

# **CPSC-332 MySQL Project Report**

**Armanul Ambia - 0278**

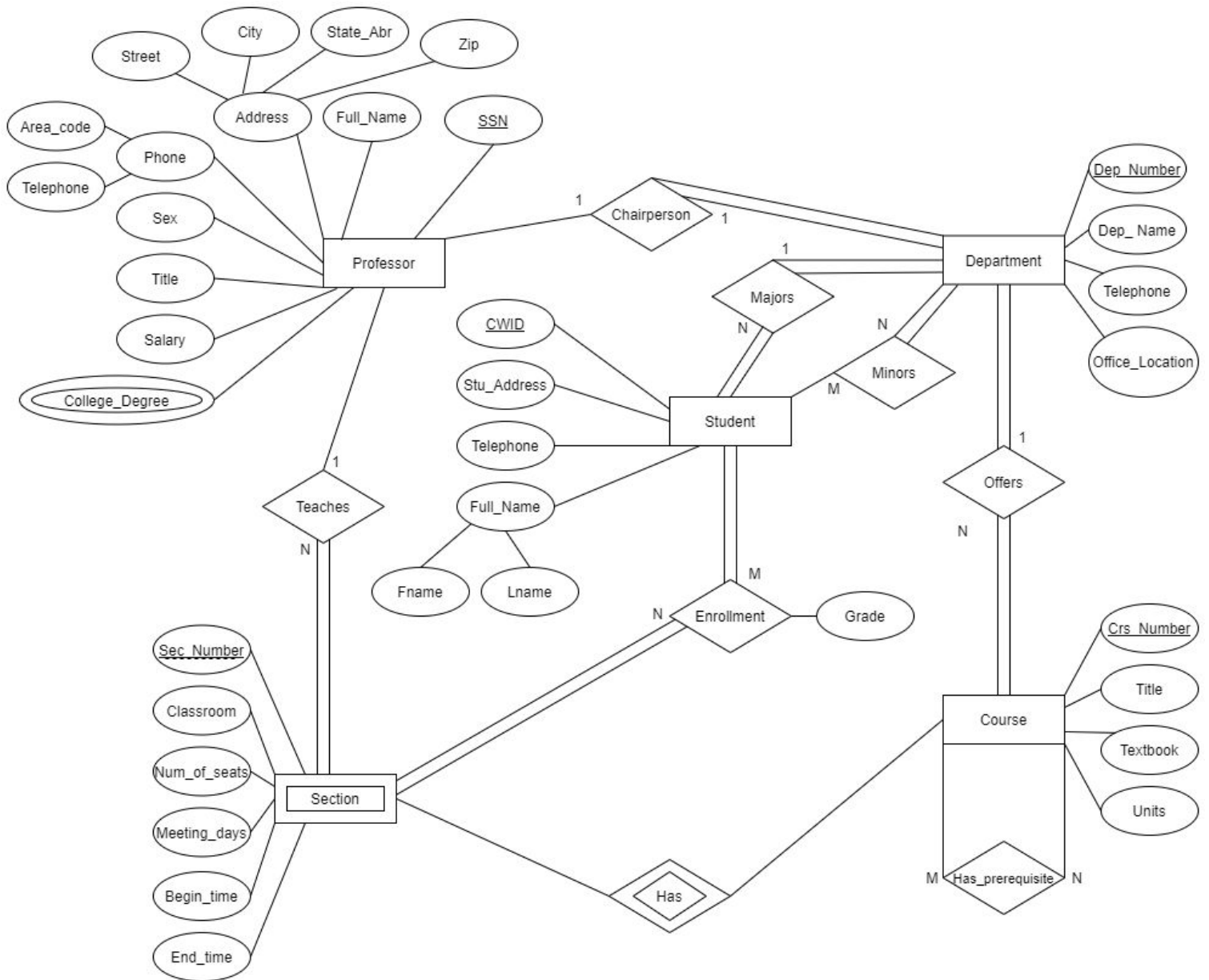
**Iftekharul Islam - 1071**

**James Talavera - 1237**

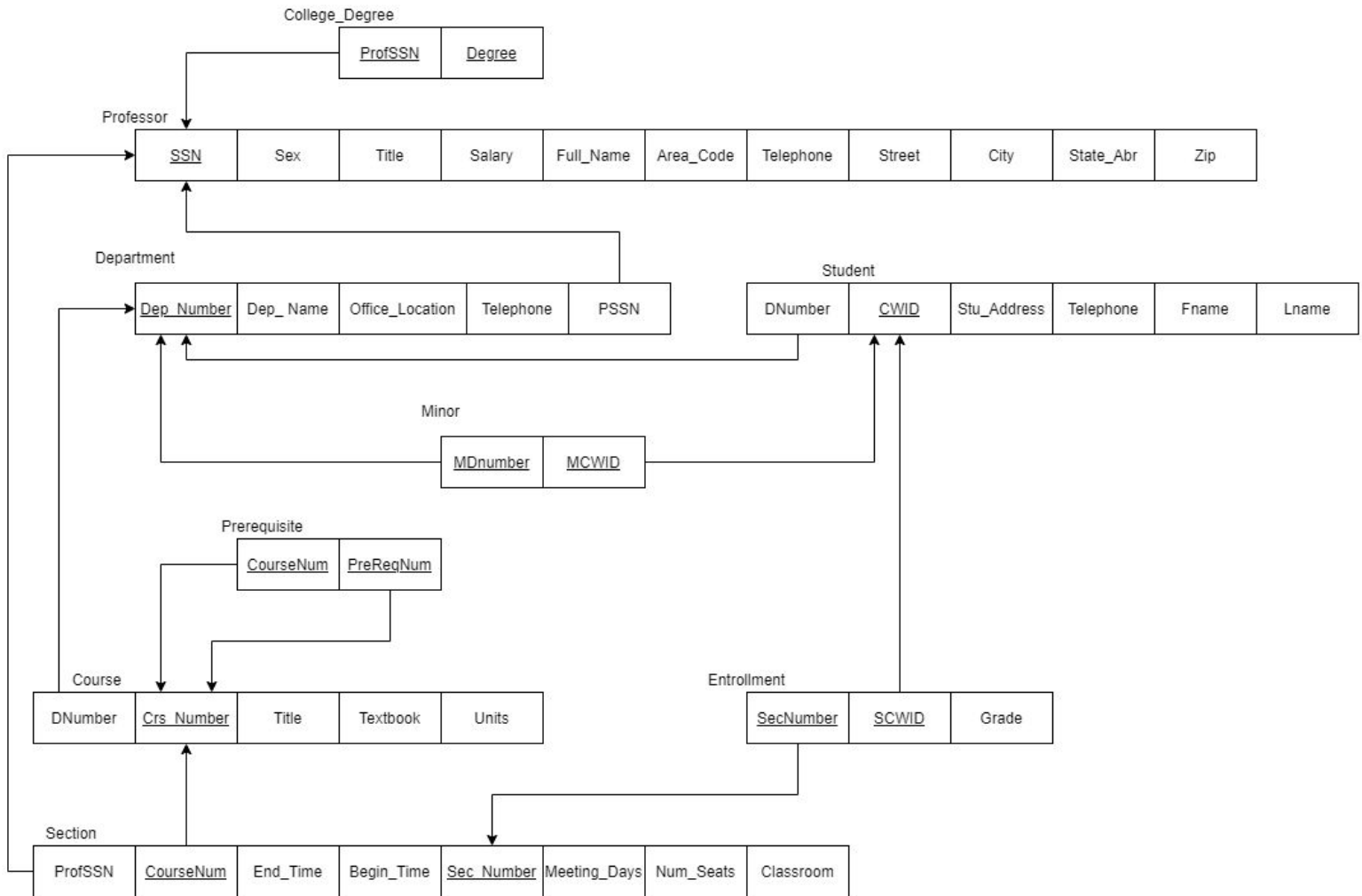
**Project Account: cs332g1**

**Link: <http://ecs.fullerton.edu/~cs332g1/>**

# ER Diagram



# Relational Model



## **CreateTables.sql - File Used to Create Tables**

```
drop table Enrollment;  
drop table Section;  
drop table Prerequisite;  
drop table Course;  
drop table Minor;  
drop table Student;  
drop table Department;  
drop table College_Degree;  
drop table Professor;
```

```
CREATE TABLE Professor(  
    SSN numeric(9) primary key,  
    Sex enum('M','F'),  
    Title enum ('Mr.', 'Mrs.', 'Ms.', 'Dr.'),  
    Salary numeric(6),  
    Full_Name varchar(30),  
    Area_Code numeric(3),  
    Telephone numeric(7),  
    Street varchar(20),  
    City varchar(20),  
    State_Abr char(2),  
    Zip char(5)  
);
```

```
Create Table College_Degree(  
    ProfSSN numeric(9),  
    Degree varchar(20),  
    primary key(ProfSSN, Degree),  
    foreign key (ProfSSN) references Professor(SSN)
```

);

Create Table Department(

Dep\_Number numeric(2) primary key,

Dep\_Name varchar(20),

Office\_Location varchar(20),

Telephone numeric(10),

PSSN numeric(9),

foreign key (PSSN) references Professor(SSN)

);

Create Table Student(

CWID numeric(9) primary key,

