speakers (
   speakerID NUMBER(3) PRIMARY KEY,
   organizationID NUMBER(4) CONSTRAINT fk_Guest_Speakers_organizationID foreign key (organisationid)
REFERENCES Organizations (organizationID),
   full_name VARCHAR2(14) NOT NULL,
   field VARCHAR2(16) NOT NULL,
   email VARCHAR2(27) NOT NULL,
   phone_no NUMBER(12) NOT NULL,
   expertise VARCHAR2(20) NOT NULL,
   guest_availability VARCHAR2(8) NOT NULL,
   guest_profile VARCHAR2(89) NOT NULL,
   links VARCHAR2(130) NOT NULL,
   speaker_notes VARCHAR2(40) NOT NULL
);
CREATE TABLE Seminars (
   seminarID NUMBER(1) PRIMARY KEY,
   facultyID NUMBER(3) CONSTRAINT fk_Seminars_facultyID foreign key (facultyid) REFERENCES Faculty (facultyID),
   departmentID NUMBER(2) CONSTRAINT fk_Seminars_departmentID foreign key (departmentid) REFERENCES
Department (departmentID),
   title VARCHAR2(39) NOT NULL,
   seminar_description VARCHAR2(34) NOT NULL,
   recorded_seminardate DATE NOT NULL
);

CREATE TABLE Marketing_Notifications (
   notificationID NUMBER(2) PRIMARY KEY,
   live_projectID NUMBER(5) CONSTRAINT fk_Marketing_Notifications_live_projectID foreign key ( live_projectID)
REFERENCES LiveProjects (live_projectID),
   departmentID NUMBER(2) CONSTRAINT fk_Marketing_Notifications_departmentID foreign key (departmentid)
REFERENCES Department (departmentID),
   notification_type VARCHAR2(3) CONSTRAINT ck_Marketing_Notifications_notification_type CHECK
(notification_type IN ('SMS', 'E', 'DEM')),
   notification_date DATE NOT NULL,
   notification_message VARCHAR2(255) NOT NULL
);
CREATE TABLE Request_GuestLectures (
   requestID NUMBER(2) PRIMARY KEY,
   seminarID NUMBER(2) CONSTRAINT fk_Request_GuestLectures_seminarID  foreign key (seminarid) REFERENCES
Seminars (seminarID),
   facultyID NUMBER(3) CONSTRAINT fk_Request_GuestLectures_facultyID  foreign key (facultyid) REFERENCES
Faculty (facultyID),
   studentID NUMBER(5) CONSTRAINT fk_Request_GuestLectures_studentID  foreig key (studentid) REFERENCES
Students (studentID),
   requested_date DATE NOT NULL,
   request_seminardate DATE NOT NULL,
   requested_time VARCHAR2(4) NOT NULL,
   request_topic VARCHAR2(40) NOT NULL
);
```

```
CREATE TABLE Suggested_GuestSpeakers (
   suggestionID NUMBER(2) PRIMARY KEY,
   requestID NUMBER(2) CONSTRAINT fk_Suggested_GuestSpeakers_requestID  foreign key (requestid)
REFERENCES Request_GuestLectures(requestID),
   speakerID NUMBER(3) CONSTRAINT fk_Suggested_GuestSpeakers_speakerID  foreign key (speakerid)
REFERENCES Guest_Speakers(speakerID),
   suggested_room VARCHAR2(24) NOT NULL,
   suggested_lecturedate DATE NOT NULL,
   suggested_topic VARCHAR2(40) NOT NULL,
   suggested_time VARCHAR2(4) NOT NULL
);
CREATE TABLE Lecture_Workshop (
   workshopID NUMBER(2) PRIMARY KEY,
   suggestionID NUMBER(2) CONSTRAINT fk_Lecture_Workshop_suggestionID  foreign key (suggestionid)
REFERENCES Suggested_GuestSpeakers (suggestionID),
   requestID NUMBER(2) CONSTRAINT fk_Lecture_Workshop_requestID foreign key (requestid) REFERENCES
Request_GuestLectures (requestID),
   attendance_status NUMBER(3) NOT NULL,
   attendance_date DATE NOT NULL,
   seminar_room VARCHAR2(24) NOT NULL,
   seminar_reports VARCHAR2(151) NOT NULL,
   student_name VARCHAR2(15) NOT NULL,
   seminar_feedback VARCHAR2(35) NOT NULL
```

6) **SAMPLE DATA**

```
INSERT ALL
  INSERT INTO Department VALUES (98, 'Head of Computing', 'George Thomas', 'Oliver Hans', 'Jeff Evans',
'98HeadofComputing@gmail.com', 4000344567);
  INSERT INTO Department VALUES (99, 'Head of Cultural', 'George Thomas', 'Jack Bob', 'Jeff Evans',
'98HeadOfCultural@gmail.com', 4456783945);
  INSERT INTO Department VALUES (77, 'Head of Cyber', 'George Thomas', 'Zack Orji', 'Jeff Evans',
'98HeadofCyber@gmail.com', 4999266781);
  INSERT INTO Department VALUES (78, 'Head of Neural', 'George Thomas', 'Zach Bo', 'Jeff Evans',
'98HeadofNeural@gmail.com', 4673456258);
SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO Faculty VALUES (104, 98, 'Hans Jo', 'For a seminar', TO_DATE('17-04-2024', 'DD-MM-YYYY'), 'Dr. A.
