LONDON METROPOLITAN UNIVERSITY

islington college
(इस्लिङ्टन कलेज)

Module Code & Module Title

CC6001NI Advanced Database

Student Name: Prabin Kumar Thakur

London Met ID:22015722

College ID:np01cp4s2201572

I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded.

Contents

Table of figures

Table of tables

Intrduction

This report deals with the concept of database and its implementation on database management system where as for the interaction with the system requires the graphical user interface due to this web forms are created to assist the user for better interaction with the system. in this coursework we implemented web form for the web technology. We design the fronted technology, backend technology and database for the fully operation of application. this application would provides the functionality like enrolling student in course where as we have multiple course in which they are enrolled.

Students can be enrolled in many courses each course are assigned to many instructors. theses courses have many lessons. Theses lesson have many contents like video,text. Students can have communication with instructors for their query have which are assigned based on courses. students can track their progress based on lesson as it is completed or not.

For the completion of project we develop the useful experience with data modeler which is used to generate and create data base structure and scripts. Oracle sql developer is used for database management system where database are created and executed.

For web technology bootstrap framework is used which provide the css class that help with styling web document and displaying the content. It provides the features like grid system and wide range of models,dropdownlist,table and button with css features. In this coursework button,table and navigation section was used to implement the web forms providing functionality to customize it.

Textual Analysis

Figure 1:Student and course Relation

Description: one student must enroll in many course or none. Many courses are assigned to one student.

Figure 2:course and instructor relationship

Description: one courses are assigned to many instructors.

Figure 3:course and lesson relationship

Description: one courses have multiple lessons

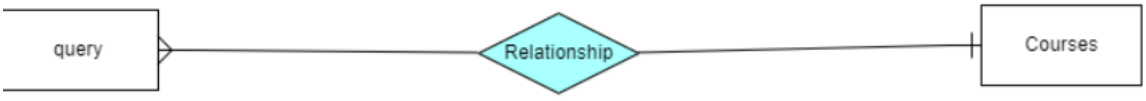


Figure 4Relationship between query and courses

Description: each courses have multiple query.

Figure 5:Reationship between student and query

Description: Many students have many query.

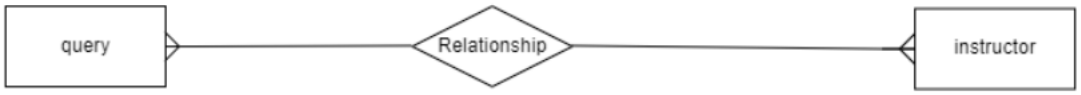


Figure 6:Relationship between instructtor and query

Description: Many query can have many instructor.

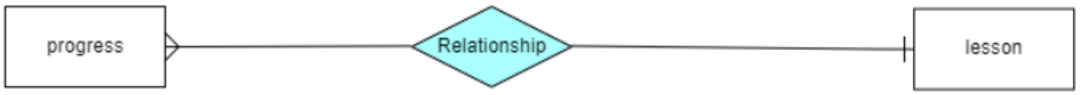


Figure 7:Relationship between lesson and progress

Initial erd

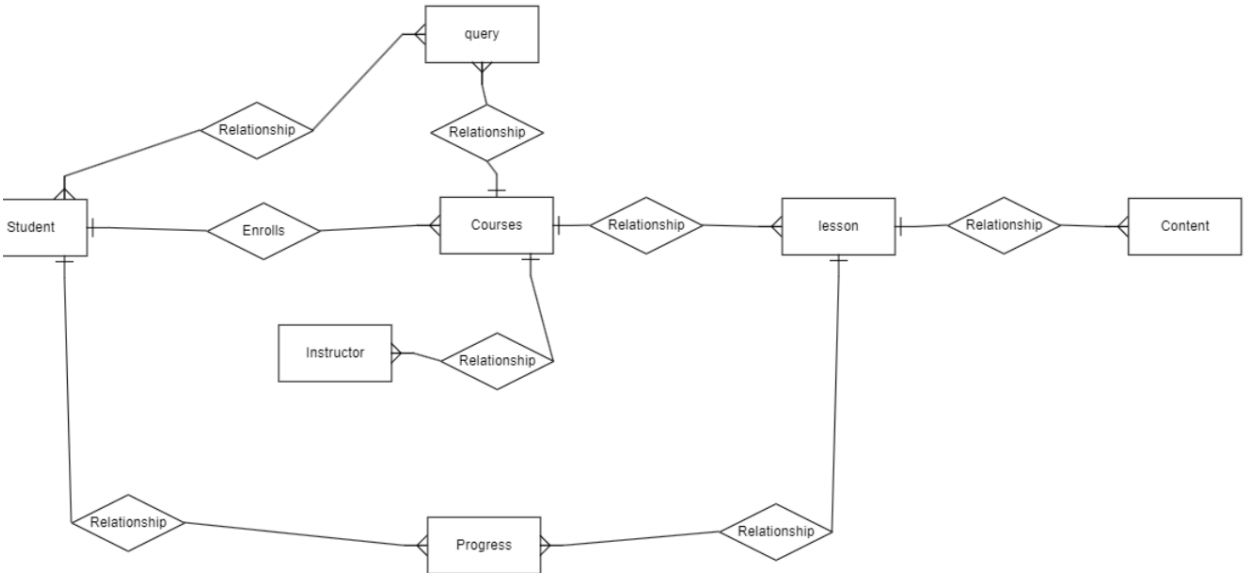


Figure 7:Initail Erd

Normalization

Normalization first table

Initial ERD

First Table

UNF

Student (**Student_id**, student_name, contact, DOB, Email, Country, {enrol_course, enrol_date})

1NF

Student-1(**Student_id,** Student_name**,**contact,DOB,email,country)

Enrollment-1(**Course_id,** Course_name, Enrol_Date, **Student_id(FK)**)

2NF

Student-1 is already in 1NF because there is no partial dependency.

For Enrollment_1

Course_id→ Course_name

Student_id→

Course_id, Student_id→ Enroll_date

Final table after 2NF

Student (**Student_id,** Student_name**,**contact,DOB,email,country)

Enrollment (**Course_id(PK), Student_id(FK)**, Enroll_date)

3NF

Student and Enrollment is already in 3NF as there is no transitive dependency.

Final table after 3NF

Student (**Student_id,** Student_name**,**contact,DOB,email,country)

Enrollment (**Course_id(PK), Student_id(FK)**, Enroll_date)

Normalization second table

Second Normalization

UNF

(Student_name, {Course_id, Course_Title, {Instructor_id, Intructor_name, {lesson_no, lesson_title, lesson_status, Last_accessed_date}})

1NF

Student-1→Student_Id, Student_Name

Course 1→ **Course_id,** course_title, **Student_id(FK)**

Instructor1→ **Instructor_id** , Instructor_name, **Course_id(FK), Student_id(FK)**

Lesson-1→ lesson_no, lesson_title, lesson status, Last_accessed_date,

Course_id(FK) ,Student_id(FK), Instructor_id(FK)

2NF

Student-1 already in 2NF

For Course1

Course_id→ Course_title

Student_id→

Course_id, student_id→

For Instructor

Instructor_id→Instructor_Name

Instructor_id, Course_id, student_id→

For lesson

Lesson_no, Course_id→ Lesson_title

Course_id, student_id→ Last_accessed_date, Lesson_status, Lesson_no

Course_id, Student_id, Instructor_id→

Final Table

Course (**Course_id**, Course_title)

Instructor (**Instructor_id**, Instructor_name)

Tutorial (**Course_id(FK), Student_id(FK), Instructor_id(FK)**)

Lesson (Lesson_no, Course_id→ Lesson_title)

Progress (**Course_id, Student_id**, **Lesson**_no, Last_accessed_date, Lesson_stauts)

3NF

All the tables are in 3NF.

