Final of CPSC 332-01

Aatib Abdullah, Aarib Abdullah

Last 4 CWID:

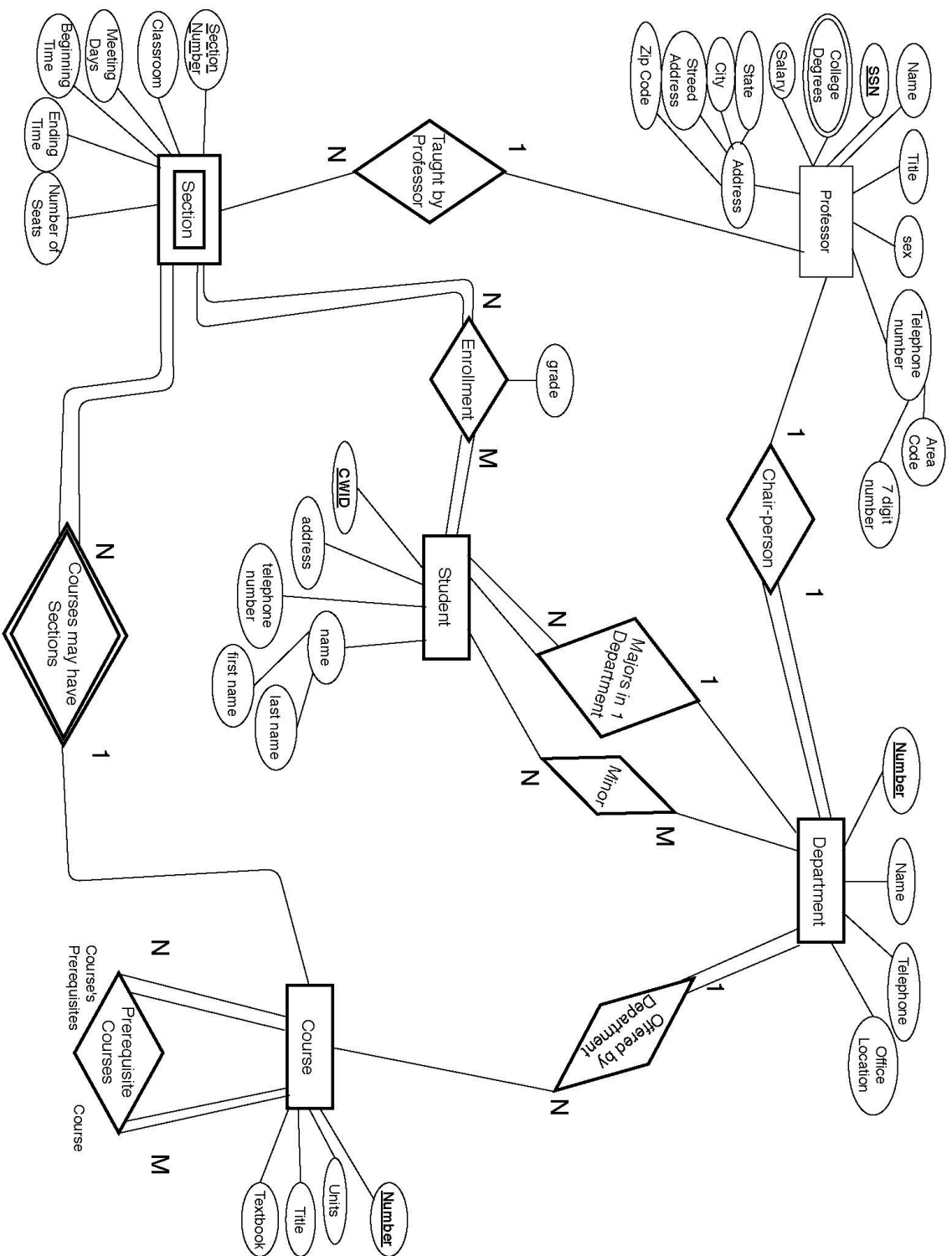0617
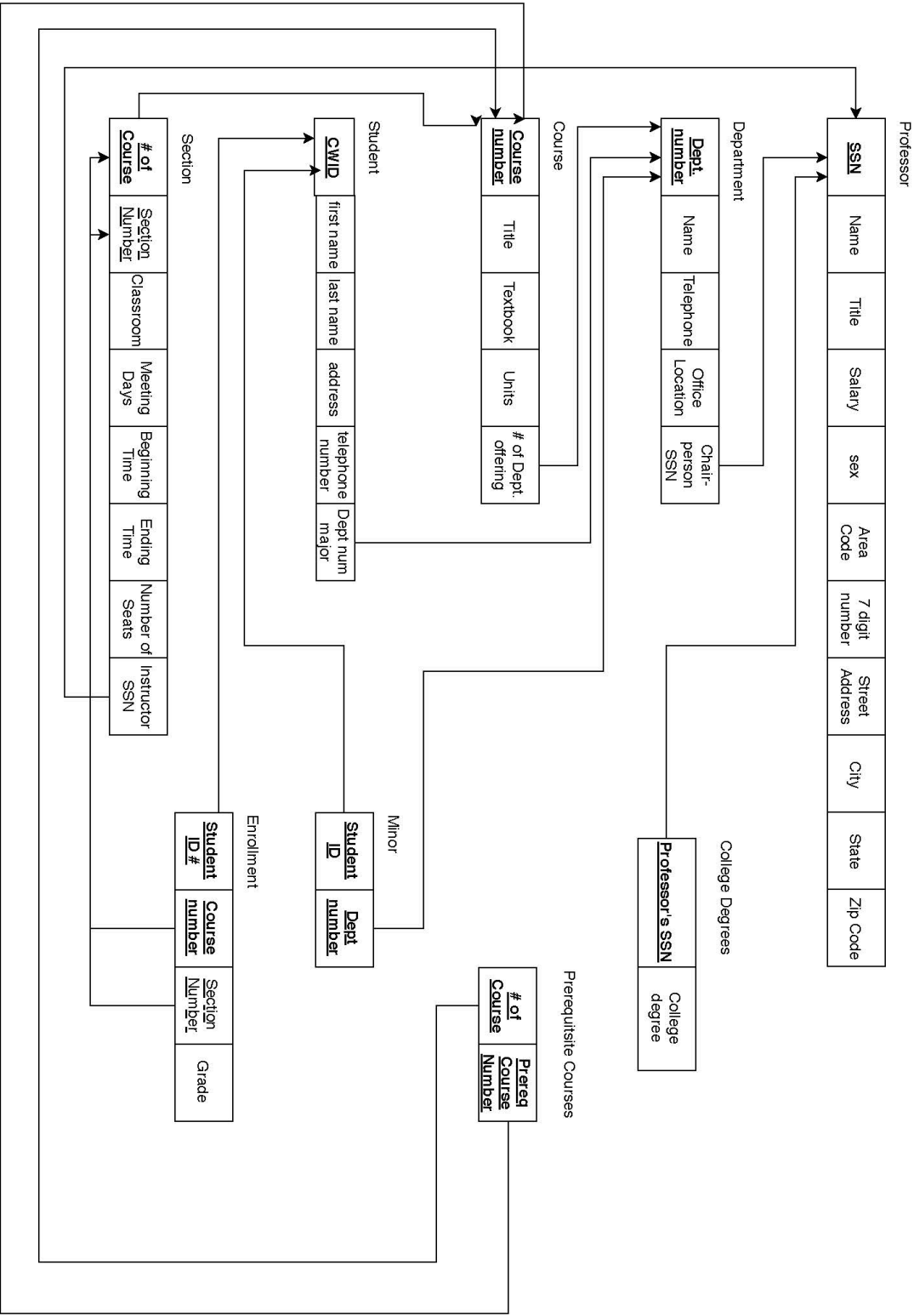
9473