Johnson', 10889994445, 'ajohnson@university.edu', 'S');
  INSERT INTO Faculty VALUES (105, 99, 'Louise Bo', 'placement', TO_DATE('20-04-2024', 'DD-MM-YYYY'), 'Dr. Clark',
10998675850, 'clark@university.edu', 'R');
  INSERT INTO Faculty VALUES (106, 77, 'Boris Hoff', 'For a seminar', TO_DATE('28-06-2024', 'DD-MM-YYYY'), 'Dr. Jo
Cruz', 10456893218, 'jo@university.edu', 'L');
  INSERT INTO Faculty VALUES (107, 78, 'Johnson', 'For a seminar', TO_DATE('04-03-2024', 'DD-MM-YYYY'), 'Dr.
Steve Bob', 10392378098, 'steve@university.edu', 'P');
SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO Organizations VALUES (3201, 104, 'AI Innovations Ltd.', 'Leading AI solutions provider, specializing in
machine learning, natural language processing, and computer vision technologies.', '123 Innovation Avenue, Tech
Park, 12345', 'Cityville', 'Countryland', 10870787773, 'info@aiinnovations.com', 'www.aiinnovations.com',
```

'Microsoft and Google.', 'Developing AI-powered chatbots for customer support in the retail sector and implementing computer vision solutions.', 'Fields such as IT and healthcare for permanent and contract positions.', 'John Doe (CEO) - john.doe@aiinnovations.com', TO_DATE('02-02-2024', 'DD-MM-YYYY'));
INSERT INTO Organizations VALUES (3202, 105, 'UK Talent Connect', 'A premier recruitment agency specializing in connecting skilled professionals with top companies across various industries.', '123 Business Park Lane, W2A 1AA', 'London', 'UK', 10870789994, 'info@uktalent.com', 'www.novawork.com', 'Tech Innovate Ltd.', 'Software engineers in a project for a fintech startup', 'Fields such as IT and healthcare for permanent and contract positions.', 'Mark Rob (Manager) - mark.rob@uktalent.com', TO_DATE('03-03-2024', 'DD-MM-YYYY'));
INSERT INTO Organizations VALUES (3203, 106, 'TalentLink UK', 'A leading placement agency connecting skilled professionals with job opportunities in various industries.', '123 Talent Avenue, W1A 2CC', 'Oxford', 'UK', 10891890005, 'info@talentlin.co.uk', 'www.talentlink.co.uk', 'Machine Learning Ltd', 'Assisting finance professionals in securing roles in banking and financial services.', 'Arranging internships for students or recent graduates.', 'Emily Jes (Coordinator) - emily.jes@.co.uk', TO_DATE('04-03-2024', 'DD-MM-YYYY'));
INSERT INTO Organizations VALUES (3204, 107, 'TalSpot UK', 'Offer personalized recruitment services, counseling, and training programs to help candidates succeed in their careers.', '456 Opportunity Street, EC1A 1AB', 'Oxford', 'UK', 10347455777, 'info@talspotuk.com', 'www.talspotuk.com', 'IBM', 'Placing IT professionals in software development roles', 'Permanent position for professionals seeking long-term career growth.', 'Jessica (Manager) - jessica@talspotuk.com', TO_DATE('07-09-2024', 'DD-MM-YYYY'));
SELECT * FROM DUAL;

INSERT ALL
INSERT INTO Students VALUES (45679, 98, 104, 'Safras Ibrahim', TO_DATE('26-11-2007', 'DD-MM-YYYY'), 'Saf456@gmail.com', 534578601, 'Computer Science', '2023-2027', 'Problem solving, Critical thinking, Coding', 'Advance Technical Expertise in Machine Learning, Publish in Leading AI Journals and Conferences, Develop Interdisciplinary Collaboration Skills');
INSERT INTO Students VALUES (45680, 99, 105, 'Muhammed Jin', TO_DATE('27-02-2007', 'DD-MM-YYYY'), 'Jin66@gmail.com', 567892145, 'Cyber Security', '2024-2028', 'Leadership, Active listening skills', 'Intern at a company you admire, Earn promotions');