Final table

Student (**Student_id**, Student_name)

Course (**Course_id**, Course_title)

Instructor (**Instructor_id**, Instructor_name)

Tutorial (**Course_id(FK), Student_id(FK), Instructor_id(FK)**)

Lesson (**Course_id, Student_id**, Lesson_no, Last_accessed_date, Lesson_stauts)

Combining table one and two

The final tables are:

Student (**Student_id**, Student_name, contact, DOB, email)

Enrollment (**Course_id(FK) ,Student_id(FK)**, Enroll_date)

Course (**Course_id**, Course_title)

Instructor (**Instructor_id**, Instructor_name)

Tutorial (**Course_id(FK), Student_id(FK), Instructor_id(FK)**)

Lesson (**Lesson_no, Course_id**, Lesson_title)

Progress (**Course_id, Student_id**, **Lesson_no**, Last_accessed_date, Lesson_stauts)

Integration and Assumtion:

- One students can enroll in multiple courses.
- Each student can have many query.
- One courses can have many lessons.
- Each lesson have multiple progress based on lesson and courses.
- One instructor can provided multiple feedback to one students.
- One instructors can instruct many courses.

Final erd

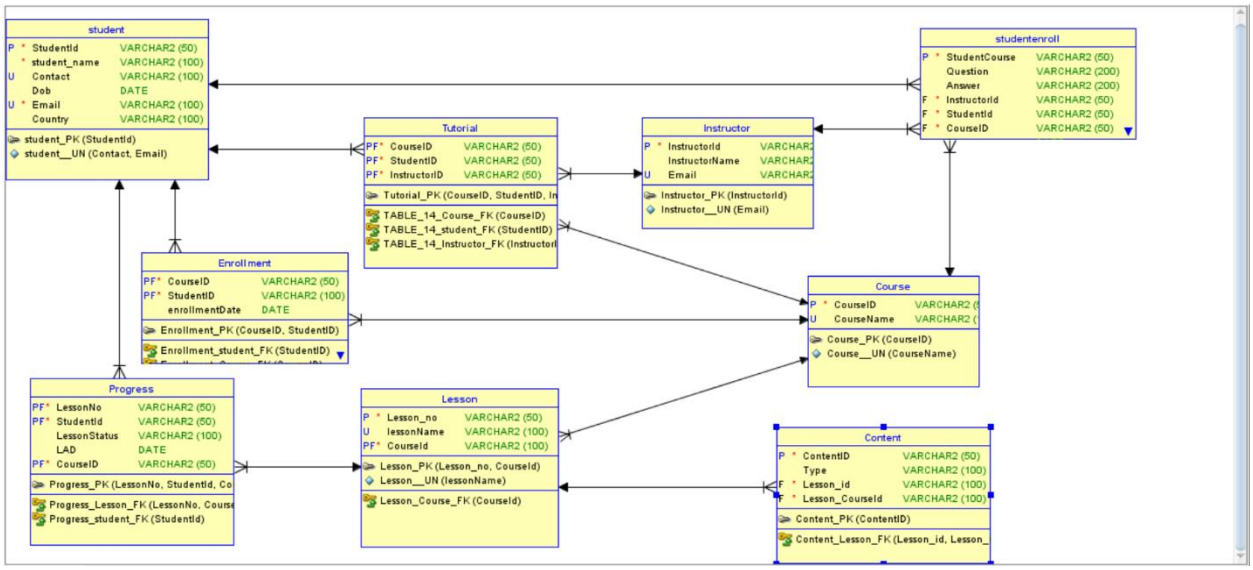


Figure 8:Final Erd

Data Dictionary:

Student

Column Name	Data Type	Size	Constraint	Reference Key	Description	Example Data
StudentId	Varchar	50	Primary Key		To uniquely identify each student	S001
StudentName	Varchar	100	Not null		To store student name	Prabin
Contact	Varchar	100	unique		To store contact number of student	980000000
Dob	Date				To store date of birth	3/1/2024
Email	Varchar	100	Not null unique		To store students email	xyz@gmail.com
Country	Varchar	100			To store student nationality	nepal

Table 1:Data Dictionary student Table

Instructor

Column Name	Data Type	Size	Constraint	Reference Key	Description	Example Data
InstructorId	Varchar	50	Primary Key		To uniquely identify each Instructor	I001
InstructorName	Varchar	100			To store Instructor name	Prabin
Email	Varchar	100	unique		To store instructor email	xyz@gmail.com

Table 2 Data dictionary Instructor table

Course

Column Name	Data Type	Size	Constraint	Reference column	Description	Example Data
CourseId	Varchar	50	Primary Key		To uniquely identify each Course	C001
CourseName	Varchar	100	Unique		To store Course name	Math

Table 3: Data dictionary course

Content

Column Name	Data Type	Size	Constraint	Reference column	Reference Table	Description	Example Data
ContentId	Varchar	50	Primary Key			To uniquely identify content	C001
Type	Varchar	100				To store content type	video
LessonId	Varchar	100	Foreign key	lessonid	lesson	To store id	L001
Lesson_coursId	Varchar	100	Foreign key	Courseid	Lesson	To store lesson courseid	C001

Table 4: Data dictionary Content Table

Progress

Column Name	Data Type	Size	Constraint	Reference column	Reference Table	Description	Example Data
LessonNo	Varchar	50	Primary Key, Foreign key	Lessonno	lesson	To store lesson no	L001
StudentId	Varchar	50	Primary key, Foreign key	Studentid	student	To store student id	S001
LessonStatus	Varchar	100	unique			To store lesson status	Completed
LAD	Date					To store last attendance	3-1-2024
CourseId	Varchar	50	Primary Key, Foreign key	CourseID	lesson	To store the coursed	C001

Table 5: Data dictinary progress table

lesson

Column Name	Data Type	Size	Constraint	Reference column	Reference Table	Description	Example Data
LessonNo	Varchar	50	Primary Key	Lessonno	lesson	To uniquely identify each lesson	L001
LessonName	Varchar	100	Unique			To store lesson Name	Data Structure
CourseId	Varchar	100	Primary, Foreign key	Courseid	Course	To store CourseID	C001

Table 6: Data Dictionary lesson table

Enrollment:

Column Name	Data Type	Size	Constraint	Reference column	Reference Table	Description	Example Data
CourseId	Varchar	50	Primary Key,foreign key	CourseId	course	To store courseId	C001
StudentId	Varchar	100	Primary Key,foreign key	studentid	student	To store studentid	S001
EnrollmentDate	Date					To store enrollment date	3-1-2024

Table 7: Data dictionary enrollment

Tutorial

Column Name	Data Type	Size	Constraint	Reference column	Reference Table	Description	Example Data
CourseId	Varchar	50	Primary Key,foreign key	CourseId	course	To store courseId	C001
StudentId	Varchar	50	Primary Key,foreign key	studentid	student	To store studentid	S001
InstructorId	Varchar	50	Primary Key,foreign key	Instructorid	instructor	To store instructorid	I001

Table 8: Data dictionary tutorial

StudentEnroll

Column Name	Data Type	Size	Constraint	Reference column	Reference Table	Description	Example Data
StudentCourse	Varchar	50	Primary Key			To uniquely identify	SC001
question	Varchar	200			student	To store question details	Question1
Answer	Varchar	200			instructor	To store answer details	Answer 1
InstructorId	Varchar	50	Foreign key	InstructorId	Instructor	To store instructorid	I001
StudentId	Varchar	50	Foreign key	StudentId	Student	To store studentid	S001
CourseId	Varchar	50	Foreign key	CourseId	Course	To store CourseId	C001

Table 9: data dictionary studentEnroll

Scripts:

DDL priview student table

```
CREATE TABLE student (
    studentid    VARCHAR2(50) NOT NULL,
    student_name VARCHAR2(100) NOT NULL,
    contact      VARCHAR2(100),
    dob          DATE,
    email        VARCHAR2(100) NOT NULL,
    country      VARCHAR2(100)
);

COMMENT ON COLUMN student.country IS
    '    ';

ALTER TABLE student ADD CONSTRAINT student_pk PRIMARY KEY ( studentid );

ALTER TABLE student ADD CONSTRAINT student__un UNIQUE ( contact,
                                                        email );
```