The account number:

CS332A2 from Aatib Abdullah

THE WEBSITE:

http://ecs.fullerton.edu/~cs332a2

Professor

SSN	Name	Title	Salary	sex	Area Code	7 digit number	Street Address	City	State	Zip Code

Department

Dept. number	Name	Telephone	Office Location	Chair-person SSN

Course

Course number	Title	Textbook	Units	# of Dept. offering

Student

CWID	first name	last name	address	telephone number	Dept num major

Section

# of Course	Section Number	Classroom	Meeting Days	Beginning Time	Ending Time	Number of Seats	Instructor SSN

College Degrees

Professor's SSN	College degree

Minor

Student ID	Dept number

Enrollment

Student ID #	Course number	Section Number	Grade

Prerequisite Courses

# of Course	Prereq Course Number

The Primary Keys and Foreign Keys in Relational Mapping

Primary Keys:

SSN from Professor

Dept number from Department

CWID from Student

Course number from Cnum

# of Course from Section

Section Number from Section

Professor's SSN from College Degrees

# of Course from Prerequisite Course

Prerquisite Course Number from Prerequisite Course

Student ID in Minor

Dept number in Minor

Course number from Enrollment

Student ID from Enrollment

Foreign Keys:

Chair-person SSN from Department

# of Dept. offering from Course

Dept num major from Student

Instructor SSN from Section

Section number from Enrollment

Implementation of the tables

```
+----------------------+
| Tables_in_cs332a2    |
+----------------------+
| College_Degree       |
| Course               |
| Department           |
| Enrollment           |
| Minor                |
| Prerequisite_Courses |
| Professor            |
| Section              |
| Student              |
+----------------------+
9 rows in set (0.00 sec)
```

1. Implementing "Professor" Table:

```
MariaDB [cs332a2]> describe Professor;
+-------------+-------------------+------+-----+---------+-------+
| Field       | Type              | Null | Key | Default | Extra |
+-------------+-------------------+------+-----+---------+-------+
| SSN         | varchar(12)       | NO   | PRI |         |       |
| Name        | varchar(30)       | YES  |     | NULL    |       |
| Title       | varchar(10)       | YES  |     | NULL    |       |
| Salary      | varchar(10)       | YES  |     | NULL    |       |
| Sex         | enum('M','F')     | YES  |     | NULL    |       |
| Area_code   | int(10) unsigned  | YES  |     | NULL    |       |
| Seven_digit | int(10) unsigned  | YES  |     | NULL    |       |
| Stree_add   | text              | YES  |     | NULL    |       |
| City        | varchar(30)       | YES  |     | NULL    |       |
| State       | varchar(30)       | YES  |     | NULL    |       |
| Zip         | varchar(20)       | YES  |     | NULL    |       |
+-------------+-------------------+------+-----+---------+-------+
11 rows in set (0.00 sec)
```

CREATE TABLE `Professor` (

  SSN varchar(12),

  Name varchar(30) ,

  Title varchar(10) ,

Salary varchar(10) ,

Sex enum('M','F') ,

Area_code int(10) unsigned ,

Seven_digit int(10) unsigned ,

Stree_add text,

City varchar(30) ,

State varchar(30) ,

Zip varchar(20),

PRIMARY KEY (SSN);