INSERT INTO Students VALUES (45681, 77, 106, 'Muhammed Ada', TO_DATE('28-01-2007', 'DD-MM-YYYY'), 'Ada78@gmail.com', 578986512, 'Data Analyst', '2024-2028', 'Negotiation, Problem solving', 'Build your network, Earn a certification, Get a professional degree');
INSERT INTO Students VALUES (45682, 78, 107, 'Muhammed Isa', TO_DATE('29-03-2007', 'DD-MM-YYYY'), 'Isa44@gmail.com', 569774356, 'Algorithm', '2024-2028', 'Time Management, Speaking Skills', 'Save Money, Become an expert, Start a business');
SELECT * FROM DUAL;

INSERT ALL
INSERT INTO Placements VALUES (11, 104);
INSERT INTO Placements VALUES (12, 105);
INSERT INTO Placements VALUES (13, 106);
INSERT INTO Placements VALUES (14, 107);
SELECT * FROM DUAL;

INSERT ALL
INSERT INTO Nomination VALUES (89, 45679, 11, 'present', TO_DATE('23-07-2024', 'DD-MM-YYYY'), 'Completed', 'Lecture Hall-9, Block F1', 'Achievers invited to talk for student cohort', 'Faculty Profiles, Research and Publications, Professional Networks, Student Feedback, School''s Partnerships, Faculty Awards and Recognition', 'SS');
INSERT INTO Nomination VALUES (90, 45680, 12, 'present', TO_DATE('24-07-2024', 'DD-MM-YYYY'), 'Completed', 'Lecture Hall-9,Block F4', 'Achievers invited to talk for student cohort', 'Faculty Profiles, Research and Publications, Professional Networks, Student Feedback, School''s Partnerships, Faculty Awards and Recognition', 'SS');
INSERT INTO Nomination VALUES (91, 45681, 13, 'present', TO_DATE('25-07-2024', 'DD-MM-YYYY'), 'Completed', 'Lecture Hall-9, Block F1', 'Achievers invited to talk for student cohort', 'Faculty Profiles, Research and Publications, Professional Networks, Student Feedback, School''s Partnerships', 'SS');

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  INSERT INTO Nomination VALUES (92, 45682, 14, 'present', TO_DATE('26-07-2024', 'DD-MM-YYYY'), 'Completed',
'Lecture Hall-9, Block F1', 'Achievers invited to talk for student cohort', 'Faculty Profiles, Research and Publications,
Professional Networks, Student Feedback, School''s Partnerships', 'SS');
SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO LiveProjects VALUES (20001, 104, 98, 'Local Link', 'Sai, John, Olive, Stilton', 'Relevant, Understanding
of basics', 100000, 'Team Skills, Working of machines in real life', TO_DATE('8-06-2024', 'DD-MM-YYYY'));
  INSERT INTO LiveProjects VALUES (20002, 105, 99, 'Unity Hub', 'Joy, Raya, Sunny, Hans', 'Achievable, Time Bound',
100001, 'Team Skills', TO_DATE('15-07-2024', 'DD-MM-YYYY'));
  INSERT INTO LiveProjects VALUES (20003, 106, 77, 'IT', 'Ada, Jace, Hazel, Ben', 'Should be time bound', 100002,
'Team Skills', TO_DATE('16-07-2024', 'DD-MM-YYYY'));
  INSERT INTO LiveProjects VALUES (20004, 107, 78, 'Arts', 'Amy, Luca, Alice, Matt', 'Achievable', 100003, 'Team
Skills', TO_DATE('17-07-2024', 'DD-MM-YYYY'));
SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO Project_Assignment VALUES (24, 45679, 20001, TO_DATE('8-06-2024', 'DD-MM-YYYY'), 'Completed',
'NM', 'Lecture hall-10 Block C6', 'SS', 'Made us understand the fundamentals and basics');
  INSERT INTO Project_Assignment VALUES (25, 45680, 20002, TO_DATE('15-07-2024', 'DD-MM-YYYY'),
'Completed', 'NM', 'Lecture hall-10 Block B10', 'SS', 'Made us understand the fundamentals and basics');
  INSERT INTO Project_Assignment VALUES (26, 45681, 20003, TO_DATE('16-07-2024', 'DD-MM-YYYY'),
'Completed', 'NM', 'Lecture hall-10 Block H7', 'SS', 'Made us understand the fundamentals and basics');
  INSERT INTO Project_Assignment VALUES (27, 45682, 20004, TO_DATE('17-07-2024', 'DD-MM-YYYY'),
'Completed', 'NM', 'Lecture hall-10 Block B11', 'SS', 'Made us understand the fundamentals and basics');
SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO Guest_Speakers VALUES (198, 3201, 'Dr. Sophia Chen', 'Machine Learning',
'sophia.chen@aiexpertise.com', 443330008970, 'AI, Machine Learning', '7am-10pm', 'Ph.D. in CS, Stanford
University, M.S. in AI, (MIT) B.S. in Computer Science, (CAMBRIDGE)', 'Advancements in Deep Learning
Architectures for Image Classification - Published in the Journal of Machine Learning Research', 'Best to learn
Machine Learning');
  INSERT INTO Guest_Speakers VALUES (199, 3202, 'Dr. Jess Jo', 'Diversity', 'jess.jo@cul.com', 449991119081,
'Cyber', '9am-10am', 'Ph.D. in Diversity (CAMBRIDGE)', 'Cultural Diversity: A Primer for the Human Services by Jerry
V. Diller', 'Best to learn diversity');
  INSERT INTO Guest_Speakers VALUES (200, 3203, 'Dr. Sara Cruz', 'Cybersecurity', 'saracru@cul.com',
558882220192, 'Cultural', '7am-8am', 'Ph.D. in Cyber', 'Cybersecurity Essentials by Charles J. Brooks', 'Best to learn
cyber');
  INSERT INTO Guest_Speakers VALUES (201, 3204, 'Dr. Lily Vhen', 'Pattern', 'lily@pa.com', 449772228695, 'Neural',
'6am-8am', 'PH.D. in Artificial Networks Pattern Recognition', 'Neural Networks for Pattern Recognition by
Christopher M. Bishop', 'Best to learn patterns');
SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO Seminars VALUES (1, 104, 98, 'Introduction to Artificial Intelligence', 'Machine Learning and maths In
AI.', TO_DATE('19-04-2024', 'DD-MM-YYYY'));
  INSERT INTO Seminars VALUES (2, 105, 99, 'Cultural Diversity in Global Business', 'Impact of cultural difference',
TO_DATE('22-04-2024', 'DD-MM-YYYY'));
  INSERT INTO Seminars VALUES (3, 106, 77, 'Cybersecurity Trends and Threats', 'Threats Brief', TO_DATE('30-06-
2024', 'DD-MM-YYYY'));
  INSERT INTO Seminars VALUES (4, 107, 78, 'Artificial Networks Pattern Recognition', 'Neural Pattern',
TO_DATE('16-03-2024', 'DD-MM-YYYY'));
```

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SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO Marketing_Notifications VALUES (17, 20001, 98, 'DEM', TO_DATE('11-04-2024', 'DD-MM-YYYY'), 'We are pleased to inform you that the latest update for our live project has been successfully deployed to production. This update includes several new features, enhancements, and bug fixes based on user feedback and continuous testing.');
  INSERT INTO Marketing_Notifications VALUES (18, 20002, 99, 'SMS', TO_DATE('19-07-2024', 'DD-MM-YYYY'), 'We are pleased to inform you that the latest update for our live project has been successfully deployed to production and several new features, enhancements, and bug fixes based on user feedback and continuous testing.');
  INSERT INTO Marketing_Notifications VALUES (19, 20003, 77, 'EM', TO_DATE('20-11-2024', 'DD-MM-YYYY'), 'We are pleased to inform you that the latest update for our live project has been successfully deployed to production and several new features, enhancements, and bug fixes based on user feedback and continuous testing.');
  INSERT INTO Marketing_Notifications VALUES (20, 20004, 78, 'SMS', TO_DATE('14-12-2024', 'DD-MM-YYYY'), 'We are pleased to inform you that the latest update for our live project has been successfully deployed to production and several new features, enhancements, and bug fixes based on user feedback and continuous testing.');
SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO Request_GuestLectures VALUES (64, 1, 104, 45679, TO_DATE('17-04-2024', 'DD-MM-YYYY'), TO_DATE('19-04-2024', 'DD-MM-YYYY'), '8 am', 'Introduction to Artificial Intelligence');