Figure 9:student table

DDL priview Progress table

```
CREATE TABLE progress (
    lessonno     VARCHAR2(50) NOT NULL,
    studentid    VARCHAR2(50) NOT NULL,
    lessonstatus VARCHAR2(100),
    lad          DATE,
    courseid     VARCHAR2(50) NOT NULL
);

ALTER TABLE progress
    ADD CONSTRAINT progress_pk PRIMARY KEY ( lessonno,
                                             studentid,
                                             courseid );

ALTER TABLE progress
    ADD CONSTRAINT progress_lesson_fk FOREIGN KEY ( lessonno,
                                                    courseid )
        REFERENCES lesson ( lesson_no,
                            courseid );

ALTER TABLE progress
    ADD CONSTRAINT progress_student_fk FOREIGN KEY ( studentid )
        REFERENCES student ( studentid );
```

Figure 10:ddl progress table

DDL priview enrollment

```
CREATE TABLE enrollment (
    courseid       VARCHAR2(50) NOT NULL,
    studentid      VARCHAR2(100) NOT NULL,
    enrollmentdate DATE
);

ALTER TABLE enrollment ADD CONSTRAINT enrollment_pk PRIMARY KEY ( courseid,
                                                                  studentid );

ALTER TABLE enrollment
    ADD CONSTRAINT enrollment_course_fk FOREIGN KEY ( courseid )
        REFERENCES course ( courseid );

ALTER TABLE enrollment
    ADD CONSTRAINT enrollment_student_fk FOREIGN KEY ( studentid )
        REFERENCES student ( studentid );
```

Figure 11:ddl priview enrollment

Ddl privew lesson

```
CREATE TABLE lesson (
    lesson_no  VARCHAR2(50) NOT NULL,
    lessonname VARCHAR2(100),
    courseid   VARCHAR2(100) NOT NULL
);

ALTER TABLE lesson ADD CONSTRAINT lesson_pk PRIMARY KEY ( lesson_no,
                                                          courseid );

ALTER TABLE lesson ADD CONSTRAINT lesson__un UNIQUE ( lessonname );

ALTER TABLE lesson
    ADD CONSTRAINT lesson_course_fk FOREIGN KEY ( courseid )
        REFERENCES course ( courseid );
```

Figure 12:ddl lesson

DDl tutorial tutorial

```
CREATE TABLE tutorial (
    courseid     VARCHAR2(50) NOT NULL,
    studentid    VARCHAR2(50) NOT NULL,
    instructorid VARCHAR2(50) NOT NULL
);

ALTER TABLE tutorial
    ADD CONSTRAINT tutorial_pk PRIMARY KEY ( courseid,
                                             studentid,
                                             instructorid );

ALTER TABLE tutorial
    ADD CONSTRAINT table_14_course_fk FOREIGN KEY ( courseid )
        REFERENCES course ( courseid );

ALTER TABLE tutorial
    ADD CONSTRAINT table_14_instructor_fk FOREIGN KEY ( instructorid )
        REFERENCES instructor ( instructorid );

ALTER TABLE tutorial
    ADD CONSTRAINT table_14_student_fk FOREIGN KEY ( studentid )
        REFERENCES student ( studentid );
```

Figure 13:ddl tutorial

Ddl instructor

```
CREATE TABLE instructor (
    instructorid   VARCHAR2(50) NOT NULL,
    instructorname VARCHAR2(100),
    email          VARCHAR2(100)
);

ALTER TABLE instructor ADD CONSTRAINT instructor_pk PRIMARY KEY ( instructorid );

ALTER TABLE instructor ADD CONSTRAINT instructor__un UNIQUE ( email );
```

Figure 14:ddl instructor

Ddl studentenroll as (query)

```
CREATE TABLE studentenroll (
    studentcourse VARCHAR2(50) NOT NULL,
    question      VARCHAR2(200),
    answer        VARCHAR2(200),
    instructorid  VARCHAR2(50) NOT NULL,
    studentid     VARCHAR2(50) NOT NULL,
    courseid      VARCHAR2(50) NOT NULL,
    "Date"        DATE
);

ALTER TABLE studentenroll ADD CONSTRAINT studentenroll_pk PRIMARY KEY ( studentcou

ALTER TABLE studentenroll
    ADD CONSTRAINT table_11_course_fk FOREIGN KEY ( courseid )
        REFERENCES course ( courseid );

ALTER TABLE studentenroll
    ADD CONSTRAINT table_11_instructor_fk FOREIGN KEY ( instructorid )
        REFERENCES instructor ( instructorid );

ALTER TABLE studentenroll
    ADD CONSTRAINT table_11_student_fk FOREIGN KEY ( studentid )
        REFERENCES student ( studentid );
```

Figure 15:ddl priview studentenroll

Ddl priview course

```
CREATE TABLE course (
    courseid   VARCHAR2(50) NOT NULL,
    coursename VARCHAR2(100)
);

ALTER TABLE course ADD CONSTRAINT course_pk PRIMARY KEY ( courseid );

ALTER TABLE course ADD CONSTRAINT course__un UNIQUE ( coursename );
```

Figure 16:ddl priview course

Ddl priview content

```
CREATE TABLE content (
    contentid       VARCHAR2(50) NOT NULL,
    type            VARCHAR2(100),
    lesson_id       VARCHAR2(100) NOT NULL,
    lesson_courseid VARCHAR2(100) NOT NULL
);

ALTER TABLE content ADD CONSTRAINT content_pk PRIMARY KEY ( contentid );

ALTER TABLE content
    ADD CONSTRAINT content_lesson_fk FOREIGN KEY ( lesson_id,
                                                   lesson_courseid )
        REFERENCES lesson ( lesson_no,
                            courseid );
```

Figure 17:ddl privew content

Insert statement

Inserting values into student table

```
INSERT ALL
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S001', 'Sitaram Thapa', '9841234567', TO_DATE('1998-02-15', 'YYYY-MM-DD'), 'sitaram.thapa@g
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S002', 'Geeta Paudel', '9812345678', TO_DATE('2000-05-20', 'YYYY-MM-DD'), 'geeta.paudel@gma
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S003', 'Manish Rana', '9863456789', TO_DATE('1999-11-10', 'YYYY-MM-DD'), 'manish.rana@gmail
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S004', 'Sunil Shrestha', '9804567890', TO_DATE('2001-08-25', 'YYYY-MM-DD'), 'sunil.shrestha
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S005', 'Anita Gurung', '9815678901', TO_DATE('1997-04-30', 'YYYY-MM-DD'), 'anita.gurung@gma
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S006', 'Sushil Shah', '9846789012', TO_DATE('2000-09-05', 'YYYY-MM-DD'), 'sushil.shah@gmail
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S007', 'Rita Basnet', '9817890123', TO_DATE('1996-12-12', 'YYYY-MM-DD'), 'rita.basnet@gmail
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S008', 'Binod Lamichhane', '9868901234', TO_DATE('2002-03-20', 'YYYY-MM-DD'), 'binod.lamich
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S009', 'Sanjib Thapa', '9849012345', TO_DATE('1998-07-18', 'YYYY-MM-DD'), 'sanjib.thapa@gma
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S010', 'Priyanka Pokharel', '9810123456', TO_DATE('1999-10-22', 'YYYY-MM-DD'), 'priyanka.po
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S011', 'Raju Rai', '9851234567', TO_DATE('2001-01-05', 'YYYY-MM-DD'), 'raju.rai@gmail.com',
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S012', 'Sanjeev Karki', '9812345678', TO_DATE('1997-06-15', 'YYYY-MM-DD'), 'sanjeev.karki@g
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S013', 'Ajay Maharjan', '9843456789', TO_DATE('2002-09-08', 'YYYY-MM-DD'), 'ajay.maharjan@g
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S014', 'Mina Shrestha', '9814567890', TO_DATE('1995-12-03', 'YYYY-MM-DD'), 'mina.shrestha@g
  INTO student (studentid, student_name, contact, dob, email, country) VALUES ('S015', 'Avinash Basnet', '9865678901', TO_DATE('2000-04-17', 'YYYY-MM-DD'), 'avinash.basnet
SELECT * FROM dual;
```