2. Implementing Department table

```
MariaDB [cs332a2]> show columns from Department;
+----------------+-----------------+------+-----+---------+-------+
| Field          | Type            | Null | Key | Default | Extra |
+----------------+-----------------+------+-----+---------+-------+
| Dept_number    | int(10) unsigned| NO   | PRI | 0       |       |
| DName          | text            | YES  |     | NULL    |       |
| Telephone      | varchar(15)     | YES  |     | NULL    |       |
| Office_Location| text            | YES  |     | NULL    |       |
| Chair_SSN      | varchar(12)     | YES  | MUL | NULL    |       |
+----------------+-----------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

CREATE TABLE `Department` (

Dept_number int(10) unsigned,

DName text,

Telephone varchar(15) ,

Office_Location text,

Chair_SSN varchar(12) ,

PRIMARY KEY (`Dept_number`),

foreign key (`Chair_SSN`) references `Professor` (`SSN`));

3. Implementing Course table

```
+----------------+--------------------+------+-----+----------+-------+
| Field          | Type               | Null | Key | Default  | Extra |
+----------------+--------------------+------+-----+----------+-------+
| Course_number  | varchar(10)        | NO   | PRI |          |       |
| Title          | text               | YES  |     | NULL     |       |
| Textbook       | text               | YES  |     | NULL     |       |
| Units          | int(10) unsigned   | YES  |     | NULL     |       |
| Dept_n         | int(10) unsigned   | YES  | MUL | NULL     |       |
+----------------+--------------------+------+-----+----------+-------+
5 rows in set (0.00 sec)
```

Create Table: CREATE TABLE `Course` (

Course_number varchar(10) '',

Title text,

Textbook text,

Units int(10) unsigned,

Dept_n int(10) unsigned,

PRIMARY KEY (Course_number),

foreign key (Dept_n) references `Department (Dept_number);

4. Implementing Student table

```
MariaDB [cs332a2]> show columns from Student;
+-------------+--------------------+------+-----+----------+-------+
| Field       | Type               | Null | Key | Default  | Extra |
+-------------+--------------------+------+-----+----------+-------+
| CWID        | int(10) unsigned   | NO   | PRI | 0        |       |
| First_name  | text               | YES  |     | NULL     |       |
| Last_name   | text               | YES  |     | NULL     |       |
| Address     | text               | YES  |     | NULL     |       |
| Phone_Num   | varchar(15)        | YES  |     | NULL     |       |
| DNum        | int(10) unsigned   | YES  | MUL | NULL     |       |
+-------------+--------------------+------+-----+----------+-------+
6 rows in set (0.00 sec)
```

CREATE TABLE `Student` (

CWID int(10) unsigned ,

First_name text,

Last_name text,

Address text,

Phone_Num varchar(15) ,

DNum int(10) unsigned ,

PRIMARY KEY (CWID),

KEY DNum (DNum),

FOREIGN KEY (DNum) REFERENCES Department (Dept_number));

5. Implementing Section table

```
MariaDB [cs332a2]> show columns from Section;
+----------------+-------------------+------+-----+---------+-------+
| Field          | Type              | Null | Key | Default | Extra |
+----------------+-------------------+------+-----+---------+-------+
| Cnum           | varchar(10)       | NO   | PRI |         |       |
| Section_num    | int(10) unsigned  | NO   | PRI | 0       |       |
| Classroom      | varchar(10)       | YES  |     | NULL    |       |
| Meeting_Days   | varchar(7)        | YES  |     | NULL    |       |
| Beginning_Time | varchar(10)       | YES  |     | NULL    |       |
| Ending_Time    | varchar(10)       | YES  |     | NULL    |       |
| Number_of_Seats| int(10) unsigned  | YES  |     | NULL    |       |
| Instructor_SSN | varchar(12)       | YES  | MUL | NULL    |       |
+----------------+-------------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

CREATE TABLE Section (

Cnum varchar(10) ,

Section_num int(10) unsigned ,

Classroom varchar(10) ,

Meeting_Days varchar(7) ,

Beginning_Time varchar(10) ,

Ending_Time varchar(10) ,

Number_of_Seats int(10) unsigned ,

Instructor_SSN varchar(12) ,

PRIMARY KEY (Section_num, Cnum),

KEY Cnum (Cnum),

KEY Instructor_SSN (Instructor_SSN),

FOREIGN KEY (Cnum) REFERENCES Course (Course_number),

FOREIGN KEY (Instructor_SSN) REFERENCES Professor (SSN));

6. Implementing College_Degree table

```
MariaDB [cs332a2]> show columns from College_Degree;
+----------------+--------------+------+-----+---------+-------+
| Field          | Type         | Null | Key | Default | Extra |
+----------------+--------------+------+-----+---------+-------+
| Prof_ssn       | varchar(12)  | NO   | PRI |         |       |
| College_Degree | varchar(100) | YES  |     | NULL    |       |
+----------------+--------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

CREATE TABLE College_Degree (

  Prof_ssn varchar(12) ,

  College_Degree varchar(100) ,

  PRIMARY KEY (Prof_ssn),

  FOREIGN KEY (Prof_ssn) REFERENCES Professor (SSN));

7. Implementing Prerequesite Course table

```
MariaDB [cs332a2]> show columns from Prerequisite_Courses;
+--------------------+-------------+------+-----+---------+-------+
| Field              | Type        | Null | Key | Default | Extra |
+--------------------+-------------+------+-----+---------+-------+
| Cnumber            | varchar(10) | NO   | PRI |         |       |
| Prereq_CourseNumber| varchar(10) | NO   | PRI |         |       |
+--------------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