  INSERT INTO Request_GuestLectures VALUES (65, 2, 105, 45680, TO_DATE('20-04-2024', 'DD-MM-YYYY'), TO_DATE('22-04-2024', 'DD-MM-YYYY'), '9 am', 'Cultural Diversity in Global Business');
  INSERT INTO Request_GuestLectures VALUES (66, 3, 106, 45681, TO_DATE('28-06-2024', 'DD-MM-YYYY'), TO_DATE('30-06-2024', 'DD-MM-YYYY'), '7 am', 'Cybersecurity Trends and Threats');
  INSERT INTO Request_GuestLectures VALUES (67, 4, 107, 45682, TO_DATE('14-03-2024', 'DD-MM-YYYY'), TO_DATE('16-03-2024', 'DD-MM-YYYY'), '6 am', 'Artificial Networks Pattern Recognition');
SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO Suggested_GuestSpeakers VALUES (52, 64, 198, TO_DATE('19-04-2024', 'DD-MM-YYYY'), ‘Building 4', 'Introduction to Artificial Intelligence', '8 am');
  INSERT INTO Suggested_GuestSpeakers VALUES (53, 65, 199, TO_DATE('22-04-2024', 'DD-MM-YYYY'), 'Building 5', 'Cultural Diversity in Global Business', '9 am');
  INSERT INTO Suggested_GuestSpeakers VALUES (54, 66, 200, TO_DATE('30-06-2024', 'DD-MM-YYYY'), 'Building 7', 'Cybersecurity Trends and Threats', '7 am');
  INSERT INTO Suggested_GuestSpeakers VALUES (55, 67, 201, TO_DATE('16-03-2024', 'DD-MM-YYYY'), 'Building 10', 'Artificial Networks Pattern Recognition', '6 am');
SELECT * FROM DUAL;

INSERT ALL
  INSERT INTO Lecture_Workshop VALUES (85, 52, 64, 108, TO_DATE('16-04-2024', 'DD-MM-YYYY'), 'Lecture Hall 8, Block F2', 'Faculty Profiles, Research and Publications, Professional Networks, Student Feedback, Faculty Awards and Recognition', 'Safras Ibrahim', 'It was the best seminar I heard.');
  INSERT INTO Lecture_Workshop VALUES (86, 53, 65, 100, TO_DATE('18-04-2024', 'DD-MM-YYYY'), 'Lecture Hall 9, Block F1', 'It’s most popular talk’, 'Muhammed Jin', 'Not bad');
  INSERT INTO Lecture_Workshop VALUES (87, 54, 66, 111, TO_DATE(‘13-06-2024', 'DD-MM-YYYY'), 'Lecture Hall 6, Block A2', 'Interesting and beneficial', 'Muhammed Ada', 'Excellent and interesting');
  INSERT INTO Lecture_Workshop VALUES (88, 55, 67, 101, TO_DATE('7-03-2024', 'DD-MM-YYYY'), 'Lecture Hall 3, Block A9', 'Intriguing talk', 'Muhammed Isa', 'Bad not interesting.');
SELECT * FROM DUAL;
```

8) **BRIEF OVERVIEW OF DATABASE SECURITY:**

1. **Encryption:** Encryption techniques are used to protect sensitive data both at rest (stored data) and in transit (data being transmitted over networks).
2. **Database Firewall:** A database firewall is a security tool that monitors and filters incoming and outgoing traffic to and from the database, applying security policies to prevent unauthorized access, SQL injection attacks, malware infections, and other threats.

9)SUGGESTION FOR OTHER DATABASE TECHNOLOGY/INFO SYSTEM:

1.Centralized Data Repository: A data warehouse would serve as a centralized repository for storing structured and organized data from various sources within the organization, including student information, course data, faculty details, attendance records, and performance metrics.
2.Data Integration and Transformation: The data warehouse would facilitate the integration of data from disparate sources, such as student management systems, learning management systems, HR databases, and financial.

10) **EVIDENCE OF CONTRIBUTIONS**

Sprint Backlog 1 uploaded date 5/5/24
Sprint Backlog 2 uploaded date 5/5/24
Sprint Backlog 3 uploaded date 5/5/24

Minutes of Meeting week 8 27/3/24 uploaded on 27/3/24
Minutes of Meeting week 9 1/4/24 uploaded on 1/4/24
Minutes of Meeting week 10 25/4/24 uploaded on 5/5/24
Minutes of Meeting week 11 1/5/24 uploaded on 5/5/24
Minutes of Meeting week 12 1/5/24 uploaded on 5/5/24