Query Result | Script Output

Task completed in 0.128 seconds

```
15 rows inserted.
```

Figure 18:inserting values into student

Selecting values from student

```
select * from student
```

Script Output | Query Result

All Rows Fetched: 15 in 0.006 seconds

	STUDENTID	STUDENT_NAME	CONTACT	DOB	EMAIL	COUNTRY
2	S002	Geeta Paudel	9812345678	20-MAY-00	geeta.paudel@gmail.com	Nepal
3	S003	Manish Rana	9863456789	10-NOV-99	manish.rana@gmail.com	Nepal
4	S004	Sunil Shrestha	9804567890	25-AUG-01	sunil.shrestha@gmail.com	Nepal
5	S005	Anita Gurung	9815678901	30-APR-97	anita.gurung@gmail.com	Nepal
6	S006	Sushil Shah	9846789012	05-SEP-00	sushil.shah@gmail.com	Nepal
7	S007	Rita Basnet	9817890123	12-DEC-96	rita.basnet@gmail.com	Nepal
8	S008	Binod Lamichhane	9868901234	20-MAR-02	binod.lamichhane@gmail.com	Nepal
9	S009	Sanjib Thapa	9849012345	18-JUL-98	sanjib.thapa@gmail.com	Nepal
10	S010	Priyanka Pokharel	9810123456	22-OCT-99	priyanka.pokharel@gmail.com	Nepal
11	S011	Raju Rai	9851234567	05-JAN-01	raju.rai@gmail.com	Nepal
12	S012	Sanjeev Karki	9812345678	15-JUN-97	sanjeev.karki@gmail.com	Nepal
13	S013	Ajay Maharjan	9843456789	08-SEP-02	ajay.maharjan@gmail.com	Nepal
14	S014	Mina Shrestha	9814567890	03-DEC-95	mina.shrestha@gmail.com	Nepal
15	S015	Avinash Basnet	9865678901	17-APR-00	avinash.basnet@gmail.com	Nepal

Figure 19:selecting values from student

Insert values into instructor

```
INSERT ALL
  INTO instructor (instructorid, instructorname, email) VALUES ('I001', 'Sitaram Thapa', 'sitaram.thapa@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I002', 'Geeta Paudel', 'geeta.paudel@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I003', 'Manish Rana', 'manish.rana@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I004', 'Sunil Shrestha', 'sunil.shrestha@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I005', 'Anita Gurung', 'anita.gurung@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I006', 'Sushil Shah', 'sushil.shah@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I007', 'Rita Basnet', 'rita.basnet@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I008', 'Binod Lamichhane', 'binod.lamichhane@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I009', 'Sanjib Thapa', 'sanjib.thapa@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I010', 'Priyanka Pokharel', 'priyanka.pokharel@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I011', 'Raju Rai', 'raju.rai@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I012', 'Sanjeev Karki', 'sanjeev.karki@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I013', 'Ajay Maharjan', 'ajay.maharjan@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I014', 'Mina Shrestha', 'mina.shrestha@gmail.com')
  INTO instructor (instructorid, instructorname, email) VALUES ('I015', 'Avinash Basnet', 'avinash.basnet@gmail.com')
SELECT * FROM dual;
```

Script Output | Query Result

Task completed in 0.079 seconds

```
15 rows inserted.

15 rows inserted.
```

Figure 20:insert values into instructor

Select values from instructor

```
select * from instructor
```

Script Output | Query Result

SQL | All Rows Fetched: 15 in 0.007 seconds

	INSTRUCTORID	INSTRUCTORNAME	EMAIL
1	I001	Sitaram Thapa	sitaram.thapa@gmail.com
2	I002	Geeta Paudel	geeta.paudel@gmail.com
3	I003	Manish Rana	manish.rana@gmail.com
4	I004	Sunil Shrestha	sunil.shrestha@gmail.com
5	I005	Anita Gurung	anita.gurung@gmail.com
6	I006	Sushil Shah	sushil.shah@gmail.com
7	I007	Rita Basnet	rita.basnet@gmail.com
8	I008	Binod Lamichhane	binod.lamichhane@gmail.com
9	I009	Sanjib Thapa	sanjib.thapa@gmail.com
10	I010	Priyanka Pokharel	priyanka.pokharel@gmail.com
11	I011	Raju Rai	raju.rai@gmail.com
12	I012	Sanjeev Karki	sanjeev.karki@gmail.com
13	I013	Ajay Maharjan	ajay.maharjan@gmail.com
14	I014	Mina Shrestha	mina.shrestha@gmail.com
15	I015	Avinash Basnet	avinash.basnet@gmail.com

Figure 21:selected values from instructor

Insert values into course table

```
INSERT ALL
  INTO course (courseid, coursename) VALUES ('C001', 'Mathematics')
  INTO course (courseid, coursename) VALUES ('C002', 'English Literature')
  INTO course (courseid, coursename) VALUES ('C003', 'Computer Science')
  INTO course (courseid, coursename) VALUES ('C004', 'History')
  INTO course (courseid, coursename) VALUES ('C005', 'Biology')
  INTO course (courseid, coursename) VALUES ('C006', 'Chemistry')
  INTO course (courseid, coursename) VALUES ('C007', 'Physics')
  INTO course (courseid, coursename) VALUES ('C008', 'Art')
  INTO course (courseid, coursename) VALUES ('C009', 'Geography')
  INTO course (courseid, coursename) VALUES ('C010', 'Economics')
  INTO course (courseid, coursename) VALUES ('C011', 'Psychology')
  INTO course (courseid, coursename) VALUES ('C012', 'Sociology')
  INTO course (courseid, coursename) VALUES ('C013', 'Philosophy')
  INTO course (courseid, coursename) VALUES ('C014', 'Music')
  INTO course (courseid, coursename) VALUES ('C015', 'Physical Education')
SELECT * FROM dual;
```

Script Output x Query Result x

Task completed in 0.149 seconds

```
15 rows inserted.
```

Figure 22:inserting values into course

Selecting values from course

```
select * from course
```

Script Output | Query Result

SQL | All Rows Fetched: 15 in 0.005 seconds

	COURSEID	COURSENAME
1	C001	Mathematics
2	C002	English Literature
3	C003	Computer Science
4	C004	History
5	C005	Biology
6	C006	Chemistry
7	C007	Physics
8	C008	Art
9	C009	Geography
10	C010	Economics
11	C011	Psychology
12	C012	Sociology
13	C013	Philosophy
14	C014	Music
15	C015	Physical Education

Figure 23:selecting values from courses

Inserting into lesson tables

```
INSERT ALL
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L001', 'Algebra Basics', 'C001')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L002', 'Introduction to Shakespeare', 'C002')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L003', 'Introduction to Programming', 'C003')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L004', 'Ancient Civilizations', 'C004')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L005', 'Cell Structure', 'C005')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L006', 'Chemical Bonds', 'C006')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L007', 'Newtonian Mechanics', 'C007')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L008', 'Basic Drawing Techniques', 'C008')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L009', 'World Geography', 'C009')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L010', 'Introduction to Microeconomics', 'C010')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L011', 'Introduction to Psychology', 'C011')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L012', 'Societal Structures', 'C012')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L013', 'Philosophical Theories', 'C013')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L014', 'Music Theory', 'C014')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L015', 'Fitness Fundamentals', 'C015')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L016', 'Geometry Basics', 'C001')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L017', 'Shakespearean Sonnets', 'C002')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L018', 'Data Structures', 'C003')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L019', 'Medieval History', 'C004')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L020', 'Genetics', 'C005')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L021', 'Organic Chemistry', 'C006')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L022', 'Electromagnetism', 'C007')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L023', 'Advanced Drawing Techniques', 'C008')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L024', 'Cultural Geography', 'C009')
  INTO lesson (lesson_no, lessonname, courseid) VALUES ('L025', 'Macroeconomics', 'C010')
```