CREATE TABLE Prerequisite_Courses (

  Cnumber varchar(10) ,

  Prereq_CourseNumber varchar(10) ,

  PRIMARY KEY (Cnumber,Prereq_CourseNumber),

  FOREIGN KEY (Cnumber) REFERENCES Course (Course_number),

  FOREIGN KEY (Cnumber) REFERENCES Course (Course_number));

8. Implementing Prerequesite Course table

```
MariaDB [cs332a2]> show columns from Minor;
+----------+-------------------+------+-----+---------+-------+
| Field    | Type              | Null | Key | Default | Extra |
+----------+-------------------+------+-----+---------+-------+
| Stud_ID  | int(10) unsigned  | NO   | PRI | 0       |       |
| Dept_num | int(10) unsigned  | NO   | PRI | 0       |       |
+----------+-------------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

CREATE TABLE Minor(

Stud_ID int(10) unsigned ,

Dept_num int(10) unsigned ,

PRIMARY KEY (Stud_ID,Dept_num),

KEY Dept_num (Dept_num),

FOREIGN KEY (Stud_ID) REFERENCES Student (CWID),

FOREIGN KEY (Dept_num) REFERENCES Department (Dept_number));

9. Implement Enrollment table

```
MariaDB [cs332a2]> show columns from Enrollment;
+----------+-----------------------------------------------------------+------+-----+---------+-------+
| Field    | Type                                                      | Null | Key | Default | Extra |
+----------+-----------------------------------------------------------+------+-----+---------+-------+
| SID      | int(10) unsigned                                          | NO   | PRI | 0       |       |
| Course_N | varchar(10)                                               | NO   | PRI |         |       |
| Section_N| int(10) unsigned                                          | NO   | PRI | 0       |       |
| Grade    | enum('A','A-','B+','B','B-','C+','C','C-','D','F','W')     | YES  |     | NULL    |       |
+----------+-----------------------------------------------------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

CREATE TABLE `Enrollment` (

SID int(10) unsigned ,

Course_N varchar(10) ,

Section_N int(10) unsigned ,

Grade enum('A','A-','B+','B','B-','C+','C','C-','D','F','W') ,

PRIMARY KEY (SID,Course_N,Section_N),

KEY Course_N (Course_N),

KEY Secti3on_N (Section_N),

FOREIGN KEY (SID) REFERENCES Student (CWID),

FOREIGN KEY (Course_N) REFERENCES Section (Cnum),

FOREIGN KEY (Section_N) REFERENCES Section (Section_num));

Inputting Values for each Table

Inserting into Professor

INSERT INTO Professor(170-970-157 , 'Boris Slav'   , 'Ass_Prof' , 75000 , 'M' ,310 , 1809280 , 514 South Ward Avenue , Compton, California, 90220)

INSERT INTO Professor(311-222-555, 'Mickey Mouse'   , 'Adj_Instr' , 60000 , 'M'   , 714 , 1234567 , 700 Lido Park Dr UNIT 33, Newport Beach, 'California', 92663)

INSERT INTO Professor(949-711-911, 'Aiko Yumi'   , 'Professor' , 100000 , 'F'   , 949 , 1816009 , 5921 San Remo Way , Yorba Linda, California, 92886)

```
MariaDB [cs332a2]> SELECT * FROM Professor;
+-------------+--------------+-----------+--------+-----+-----------+-------------+----------------------+--------------+------------+-------+
| SSN         | Name         | Title     | Salary | Sex | Area_code | Seven_digit | Stree_add            | City         | State      | Zip   |
+-------------+--------------+-----------+--------+-----+-----------+-------------+----------------------+--------------+------------+-------+
| 170-970-157 | Boris Slav   | Ass_Prof  | 75000  | M   |       310 |     1809280 | 514 South Ward Avenue | Compton      | California | 90220 |
| 311-222-555 | Mickey Mouse | Adj_Instr | 60000  | M   |       714 |     1234567 | 700 Lido Park Dr UNIT 33 | Newport Beach | California | 92663 |
| 949-711-911 | Aiko Yumi    | Professor | 100000 | F   |       949 |     1816009 | 5921 San Remo Way    | Yorba Linda  | California | 92886 |
+-------------+--------------+-----------+--------+-----+-----------+-------------+----------------------+--------------+------------+-------+
3 rows in set (0.00 sec)
```

Inserting into Department

INSERT INTO Department(1000, 'Computer Science', '(657)-278-3700', '800 N. State College Blvd. Fullerton, CA 92834, CS-522', '170-970-157')

INSERT INTO Department(9000, 'Physics', '(657) 278-3366', '800 N. State College Blvd. Fullerton, CA 92834, MCH-611', '949-711-911')

```
MariaDB [cs332a2]> SELECT * FROM Department;
+-------------+------------------+----------------+----------------------------------------------+-------------+
| Dept_number | DName            | Telephone      | Office_Location                              | Chair_SSN   |
+-------------+------------------+----------------+----------------------------------------------+-------------+
|        1000 | Computer Science | (657)-278-3700 | 800 N. State College Blvd.
Fullerton, CA 92834, CS-522  | 170-970-157 |
|        9000 | Physics          | (657) 278-3366 | 800 N. State College Blvd.
Fullerton, CA 92834, MCH-611 | 949-711-911 |
+-------------+------------------+----------------+----------------------------------------------+-------------+
2 rows in set (0.00 sec)
```

Inserting into Course

INSERT INTO Course('1332 ', ' Databases & Filestructures',' The Essentials of Databases and File Structures ', 3 , 1000)

INSERT INTO Course('1335 ', ' Algorithmic Engineering',' ADITA 9.1 ', 3 , 1000)

