

Jubail Industrial College

Department of Business Administration

Semester 462

**Deliverable 2**

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| --- | --- | --- |
| **Course Name:** | | **Capstone Project** |
| **Course Code:** | | **MIS 451** |
| **Section:** | | **101** |
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**ERD**

A diagram of a diagram

AI-generated content may be incorrect.

**Business Rules (Based on Current ERD):**

**Users:**

A User can have one of the following roles: Family Member, Teacher, or Student.

**Family Members:**

A Family Member is responsible for one or more Students.

A Family Member can receive zero or more Notifications.

**Teachers:**

A Teacher manages one or more Study Circles.

A Teacher evaluates zero or more Students.

A Teacher can have zero or more Subscriptions.

A Teacher can send zero or more Reports to Students or Family Members.

**Students:**

A Student belongs to one and only one Family Member.

A Student can enroll in one or more Study Circles.

A student's attendance can be recorded in one or more study circles.

A student can be evaluated by one or more teachers.

A student can appear on one or more leaderboards.

A Student can receive zero or more Notifications.

**Subscriptions:**

A Subscription belongs to one and only one Teacher.

A Subscription can be paid through one or more Payments.

**Payments:**

A Payment belongs to one and only one Subscription.

**Study Circles:**

A Study Circle is managed by one and only one Teacher.

A Study Circle contains zero or more Students.

A Study Circle has zero or more Attendance records.

**Attendance:**

An Attendance record is linked to one Student in one Study Circle.

**Evaluations:**

An Evaluation is conducted by one Teacher for one Student.

**Notifications:**

A Notification is sent to one Family Member or one Student.

**Reports:**

A Report is sent by one Teacher.

A Report is received by one Student or one Family Member.

**Leaderboards:**

A Student can appear on one or more Leaderboard.

**Use case diagram**

A diagram of a group of people

AI-generated content may be incorrect.

**Quran Teaching Management System**

**Use case descriptions**

Use Case: Manage Student Profile

Scenario: Student updates profile information

Triggering Event: Student wants to modify personal details

Actors: Student

Preconditions: Student must be logged in

Postconditions: Profile is updated successfully

Flow of Events:

Student selects "Manage Profile"

System displays profile details

Student updates information

System validates and saves changes

Use Case: View Attendance

Scenario: Student checks attendance records

Triggering Event: Student wants to review attendance

Actors: Student

Preconditions: Student must be enrolled

Postconditions: Attendance records are displayed

Flow of Events:

Student selects "View Attendance"

System retrieves and displays records

Use Case: View Student Progress

Scenario: Student reviews academic progress

Triggering Event: Student wants to track progress

Actors: Student

Preconditions: Student must be enrolled

Postconditions: Progress details are displayed

Flow of Events:

Student selects "View Progress"

System retrieves and displays progress data

Use Case: View Evaluations

Scenario: Student checks evaluation results

Triggering Event: Student wants to see feedback and scores

Actors: Student

Preconditions: Evaluations must be completed

Postconditions: Evaluation results are displayed

Flow of Events:

Student selects "View Evaluations"

System retrieves and displays evaluation data

Use Case: Enroll in Study Circle

Scenario: Student joins a study circle

Triggering Event: Student wants to enroll in a study group

Actors: Student

Preconditions: Study circle must be available

Postconditions: Student is enrolled in the study circle

Flow of Events:

Student selects "Enroll in Study Circle"

System verifies availability

Student confirms enrollment

System updates enrollment status

Use Case: Receive Reports

Scenario: Student receives academic reports

Triggering Event: A report is generated for the student

Actors: Student

Preconditions: Reports must be available

Postconditions: Report is received and accessible

Flow of Events:

System generates the report

Student receives notification

Student accesses and views the report

Use Case: View Leaderboard

Scenario: Student views ranking and achievements

Triggering Event: Student wants to check leaderboard

Actors: Student

Preconditions: Leaderboard data must be available

Postconditions: Leaderboard is displayed

Flow of Events:

Student selects "View Leaderboard"

System retrieves and displays rankings

Use Case: Manage Study Circles

Scenario: Admin manages study circles

Triggering Event: Admin wants to add, update, or remove study circles

Actors: Admin

Preconditions: Admin must be logged in

Postconditions: Study circle information is updated

Flow of Events:

Admin selects "Manage Study Circles"

System displays existing study circles

Admin adds, edits, or removes a study circle

System updates records

Use Case: Track Attendance

Scenario: Instructor tracks student attendance

Triggering Event: Instructor marks attendance

Actors: Instructor

Preconditions: Students must be enrolled

Postconditions: Attendance is recorded

Flow of Events:

Instructor selects "Track Attendance"

System displays student list

Instructor marks attendance

System updates attendance records

Use Case: Conduct Evaluations

Scenario: Instructor evaluates students

Triggering Event: Instructor wants to assess students

Actors: Instructor

Preconditions: Evaluation criteria must be defined

Postconditions: Evaluations are recorded

Flow of Events:

Instructor selects "Conduct Evaluations"

System displays students and criteria

Instructor submits evaluations

System records results

Use Case: Generate Reports

Scenario: Admin generates performance reports

Triggering Event: Admin wants to create reports

Actors: Admin

Preconditions: Data must be available for reporting

Postconditions: Report is generated

Flow of Events:

Admin selects "Generate Reports"

System retrieves data

System generates and displays report

Use Case: Manage Subscriptions

Scenario: Admin handles user subscriptions

Triggering Event: Admin wants to manage subscription plans

Actors: Admin

Preconditions: Subscription system must be active

Postconditions: Subscription details are updated

Flow of Events:

Admin selects "Manage Subscriptions"

System displays current plans

Admin modifies subscriptions

System updates subscription records

Use Case: Process Payments

Scenario: System processes student payments

Triggering Event: Student makes a payment

Actors: Student, Payment System

Preconditions: Payment method must be available

Postconditions: Payment is processed successfully

Flow of Events:

Student selects "Process Payment"

System requests payment details

Payment system processes transaction

System confirms payment

Use Case: Send Notifications

Scenario: System sends notifications to users

Triggering Event: An event triggers a notification

Actors: System, Users

Preconditions: Users must have notifications enabled

Postconditions: Notification is sent and received

Flow of Events:

System detects an event

System generates notification

User receives notification

Use Case: Manage Users

Scenario: Admin manages user accounts

Triggering Event: Admin wants to add, update, or remove users

Actors: Admin

Preconditions: Admin must be logged in

Postconditions: User records are updated

Flow of Events:

Admin selects "Manage Users"

System displays user list

Admin adds, updates, or removes a user

System updates user database

Use Case: Manage Reports

Scenario: Admin handles system reports

Triggering Event: Admin wants to review or delete reports

Actors: Admin

Preconditions: Reports must exist in the system

Postconditions: Reports are updated or removed

Flow of Events:

Admin selects "Manage Reports"

System displays reports

Admin reviews, edits, or deletes reports

System updates report status

Use Case: Monitor System

Scenario: Admin monitors system performance

Triggering Event: Admin wants to check system status

Actors: Admin

Preconditions: Admin must be logged in

Postconditions: System metrics are displayed

Flow of Events:

Admin selects "Monitor System"

System retrieves and displays system health metrics