Script Output | Query Result

Task completed in 0.101 seconds

```
30 rows inserted.
```

Figure 24:inserting values into lesson tables

Selecting values from lesson

```
select * from lesson
```

Script Output | Query Result

SQL | All Rows Fetched: 30 in 0.01 seconds

	LESSON_NO	LESSONNAME	COURSEID
1	L001	Algebra Basics	C001
2	L002	Introduction to Shakespeare	C002
3	L003	Introduction to Programming	C003
4	L004	Ancient Civilizations	C004
5	L005	Cell Structure	C005
6	L006	Chemical Bonds	C006
7	L007	Newtonian Mechanics	C007
8	L008	Basic Drawing Techniques	C008
9	L009	World Geography	C009
10	L010	Introduction to Microeconomics	C010
11	L011	Introduction to Psychology	C011
12	L012	Societal Structures	C012
13	L013	Philosophical Theories	C013
14	L014	Music Theory	C014
15	L015	Fitness Fundamentals	C015
16	L016	Geometry Basics	C001

Figure 25:selected values from lesson table

Inserting values into studentenroll table

```
INSERT ALL
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC001', 'Question 1', 'Answer 1', 'I001', 'S001', 'C001', TO_D
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC002', 'Question 2', 'Answer 2', 'I002', 'S002', 'C002', TO_D
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC003', 'Question 3', 'Answer 3', 'I003', 'S003', 'C003', TO_D
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC004', 'Question 4', 'Answer 4', 'I004', 'S004', 'C004', TO_D
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC005', 'Question 5', 'Answer 5', 'I005', 'S005', 'C005', TO_D
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC006', 'Question 6', 'Answer 6', 'I006', 'S006', 'C006', TO_D
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC007', 'Question 7', 'Answer 7', 'I007', 'S007', 'C007', TO_D
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC008', 'Question 8', 'Answer 8', 'I008', 'S008', 'C008', TO_D
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC009', 'Question 9', 'Answer 9', 'I009', 'S009', 'C009', TO_D
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC010', 'Question 10', 'Answer 10', 'I010', 'S010', 'C010', TO
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC011', 'Question 11', 'Answer 11', 'I011', 'S011', 'C011', TO
  INTO studentenroll (studentcourse, question, answer, instructorid, studentid, courseid, "Date") VALUES ('SC012', 'Question 12', 'Answer 12', 'I012', 'S012', 'C012', TO
```

Figure 26:inserting into studentenroll

Selecting values from studentenroll table

```
select * from studentenroll
```

Script Output | Query Result

SQL | All Rows Fetched: 30 in 0.01 seconds

	STUDENTCOURSE	QUESTION	ANSWER	INSTRUCTORID	STUDENTID	COURSEID	Date
1	SC001	Question 1	Answer 1	I001	S001	C001	15-MAR-24
2	SC002	Question 2	Answer 2	I002	S002	C002	16-MAR-24
3	SC003	Question 3	Answer 3	I003	S003	C003	17-MAR-24
4	SC004	Question 4	Answer 4	I004	S004	C004	18-MAR-24
5	SC005	Question 5	Answer 5	I005	S005	C005	19-MAR-24
6	SC006	Question 6	Answer 6	I006	S006	C006	20-MAR-24
7	SC007	Question 7	Answer 7	I007	S007	C007	21-MAR-24
8	SC008	Question 8	Answer 8	I008	S008	C008	22-MAR-24
9	SC009	Question 9	Answer 9	I009	S009	C009	23-MAR-24
10	SC010	Question 10	Answer 10	I010	S010	C010	24-MAR-24
11	SC011	Question 11	Answer 11	I011	S011	C011	25-MAR-24
12	SC012	Question 12	Answer 12	I012	S012	C012	26-MAR-24

Figure 27:selecting values from studentenroll

Inserting into enrollment

```
INSERT ALL
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C001', 'S001', TO_DATE('2024-03-15', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C001', 'S002', TO_DATE('2024-03-16', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C002', 'S003', TO_DATE('2024-03-17', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C002', 'S004', TO_DATE('2024-03-18', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C003', 'S005', TO_DATE('2024-03-19', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C003', 'S006', TO_DATE('2024-03-20', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C004', 'S007', TO_DATE('2024-03-21', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C004', 'S008', TO_DATE('2024-03-22', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C005', 'S009', TO_DATE('2024-03-23', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C005', 'S010', TO_DATE('2024-03-24', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C006', 'S011', TO_DATE('2024-03-25', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C006', 'S012', TO_DATE('2024-03-26', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C007', 'S013', TO_DATE('2024-03-27', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C007', 'S014', TO_DATE('2024-03-28', 'YYYY-MM-DD'))
INTO enrollment (courseid, studentid, enrollmentdate) VALUES ('C008', 'S015', TO_DATE('2024-03-29', 'YYYY-MM-DD'))
```

Figure 28:insert into enrollment

```
alter table enrollment modify enrollmentdate date;
```

Figure 29:alter table enrollment column name date

Selecting from enrollment

```
select * from enrollment
```

Script Output | Query Result | SQL | All Rows Fetched: 30 in 0.006 seconds

	COURSEID	STUDENTID	ENROLLMENTDATE
1	C001	S001	15-MAR-24
2	C001	S002	16-MAR-24
3	C002	S003	17-MAR-24
4	C002	S004	18-MAR-24
5	C003	S005	19-MAR-24
6	C003	S006	20-MAR-24
7	C004	S007	21-MAR-24
8	C004	S008	22-MAR-24
9	C005	S009	23-MAR-24
10	C005	S010	24-MAR-24
11	C006	S011	25-MAR-24

Figure 30:selected data from

Altering unique constraints from content

```
ALTER TABLE content DROP CONSTRAINT content__un;
```

Insert into content

```
INSERT ALL
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C001', 'Video', 'L001', 'C001')
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C002', 'Text', 'L002', 'C002')
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C003', 'Image', 'L003', 'C003')
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C004', 'Audio', 'L004', 'C004')
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C005', 'Video', 'L005', 'C005')
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C006', 'Text', 'L006', 'C006')
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C007', 'Image', 'L007', 'C007')
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C008', 'Audio', 'L008', 'C008')
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C009', 'Video', 'L009', 'C009')
INTO content (contentid, type, lesson_id, lesson_courseid) VALUES ('C010', 'Text', 'L010', 'C010')
```

Figure 31:insert into content

```
SELECT * from content
```

cript Output | Query Result

SQL | All Rows Fetched: 30 in 0.005 seconds

	CONTENTID	TYPE	LESSON_ID	LESSON_COURSEID
1	C001	Video	L001	C001
2	C002	Text	L002	C002
3	C003	Image	L003	C003
4	C004	Audio	L004	C004
5	C005	Video	L005	C005
6	C006	Text	L006	C006
7	C007	Image	L007	C007

Inserting into progress

```
INSERT ALL
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L001', 'S001', 'Completed', TO_DATE('2024-03-15', 'YYYY-MM-DD'), 'C
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L002', 'S002', 'In Progress', TO_DATE('2024-03-16', 'YYYY-MM-DD'),
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L003', 'S003', 'Not Started', TO_DATE('2024-03-17', 'YYYY-MM-DD'),
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L004', 'S004', 'Completed', TO_DATE('2024-03-18', 'YYYY-MM-DD'), 'C
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L005', 'S005', 'In Progress', TO_DATE('2024-03-19', 'YYYY-MM-DD'),
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L006', 'S006', 'Not Started', TO_DATE('2024-03-20', 'YYYY-MM-DD'),
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L007', 'S007', 'Completed', TO_DATE('2024-03-21', 'YYYY-MM-DD'), 'C
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L008', 'S008', 'In Progress', TO_DATE('2024-03-22', 'YYYY-MM-DD'),
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L009', 'S009', 'Not Started', TO_DATE('2024-03-23', 'YYYY-MM-DD'),
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L010', 'S010', 'Completed', TO_DATE('2024-03-24', 'YYYY-MM-DD'), 'C
INTO progress (lessonno, studentid, lessonstatus, lad, courseid) VALUES ('L011', 'S011', 'In Progress', TO_DATE('2024-03-25', 'YYYY-MM-DD'),
```