INSERT INTO Course('9225 ', ' Physics I',' The Fund. Of Physics based on Calculus', 4 , 9000)

INSERT INTO Course('9225 ', ' Physics II',' The Fund. Of Physics based on Calculus', 4 , 9000)

```
MariaDB [cs332a2]> SELECT * FROM Course;
+---------------+------------------------+--------------------------------------------------+-------+--------+
| Course_number | Title                  | Textbook                                         | Units | Dept_n |
+---------------+------------------------+--------------------------------------------------+-------+--------+
| 1332          | Databases & Filestructures | The Essentials of Databases and File Structures | 3 | 1000 |
| 1335          | Algorithmic Engineering | ADITA 9.1                                       | 3 | 1000 |
| 9225          | Physics I              | The Fund. Of Physics based on Calculus          | 4 | 9000 |
| 9226          | Physics II             | The Fund. Of Physics based on Calculus          | 4 | 9000 |
+---------------+------------------------+--------------------------------------------------+-------+--------+
4 rows in set (0.00 sec)
```

Inserting into Student

INSERT INTO Student(111152222, 'Bart', 'Simpson', 'Springfield Drive, Anaheim, CA 92805', '310-290-2277', 1000)

INSERT INTO Student(123456789, 'John', 'Cena', '855 E Magrinal Street, Anaheim, CA 92805', '615-190-3307', 1000)

INSERT INTO Student(196417761, 'Homer', 'Simpson', 'Springfield Drive, Anaheim, CA 92805', '310-711-9012', 1000)

INSERT INTO Student(220111012 , 'Man', 'Dan', 'Simplicity Street, Anaheim, CA 92801', '714-123-4567', 1000)

INSERT INTO Student(797911711, 'Jack', 'Septiceye', 'Irishmen Street, Yorba Lindaistan, CA 92806', '949-711-9011', 1000)

INSERT INTO Student(617888950, 'Terry', 'Bart', 'Richard Street, Fullerton, CA 92804', '714-010-0003', 1000)

INSERT INTO Student(711012119, 'Daddy', 'Lovestein', 'Middle Street, Anaheim, CA 92802', '714-111-1989', 1000)

INSERT INTO Student(987456123, 'Mark', 'Iplier', 'Youtuber Street, Yorba Lindaistan, CA 92804', '714-888-7110', 1000)

```
MariaDB [cs332a2]> SELECT * FROM Student;
+-----------+------------+-----------+----------------------------------------------+--------------+------+
| CWID      | First_name | Last_name | Address                                      | Phone_Num    | DNum |
+-----------+------------+-----------+----------------------------------------------+--------------+------+
| 111152222 | Bart       | Simpson   | Springfield Drive, Anaheim, CA 92805         | 310-290-2277 | 1000 |
| 123456789 | John       | Cena      | 855 E Magrinal Street, Anaheim, CA 92805     | 615-190-3307 | 1000 |
| 196417761 | Homer      | Simpson   | Springfield Drive, Anaheim, CA 92805         | 310-711-9012 | 1000 |
| 220111012 | Man        | Dan       | Simplicity Street, Anaheim, CA 92801         | 714-123-4567 | 1000 |
| 617888950 | Terry      | Bart      | Richard Street, Fullerton, CA 92804          | 714-010-0003 | 1000 |
| 711012119 | Daddy      | Lovestein | Middle Street, Anaheim, CA 92802             | 714-111-1989 | 1000 |
| 797911711 | Jack       | Septiceye | Irishmen Street, Yorba Lindaistan, CA 92806  | 949-711-9011 | 1000 |
| 987456123 | Mark       | Iplier    | Youtuber Street, Yorba Lindaistan, CA 92804  | 714-888-7110 | 1000 |
+-----------+------------+-----------+----------------------------------------------+--------------+------+
8 rows in set (0.00 sec)
```