Stu\_Address varchar(40),

Telephone numeric(10),

Fname varchar(20),

Lname varchar(20),

DNumber numeric(2),

foreign key (DNumber) references Department(Dep\_Number)

);

Create Table Minor(

MDnumber numeric(2),

MCWID numeric(9),

primary key(MDnumber, MCWID),

foreign key (MDnumber) references Department(Dep\_Number),

foreign key (MCWID) references Student(CWID)

);

Create Table Course(

Crs\_Number varchar(10) primary key,

```
Title varchar(20),
Textbook varchar(20),
Units numeric(1),
DNumber numeric(2),
foreign key (DNumber) references Department(Dep_Number)
);
```

```
create Table Prerequisite(
    CourseNum varchar(10),
    PreReqNum varchar(10),
    primary key(CourseNum, PreReqNum),
    foreign key (CourseNum) references Course(Crs_Number),
    foreign key (PreReqNum) references Course(Crs_Number)
);
```

```
Create Table Section(
    Sec_Number numeric(2),
    CourseNum varchar(10),
    ProfSSN numeric(9),
    Begin_Time varchar(20),
    End_Time varchar(20),
    Meeting_Days varchar(20),
    Num_Seats numeric(2),
    Classroom varchar(20),
    primary key(Sec_Number, CourseNum),
    foreign key (CourseNum) references Course(Crs_Number),
    foreign key (ProfSSN) references Professor(SSN)
);
```

```
Create Table Enrollment(
    SecNumber numeric(2),
```

```
SCWID numeric(9),
Grade varchar(2),
primary key (SecNumber, SCWID),