Figure 32:progress

```
select * from progress
```

Script Output | Query Result

SQL | All Rows Fetched: 30 in 0.007 seconds

	LESSONNO	STUDENTID	LESSONSTATUS	LAD	COURSEID
1	L001	S001	Completed	15-MAR-24	C001
2	L002	S002	In Progress	16-MAR-24	C002
3	L003	S003	Not Started	17-MAR-24	C003
4	L004	S004	Completed	18-MAR-24	C004
5	L005	S005	In Progress	19-MAR-24	C005
6	L006	S006	Not Started	20-MAR-24	C006
7	L007	S007	Completed	21-MAR-24	C007
8	L008	S008	In Progress	22-MAR-24	C008
9	L009	S009	Not Started	23-MAR-24	C009
10	L010	S010	Completed	24-MAR-24	C010
11	L011	S011	In Progress	25-MAR-24	C011

Insert into tutorial table

```
INSERT ALL
INTO tutorial (courseid, studentid, instructorid) VALUES ('C001', 'S001', 'I001')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C002', 'S002', 'I002')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C003', 'S003', 'I003')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C004', 'S004', 'I004')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C005', 'S005', 'I005')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C006', 'S006', 'I006')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C007', 'S007', 'I007')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C008', 'S008', 'I008')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C009', 'S009', 'I009')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C010', 'S010', 'I010')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C011', 'S011', 'I011')
INTO tutorial (courseid, studentid, instructorid) VALUES ('C012', 'S012', 'I012')
```

Select * from tutorial

```
select * from tutorial
```

ript Output x | Query Result x

SQL | All Rows Fetched: 30 in 0.004 seconds

	COURSEID	STUDENTID	INSTRUCTORID
1	C001	S001	I001
2	C001	S002	I002
3	C002	S002	I002
4	C002	S003	I003
5	C003	S003	I003
6	C003	S004	I004
7	C004	S004	I004
8	C004	S005	I005
9	C005	S005	I005
10	C005	S006	I006
11	C006	S006	I006

Figure 33:selected value

Web forms

Dashboard

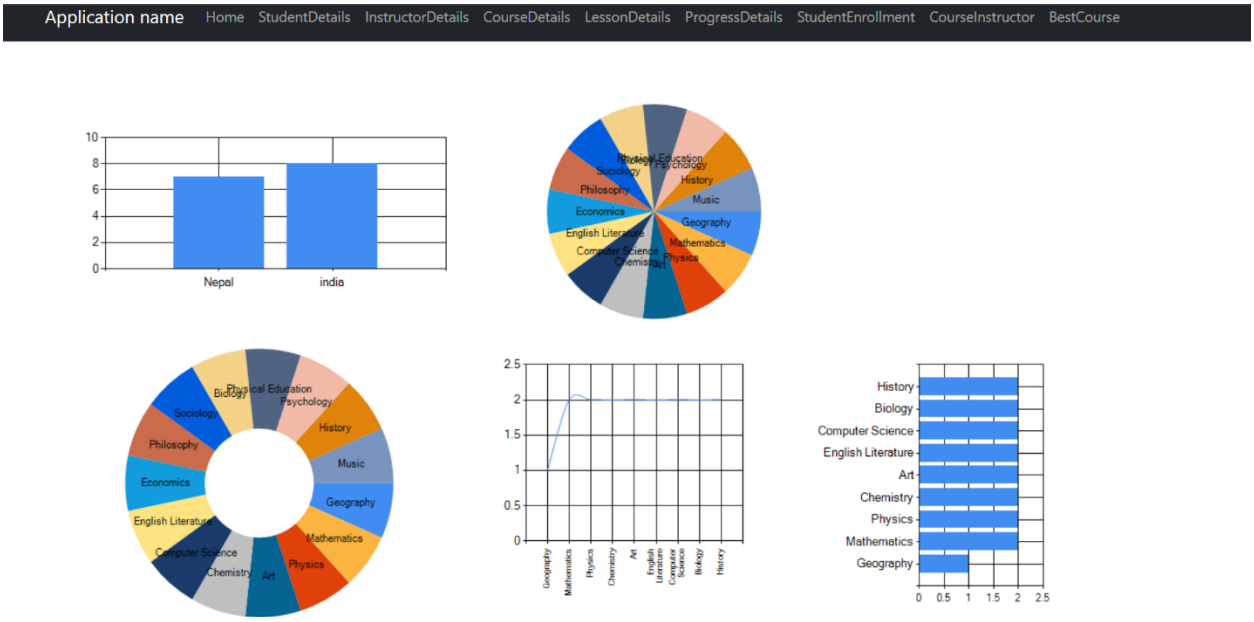


Figure 34:Dashboard

StudentDetails

Application name Home StudentDetails InstructorDetails CourseDetails LessonDetails ProgressDetails StudentEnrollment CourseInstructor BestCourse

	STUDENTID	STUDENT_NAME	CONTACT	DOB	EMAIL	COUNTRY
Edit Delete	S001	Sitaram Thapa	9841234567	2/15/1998 12:00:00 AM	sitaram.thapa@gmail.com	Nepal
Edit Delete	S002	Geeta Paudel	9812345678	5/20/2000 12:00:00 AM	geeta.paudel@gmail.com	Nepal
Edit Delete	S003	Manish Rana	9863456789	11/10/1999 12:00:00 AM	manish.rana@gmail.com	Nepal
Edit Delete	S004	Sunil Shrestha	9804567890	8/25/2001 12:00:00 AM	sunil.shrestha@gmail.com	Nepal
Edit Delete	S005	Anita Gurung	9815678901	4/30/1997 12:00:00 AM	anita.gurung@gmail.com	Nepal
Edit Delete	S006	Sushil Shah	9846789012	9/5/2000 12:00:00 AM	sushil.shah@gmail.com	Nepal
Edit Delete	S007	Rita Basnet	9817890123	12/12/1996 12:00:00 AM	rita.basnet@gmail.com	Nepal
Edit Delete	S008	Binod Lamichhane	9868901234	3/20/2002 12:00:00 AM	binod.lamichhane@gmail.com	india
Edit Delete	S009	Sanjib Thapa	9849012345	7/18/1998 12:00:00 AM	sanjib.thapa@gmail.com	india
Edit Delete	S010	Priyanka Pokharel	9810123456	10/22/1999 12:00:00 AM	priyanka.pokharel@gmail.com	india
Edit Delete	S011	Raju Rai	9851234567	1/5/2001 12:00:00 AM	raju.rai@gmail.com	india
Edit Delete	S012	Sanjeev Karki	9812345678	6/15/1997 12:00:00 AM	sanjeev.karki@gmail.com	india
Edit Delete	S013	Ajay Maharjan	9843456789	9/8/2002 12:00:00 AM	ajay.maharjan@gmail.com	india
Edit Delete	S014	Mina Shrestha	9814567890	12/3/1995 12:00:00 AM	mina.shrestha@gmail.com	india

Figure 35:student details

Instructor Details

Application name Home StudentDetails InstructorDetails CourseDetails LessonDetails ProgressDetails StudentEnrollment CourseInstructor BestCourse

	INSTRUCTORID	INSTRUCTORNAME	EMAIL
Edit Delete	I001	Sitaram Thapa	sitaram.thapa@gmail.com
Edit Delete	I002	Geeta Paudel	geeta.paudel@gmail.com
Edit Delete	I003	Manish Rana	manish.rana@gmail.com
Edit Delete	I004	Sunil Shrestha	sunil.shrestha@gmail.com
Edit Delete	I005	Anita Gurung	anita.gurung@gmail.com
Edit Delete	I006	Sushil Shah	sushil.shah@gmail.com
Edit Delete	I007	Rita Basnet	rita.basnet@gmail.com
Edit Delete	I008	Binod Lamichhane	binod.lamichhane@gmail.com
Edit Delete	I009	Sanjib Thapa	sanjib.thapa@gmail.com
Edit Delete	I010	Priyanka Pokharel	priyanka.pokharel@gmail.com
Edit Delete	I011	Raju Rai	raju.rai@gmail.com
Edit Delete	I012	Sanjeev Karki	sanjeev.karki@gmail.com
Edit Delete	I013	Ajay Maharjan	ajay.maharjan@gmail.com
Edit Delete	I014	Mina Shrestha	mina.shrestha@gmail.com