Inserting into Section

```
INSERT INTO Section( '1332', 1,' E-202',' MW',' 1:00',' 2:15', 30,' 311-222-555' )

INSERT INTO Section( '1335', 1,' CS-104',' MW', ' 1:00',' 2:15',30 ,' 170-970-157' )

INSERT INTO Section( '9225', 1,' MCH-600',' MW',' 5:30',' 6:45', 30 ,' 949-711-911' )

INSERT INTO Section( '9226', 1,' MCH-600',' MW',' 4:00',' 5:15' 30, ,' 949-711-911' )

INSERT INTO Section( '1332', 2,' E-202',' TTh',' 1:00',' 2:30', 30,' 311-222-555' )

INSERT INTO Section( '1335', 2,' CS-104',' TTh',' 1:00',' 2:15', 30,' 170-970-157' )

INSERT INTO Section( '9225', 2,' MCH-600',' TTh',' 4:00',' 5:15', 30 ,' 949-711-911' )

INSERT INTO Section( '9226', 2,' MCH-600',' TTh',' 2:45',' 3:30', 30,' 949-711-911' )

INSERT INTO Section( '1332', 3,' E-202',' MW',' 3:00',' 4:30', 30 ,' 311-222-555' )

INSERT INTO Section( '1335', 3,' CS-104',' MW',' 3:00',' 4:15', 30 ,' 170-970-157' )

INSERT INTO Section( '9225', 3,' MCH-600',' MW',' 12:00',' 1:15', 30 ,' 949-711-911' )

INSERT INTO Section( '9226', 3,' MCH-600',' MW',' 1:30',' 2:45', 30,' 949-711-911' )

INSERT INTO Section( '1332', 4,' E-202',' TTh',' 3:00',' 4:30', 30 ,' 311-222-555' )

INSERT INTO Section( '1335', 4,' CS-104',' TTh', ' 3:00',' 4:30', 30 ,' 170-970-157' )

INSERT INTO Section( '9225', 4,' MCH-600',' TTh',' 11:00 AM',' 12:15', 30,' 949-711-911' )

INSERT INTO Section( '9226', 4,' MCH-600',' TTh',' 12:30',' 1:15', 30,' 949-711-911' )

INSERT INTO Section( '1332', 5,' E-202',' F',' 12:00',' 2:45', 30 ,' 311-222-555' )

INSERT INTO Section( '1335', 5,' CS-104',' F',' 8:00 AM',' 10:45 AM', 30,' 170-970-157' )

INSERT INTO Section( '9225', 5,' MCH-600',' F',' 8:00 AM',' 11:45', 30,' 949-711-911' )

INSERT INTO Section( '9226', 5,' MCH-600',' F',' 12:00',' 2:45', 30 ,' 949-711-911' )

INSERT INTO Section( '1332', 6,' E-202','T',' 5:00',' 7:45', 30 ,' 311-222-555' )

INSERT INTO Section( '1335', 6,' CS-104','M',' 8:00 AM',' 10:45 AM', 30 ,' 170-970-157' )

INSERT INTO Section( '9225', 6,' MCH-600','M',' 8:00 AM',' 11:45', 30 ,' 949-711-911' )

INSERT INTO Section( '9226', 6,' MCH-600','T',' 5:00',' 7:45', 30,' 949-711-911' )
```

```
Database changed
MariaDB [cs332a2]> SELECT * FROM Section;
+-------+-------------+-----------+--------------+----------------+-------------+-----------------+----------------+
| Cnum  | Section_num | Classroom | Meeting_Days | Beginning_Time | Ending_Time | Number_of_Seats | Instructor_SSN |
+-------+-------------+-----------+--------------+----------------+-------------+-----------------+----------------+
| 1332  |           1 | E-202     | MW           | 1:00           | 2:15        |              30 | 311-222-555    |
| 1335  |           1 | CS-104    | MW           | 1:00           | 2:15        |              30 | 170-970-157    |
| 9225  |           1 | MCH-600   | MW           | 5:30           | 6:45        |              30 | 949-711-911    |
| 9226  |           1 | MCH-600   | MW           | 4:00           | 5:15        |              30 | 949-711-911    |
| 1332  |           2 | E-202     | TTh          | 1:00           | 2:30        |              30 | 311-222-555    |
| 1335  |           2 | CS-104    | TTh          | 1:00           | 2:15        |              30 | 170-970-157    |
| 9225  |           2 | MCH-600   | TTh          | 4:00           | 5:15        |              30 | 949-711-911    |
| 9226  |           2 | MCH-600   | TTh          | 2:45           | 3:30        |              30 | 949-711-911    |
| 1332  |           3 | E-202     | MW           | 3:00           | 4:30        |              30 | 311-222-555    |
| 1335  |           3 | CS-104    | MW           | 3:00           | 4:15        |              30 | 170-970-157    |
| 9225  |           3 | MCH-600   | MW           | 12:00          | 1:15        |              30 | 949-711-911    |
| 9226  |           3 | MCH-600   | MW           | 1:30           | 2:45        |              30 | 949-711-911    |
| 1332  |           4 | E-202     | TTh          | 3:00           | 4:30        |              30 | 311-222-555    |
| 1335  |           4 | CS-104    | TTh          | 3:00           | 4:30        |              30 | 170-970-157    |
| 9225  |           4 | MCH-600   | TTh          | 11:00 AM       | 12:15       |              30 | 949-711-911    |
| 9226  |           4 | MCH-600   | TTh          | 12:30          | 1:15        |              30 | 949-711-911    |
| 1332  |           5 | E-202     | F            | 12:00          | 2:45        |              30 | 311-222-555    |
| 1335  |           5 | CS-104    | F            | 8:00 AM        | 10:45 AM    |              30 | 170-970-157    |
| 9225  |           5 | MCH-600   | F            | 8:00 AM        | 11:45       |              30 | 949-711-911    |
| 9226  |           5 | MCH-600   | F            | 12:00          | 2:45        |              30 | 949-711-911    |
| 1332  |           6 | E-202     | T            | 5:00           | 7:45        |              30 | 311-222-555    |
| 1335  |           6 | CS-104    | M            | 8:00 AM        | 10:45 AM    |              30 | 170-970-157    |
| 9225  |           6 | MCH-600   | M            | 8:00 AM        | 11:45       |              30 | 949-711-911    |
| 9226  |           6 | MCH-600   | T            | 5:00           | 7:45        |              30 | 949-711-911    |
+-------+-------------+-----------+--------------+----------------+-------------+-----------------+----------------+
```

Inserting into College_Degrees

INSERT INTO College_Degrees('170-970-157', 'BS, Computer Science')

INSERT INTO College_Degrees('311-222-555', 'BS, Computer Science')

INSERT INTO College_Degrees('949-711-911', 'BS,Physics & Phd, Physics')

```
MariaDB [cs332a2]> SELECT * FROM College_Degree
    -> ;
+-------------+---------------------------+
| Prof_ssn    | College_Degree            |
+-------------+---------------------------+
| 170-970-157 | BS, Computer Science      |
| 311-222-555 | BS, Computer Science      |
| 949-711-911 | BS,Physics & Phd, Physics |
+-------------+---------------------------+
3 rows in set (0.00 sec)
```