foreign key (SecNumber) references Section(Sec_Number),
foreign key (SCWID) references Student(CWID)
);
```

## **InsertData.sql - Inserts all Data Records**

Insert Into Professor Values (

123456789, 'M', 'Mr.', 111765, 'Andrew Born', 714, 8713423, '1500 Brea Blvd.',  
'Brea', 'CA', '92355'  
);

Insert Into Professor Values (

765486987, 'F', 'Mrs.', 122361, 'Samantha Singh', 714, 2387633, '1100 Fourth  
St.', 'Fullerton', 'CA', '92470'  
);

Insert Into Professor Values (

109374923, 'F', 'Ms.', 103092, 'Kyle Kapernick', 714, 6723982, '1201 East St.',  
'Irvine', 'CA', '91101'  
);

Insert Into College\_Degree Values(

109374923, 'Mathematics'  
);

Insert Into College\_Degree Values(

765486987, 'Biology'  
);

Insert Into College\_Degree Values(

123456789, 'Political Science'  
);

Insert Into College\_Degree Values(

109374923, 'Computer Science'  
);



Insert Into Department Values(

07, 'Law', 'Langsdorf Hall', 7145622135, 123456789  
);

Insert Into Department Values(

11, 'Information Science', 'Engineering', 7149998274, 109374923  
);

Insert Into Department Values(

14, 'General Education', 'Mcharthy Hall', 7146128734, 765486987  
);

Insert Into Student Values(

682634629, '125 South St. Fullerton CA, 92344', 7145622789, 'John', 'Smith', 11  
);

Insert Into Student Values(

862354826, '766 Alcapone Ave. Brea CA, 92866', 7145326482, 'Bobby', 'Dylan', 07  
);