Figure 36:InstructorDetails

CourseDetails

Application name Home StudentDetails InstructorDetails CourseDetails LessonDetails ProgressDetails StudentEnrollment CourseInstructor BestCourse

	COURSEID	COURSENAME
Edit Delete	C001	Mathematics
Edit Delete	C002	English Literature
Edit Delete	C003	Computer Science
Edit Delete	C004	History
Edit Delete	C005	Biology
Edit Delete	C006	Chemistry
Edit Delete	C007	Physics
Edit Delete	C008	Art
Edit Delete	C009	Geography
Edit Delete	C010	Economics
Edit Delete	C011	Psychology
Edit Delete	C012	Sociology
Edit Delete	C013	Philosophy
Edit Delete	C014	Music

Figure 37:CourseDetails

LessonDetails

Application name Home StudentDetails InstructorDetails CourseDetails LessonDetails ProgressDetails StudentEnrollment CourseInstructor BestCourse

LESSON_NO	LESSONNAME	COURSEID	Course Title
L001	Algebra Basics	C001	Mathematics
L002	Introduction to Shakespeare	C002	English Literature
L003	Introduction to Programming	C003	Computer Science
L004	Ancient Civilizations	C004	History
L005	Cell Structure	C005	Biology
L006	Chemical Bonds	C006	Chemistry
L007	Newtonian Mechanics	C007	Physics
L008	Basic Drawing Techniques	C008	Art
L009	World Geography	C009	Geography
L010	Introduction to Microeconomics	C010	Economics
L011	Introduction to Psychology	C011	Psychology
L012	Societal Structures	C012	Sociology
L013	Philosophical Theories	C013	Philosophy

Figure 38:LessonDetails

Progress Details

Application name Home StudentDetails InstructorDetails CourseDetails LessonDetails ProgressDetails StudentEnrollment CourseInstructor BestCourse

	LESSONNO	STUDENTID	LESSONSTATUS	LAD	COURSEID
Edit Delete	L001	S001	Completed	3/15/2024 12:00:00 AM	C001
Edit Delete	L002	S002	In Progress	3/16/2024 12:00:00 AM	C002
Edit Delete	L003	S003	Not Started	3/17/2024 12:00:00 AM	C003
Edit Delete	L004	S004	Completed	3/18/2024 12:00:00 AM	C004
Edit Delete	L005	S005	In Progress	3/19/2024 12:00:00 AM	C005
Edit Delete	L006	S006	Not Started	3/20/2024 12:00:00 AM	C006
Edit Delete	L007	S007	Completed	3/21/2024 12:00:00 AM	C007
Edit Delete	L008	S008	In Progress	3/22/2024 12:00:00 AM	C008
Edit Delete	L009	S009	Not Started	3/23/2024 12:00:00 AM	C009
Edit Delete	L010	S010	Completed	3/24/2024 12:00:00 AM	C010