Inserting into Prequisite_Courses

INSERT INTO Prequisite_Courses('9226' , '9225')

```
of the right syntax to use near 'FORM Prerequisite_cour
MariaDB [cs332a2]> SELECT * FROM Prerequisite_Courses;
+---------+--------------------+
| Cnumber | Prereq_CourseNumber |
+---------+--------------------+
| 9226    | 9225               |
+---------+--------------------+
1 row in set (0.00 sec)
```

Inserting into Minor

INSERT INTO Minor(111152222 , 9000)

INSERT INTO Minor(196417761 , 9000)

```
MariaDB [cs332a2]> SELECT * FROM Minor;
+-----------+----------+
| Stud_ID   | Dept_num |
+-----------+----------+
| 111152222 |     9000 |
| 196417761 |     9000 |
+-----------+----------+
2 rows in set (0.00 sec)
```

Inserting into Enrollment

INSERT INTO Enrollment(111152222, ' 1335 ', 1 , ' B ')

INSERT INTO Enrollment(111152222, ' 9226 ', 6, ' C+ ')

INSERT INTO Enrollment(123456789 , '1335 ', 1, ' C- ')

INSERT INTO Enrollment(123456789 , '9226 ', 2 , 'B ')

INSERT INTO Enrollment(196417761 , '1335 ', 1 , 'A')

INSERT INTO Enrollment(196417761, '9226 ', 5, 'C ')

INSERT INTO Enrollment(220111012, ' 1332', 4 , ' B')

INSERT INTO Enrollment(220111012, '1335 ', 2, 'B')

INSERT INTO Enrollment(220111012 , '9225 ', 5, 'B-')

INSERT INTO Enrollment(617888950, '1335 ', 2 , 'B')

INSERT INTO Enrollment(617888950, '9226 ', 5, 'A')

INSERT INTO Enrollment(711012119 , '1332 ', 4, ' B')

INSERT INTO Enrollment(711012119 , '1335 ', ,2 ' B')

INSERT INTO Enrollment(711012119 , ' 9225', 5, ' B')

INSERT INTO Enrollment(797911711, '1332 ', 1, 'A ')

INSERT INTO Enrollment(797911711, '1335 ', 3, ' A')

INSERT INTO Enrollment(797911711 , '9225 ', 5 , ' A')

INSERT INTO Enrollment(987456123, ' 1332', 1, ' C')

INSERT INTO Enrollment(987456123 , '1335 ', 3, 'A ')

INSERT INTO Enrollment(987456123 , '9225 ', 5, ' A')

```
MariaDB [cs332a2]> SELECT * FROM Enrollment;
+-----------+----------+-----------+-------+
| SID       | Course_N | Section_N | Grade |
+-----------+----------+-----------+-------+
| 111152222 | 1335     |         1 | B     |
| 111152222 | 9226     |         6 | C+    |
| 123456789 | 1335     |         1 | C-    |
| 123456789 | 9226     |         2 | B     |
| 196417761 | 1335     |         1 | A     |
| 196417761 | 9226     |         5 | C     |
| 220111012 | 1332     |         4 | B     |
| 220111012 | 1335     |         2 | B     |
| 220111012 | 9225     |         5 | B-    |
| 617888950 | 1335     |         2 | B     |
| 617888950 | 9226     |         5 | A     |
| 711012119 | 1332     |         4 | B     |
| 711012119 | 1335     |         2 | B     |
| 711012119 | 9225     |         5 | B     |
| 797911711 | 1332     |         1 | A     |
| 797911711 | 1335     |         3 | A     |
| 797911711 | 9225     |         5 | A     |
| 987456123 | 1332     |         1 | C     |
| 987456123 | 1335     |         3 | A     |
| 987456123 | 9225     |         5 | A     |
+-----------+----------+-----------+-------+
20 rows in set (0.01 sec)
```

The Queries Implemented

Professor –

a.

SELECT Course.Title, Classroom, Meeting_Days,
Beginning_time, Ending_time FROM Professor, Section, Course
WHERE Professor.SSN = '$prof_ssn' AND Professor.SSN = Section.Instructor_SSN
AND Cnum = Course_number

```
MariaDB [cs332a2]> SELECT Course.Title, Classroom, Meeting_Days, Beginning_Time, Ending_Time
    -> FROM Professor, Section, Course
    -> Where Professor.SSN = '949-711-911' AND Professor.SSN=Section.Instructor_SSN AND Cnum = Course_number;
+------------+-----------+--------------+----------------+-------------+
| Title      | Classroom | Meeting_Days | Beginning_Time | Ending_Time |
+------------+-----------+--------------+----------------+-------------+
| Physics I  | MCH-600   | MW           | 5:30           | 6:45        |
| Physics I  | MCH-600   | TTh          | 4:00           | 5:15        |
| Physics I  | MCH-600   | MW           | 12:00          | 1:15        |
| Physics I  | MCH-600   | TTh          | 11:00 AM       | 12:15       |
| Physics I  | MCH-600   | F            | 8:00 AM        | 11:45       |
| Physics I  | MCH-600   | M            | 8:00 AM        | 11:45       |
| Physics II | MCH-600   | MW           | 4:00           | 5:15        |
| Physics II | MCH-600   | TTh          | 2:45           | 3:30        |
| Physics II | MCH-600   | MW           | 1:30           | 2:45        |
| Physics II | MCH-600   | TTh          | 12:30          | 1:15        |
| Physics II | MCH-600   | F            | 12:00          | 2:45        |
| Physics II | MCH-600   | T            | 5:00           | 7:45        |
+------------+-----------+--------------+----------------+-------------+
12 rows in set (0.00 sec)
```

b.