Figure 39:progressDetails

StudentEnrollment

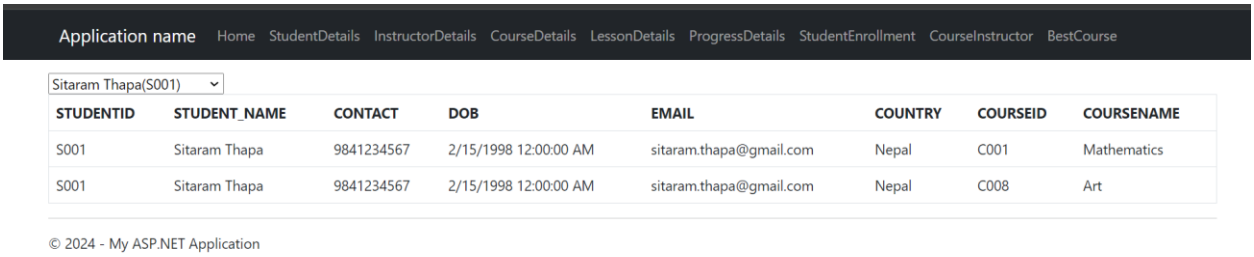


Figure 40:StudentEnrollment

CourseInstructor

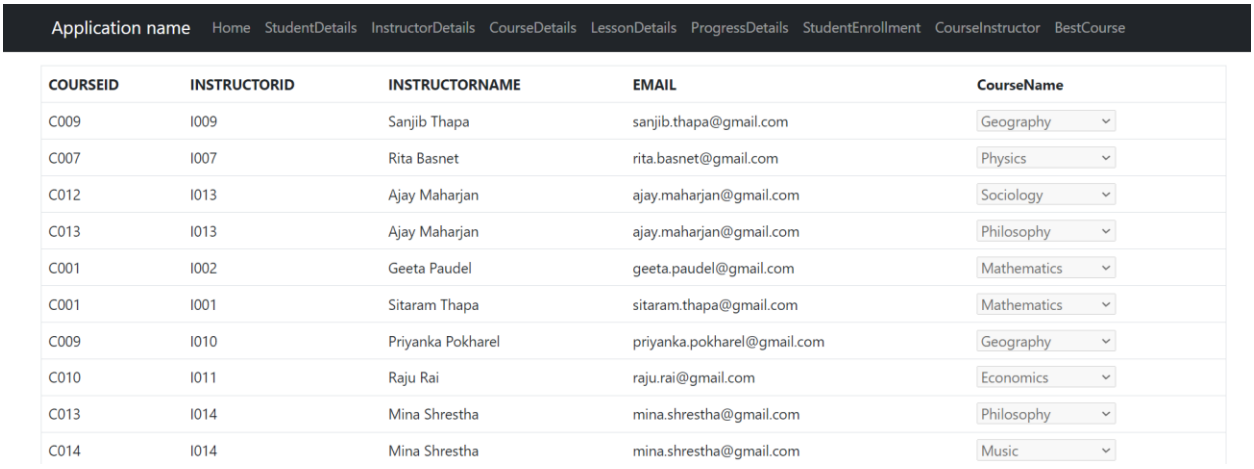


Figure 41:CourseInstructor

Best Course

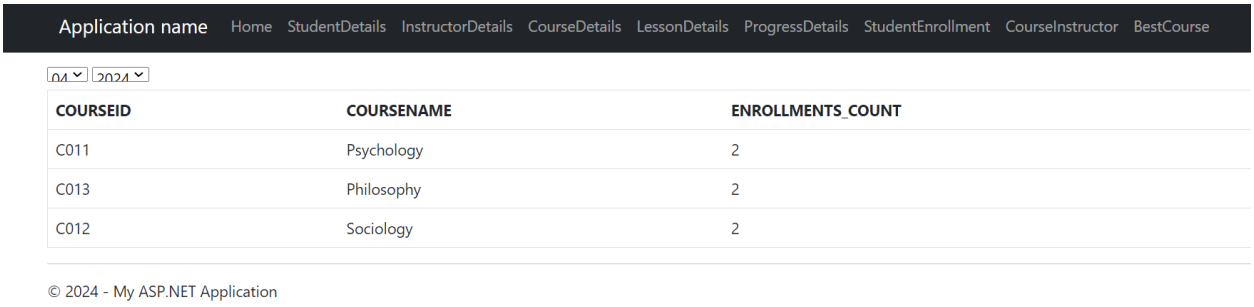


Figure 42:best Course

UserManual

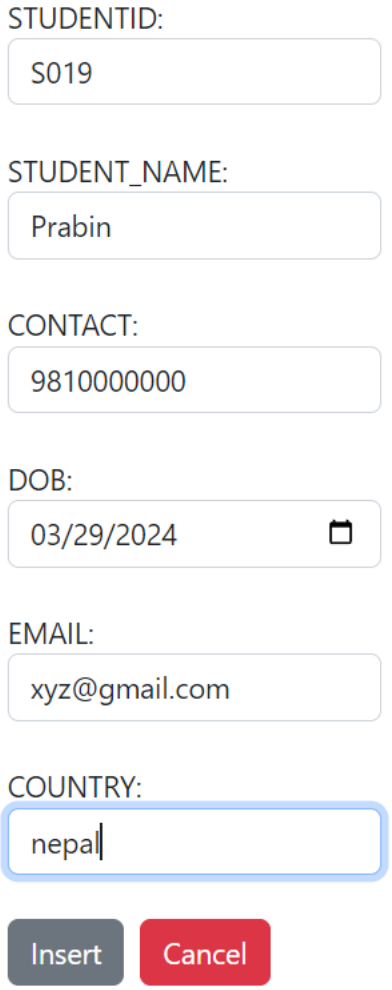


Figure 43:add student

Inserted values

Figure 44:New inserted data

Update values

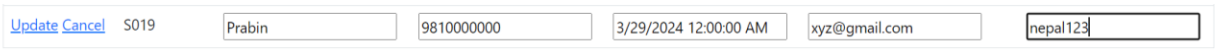


Figure 45:updating values

Updated data

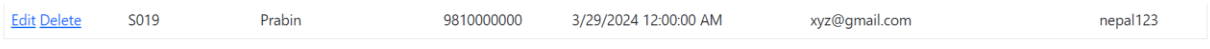


Figure 46:updated data

Add new instructor

Edit Delete	I013	Ajay Maharjan	ajay.maharjan@gmail.com
Edit Delete	I014	Mina Shrestha	mina.shrestha@gmail.com
Edit Delete	I015	Avinash Basnet	avinash.basnet@gmail.com

ADD NEW

Figure 47:add new instructor from add buttons

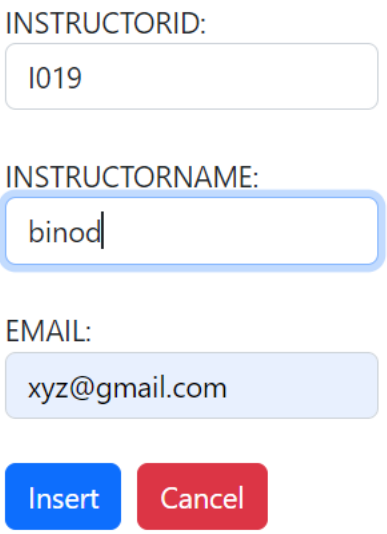


Figure 48:adding instructor

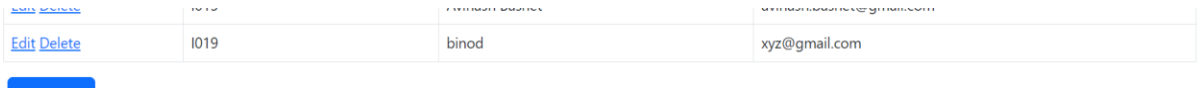
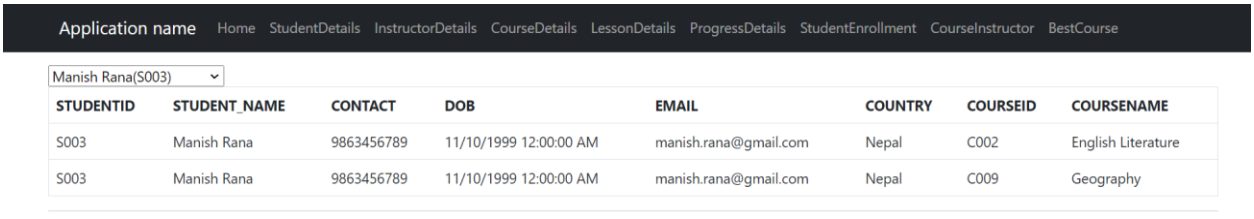


Figure 49:Added data

Complex form

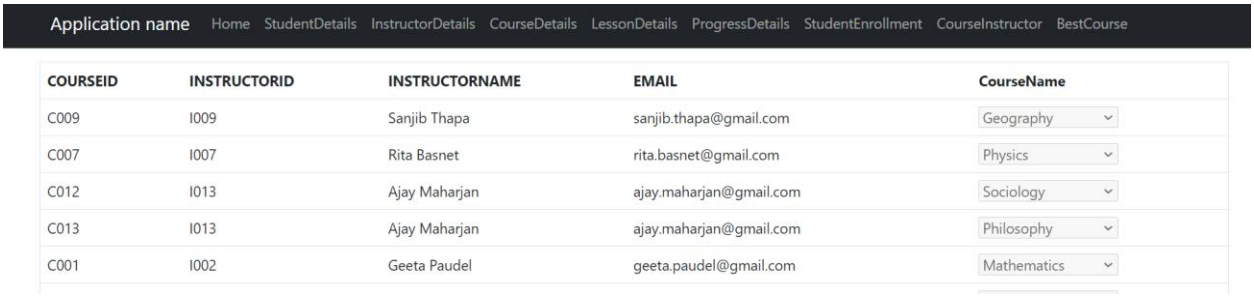
Details of students (studentEnrollment)



STUDENTID	STUDENT_NAME	CONTACT	DOB	EMAIL	COUNTRY	COURSEID	COURSENAME
S003	Manish Rana	9863456789	11/10/1999 12:00:00 AM	manish.rana@gmail.com	Nepal	C002	English Literature
S003	Manish Rana	9863456789	11/10/1999 12:00:00 AM	manish.rana@gmail.com	Nepal	C009	Geography

Figure 50:studentDetails based on enrollment

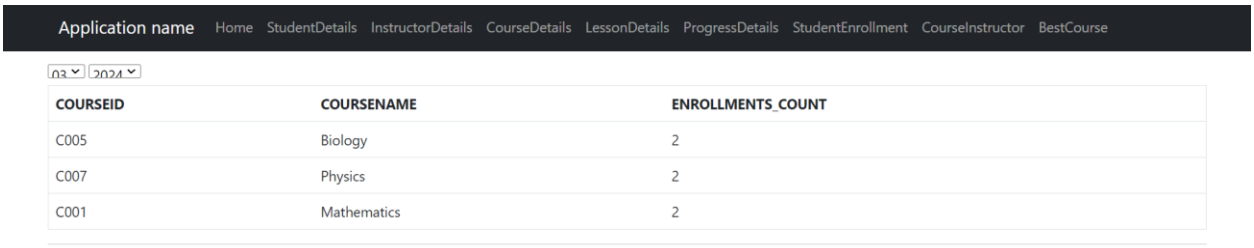
courseInstructor(courseInstructor in 2 courses)



COURSEID	INSTRUCTORID	INSTRUCTORNAME	EMAIL	CourseName
C009	I009	Sanjib Thapa	sanjib.thapa@gmail.com	Geography
C007	I007	Rita Basnet	rita.basnet@gmail.com	Physics
C012	I013	Ajay Maharjan	ajay.maharjan@gmail.com	Sociology
C013	I013	Ajay Maharjan	ajay.maharjan@gmail.com	Philosophy
C001	I002	Geeta Paudel	geeta.paudel@gmail.com	Mathematics

Figure 51:courseInstructorDetails

Top 3 course based on month



COURSEID	COURSENAME	ENROLLMENTS_COUNT
C005	Biology	2
C007	Physics	2
C001	Mathematics	2

Figure 52:top 3 course based on month

Conclusion:

This report discusses the concept of a database and its implementation in a database management system. A graphical user interface is used to interact with the system, and web forms are created to facilitate better interaction. The application includes fronted technology, backend technology, and a database for full operation. It allows students to enroll in multiple courses, with each course assigned to multiple instructors. Students can communicate with instructors for queries and track their progress. The project utilizes data modeler for database structure and scripts, and Oracle SQL developer for database management. Bootstrap framework is used for web technology, providing CSS classes for styling web documents and content display.

References

(w3sch, 2024) (Anon., 2023) (Anon., 2023)