SELECT Grade, COUNT(Grade) AS Num_of_Students

FROM Course, Section, Enrollment

WHERE Course_number = '$course_num' AND Course_number = Cnum AND Section_num
= $section_num AND Course_number = Course_N AND Section_num = Section_N

GROUP BY Grade

```
MariaDB [cs332a2]>     SELECT COUNT(Grade),Grade
    -> FROM Course,Section, Enrollment
    -> WHERE Course_number = '9225'AND Course_number = Cnum AND Section_num = 5 AND Course_number = Course_N AND Section_num = Section_N
    -> GROUP BY Grade;
+--------------+-------+
| COUNT(Grade) | Grade |
+--------------+-------+
|            2 | A     |
|            1 | B     |
|            1 | B-    |
+--------------+-------+
3 rows in set (0.00 sec)

MariaDB [cs332a2]>
```

Student –

b.

SELECT Section_num, Classroom, Meeting_Days, Beginning_Time, Ending_Time,
COUNT(Section_num) AS Num_of_Students
FROM Enrollment, Section
WHERE Cnum = '$cnumber' AND Cnum = Course_N AND Section_num=   Section_N
GROUP BY Section_num

```
MariaDB [cs332a2]> SELECT Section_num, Classroom, Meeting_Days,Beginning_Time,Ending_Time,COUNT(Section_num)
    -> FROM Enrollment, Section
    -> WHERE Cnum = '1335' AND Cnum = Course_N AND Section_num = Section_N
    -> GROUP BY Section_num;
+-------------+-----------+--------------+----------------+-------------+--------------------+
| Section_num | Classroom | Meeting_Days | Beginning_Time | Ending_Time | COUNT(Section_num) |
+-------------+-----------+--------------+----------------+-------------+--------------------+
|           1 | CS-104    | MW           | 1:00           | 2:15        |                  3 |
|           2 | CS-104    | TTh          | 1:00           | 2:15        |                  3 |
|           3 | CS-104    | MW           | 3:00           | 4:15        |                  2 |
+-------------+-----------+--------------+----------------+-------------+--------------------+
3 rows in set (0.00 sec)
```

b.

SELECT Course.Title, Grade
FROM Enrollment, Section, Course
WHERE SID = '$student_id' AND Cnum = Course_N AND Section_num = Section_N AND
Course_number = Cnum

```
MariaDB [cs332a2]> SELECT Course.Title, Grade
    ->     FROM Enrollment, Section, Course
    ->     WHERE SID = 711012119 AND Cnum = Course_N AND Section_num = Section_N AND Course_number = Cnum;
+--------------------------+-------+
| Title                    | Grade |
+--------------------------+-------+
| Databases & Filestructures | B   |
| Algorithmic Engineering  | B     |
| Physics I                | B     |
+--------------------------+-------+
3 rows in set (0.00 sec)
```

The Interface of Website

I will show you website and the input with the outputs in the pictures.

University Database

Menu:
Professor
Student

Hello! Welcome to the university's database!

Aatib Abdullah/Aarib Abdullah CPSC 332-01

Professor Section

Enter the requested information to view the results of the query.

Part A. SSN of professor: [_____] [Submit]

Part B. Course Number: [_____] Section Number: [_____] [Submit]

Connected successfully!

Enter the requested information to view the results of the query.

Part A. SSN of professor: [949-711-911] [Submit]

Part B. Course Number: [_____] Section Number: [_____] [Submit]

Connected successfully!

Title: Physics I
Classroom: MCH-600
Meeting Days: MW
Start Time: 5:30
End Time: 6:45

Title: Physics I
Classroom: MCH-600
Meeting Days: TTh
Start Time: 4:00
End Time: 5:15

Title: Physics I
Classroom: MCH-600
Meeting Days: MW
Start Time: 12:00
End Time: 1:15

Title: Physics I
Classroom: MCH-600
Meeting Days: TTh
Start Time: 11:00 AM
End Time: 12:15

Title: Physics I
Classroom: MCH-600
Meeting Days: F
Start Time: 8:00 AM
End Time: 11:45

Enter the requested information to view the results of the query.

Part A. SSN of professor: [   ] [Submit]

Part B. Course Number: [9225   ] Section Number: [5   ] [Submit]

Connected successfully!

Grade: A
Number of Students With This Grade: 2

Grade: B
Number of Students With This Grade: 1

Grade: B-
Number of Students With This Grade: 1

Student Section

Part A.Course number: [   ] Submit

Part B.CWID: [   ] Submit

NOTE:For Part A of Student (first field), If there is a Course # that did not show up it has no students as Section is dependent on Student

Connected successfully!

Part A.Course number: [1335] Submit

Part B.CWID: [   ] Submit

t field), If there is a Course # that did not show up it has no students as Section

Connected successfully!

Section number: 1
Classroom: CS-104
Meeting Days: MW
Start Time: 1:00
End Time: 2:15
Students Enrolled: 3

Section number: 2
Classroom: CS-104
Meeting Days: TTh
Start Time: 1:00
End Time: 2:15
Students Enrolled: 3

Section number: 3
Classroom: CS-104
Meeting Days: MW
Start Time: 3:00
End Time: 4:15
Students Enrolled: 2

Enter the requested information to view the results of the query.

Part A.Course number: [   ] Submit

Part B.CWID: [987456123] Submit

t field), If there is a Course # that did not show up it has no students as Sec

Connected successfully!

Title: Databases & Filestructures Grade: C

Title: Algorithmic Engineering Grade: A

Title: Physics I Grade: A