Insert Into Student Values(

769239856, '811 East St. Placentia CA. 92870', 7145622789, 'Lana', 'Johnson', 07  
);

Insert Into Student Values(

345223958, '111 Richmond Way Fullerton CA. 92344', 7142473845, 'Stacy', 'Rodgers',  
07  
);

Insert Into Student Values(

565489214, '923 Flower St. Greendale CA. 90135', 7149750237, 'Betty', 'Wilson', 11  
);

Insert Into Student Values(

123985476, '115 Gilbert St. Artesia CA. 92870', 7147320564, 'Tank', 'Dempsey', 11  
);

Insert Into Student Values(

935167412, '935 8th St. Buena Park CA. 90620', 7145218732, 'Kianu', 'Peeves', 11  
);

Insert Into Student Values(

963147852, '2121 Vine Ave. Fullerton CA. 92835', 7143862058, 'Luis', 'Martinez',  
11  
);

Insert Into Minor Values(

11, 345223958  
);

Insert Into Minor Values(

11, 862354826  
);

Insert Into Minor Values(

07, 565489214  
);

Insert Into Course Values(

'POSC-101', 'Intro to Law', 'Political Theory', 3, 07  
);

```
Insert Into Course Values(  
    'POSC-311', 'Gender and Politics', 'Political Feminism', 3, 07  
);
```

```
Insert Into Course Values(  
    'CPSC-131', 'Data Structures', 'Structuring Data', 3, 11  
);
```

```
Insert Into Course Values(  
    'CPSC-335', 'Algorithms', 'Algo Expert', 3, 11  
);
```

```
Insert Into Course Values(  
    'GEN-101', 'Personal Finance', 'History of Tax', 3, 14  
);
```

```
Insert Into Course Values(  
    'GEN-254', 'Beginner Cooking', 'Culinary Arts', 3, 14  
);
```

```
Insert Into Course Values(  
    'GEN-181', 'Dance Theory', 'Cultural Dance', 3, 14  
);
```

```
Insert Into Prerequisite Values(  
    'POSC-311', 'POSC-101'  
);
```

```
Insert Into Prerequisite Values(  
    'CPSC-335', 'CPSC-131'
```

);

Insert Into Section Values(

01, 'POSC-101', 123456789, '8:00 am', '9:50 am', 'Mo We', 30, 'POSC-205'  
);

Insert Into Section Values(

02, 'POSC-101', 123456789, '10:00 am', '11:50 am', 'Mo We', 30, 'POSC-213'  
);

Insert Into Section Values(

03, 'POSC-311', 123456789, '1:00 pm', '2:50 pm', 'Tu Th', 30, 'POSC-410'  
);

Insert Into Section Values(

04, 'CPSC-131', 109374923, '9:00 am', '10:15 am', 'Mo We', 45, 'CS-109'  
);

Insert Into Section Values(

05, 'CPSC-131', 109374923, '10:30 am', '11:45 am', 'Tu Th', 45, 'CS-109'  
);

Insert Into Section Values(

06, 'CPSC-335', 109374923, '1:00 pm', '2:45 pm', 'Mo We', 30, 'CS-201'  
);

Insert Into Section Values(

07, 'GEN-101', 765486987, '8:00 pm', '9:50 pm', 'Mo We', 20, 'MH-198'  
);

Insert Into Section Values(

```
    08, 'GEN-254', 765486987, '1:00 pm', '5:45 pm', 'F', 20, 'MH-214'  
);
```

```
Insert Into Section Values(
```

```
    09, 'GEN-181', 765486987, '1:00 pm', '2:45 pm', 'Sa', 25, 'MH-300'  
);
```

```
Insert Into Enrollment Values(
```

```
    02, 862354826, 'A+'  
);
```

```
Insert Into Enrollment Values(
```

```
    01, 769239856, 'C+'  
);
```

```
Insert Into Enrollment Values(
```

```
    03, 345223958, 'A-'  
);
```

```
Insert Into Enrollment Values(
```

```
    04, 682634629, 'B-'  
);
```

```
Insert Into Enrollment Values(
```

```
    07, 862354826, 'C-'  
);
```

```
Insert Into Enrollment Values(
```

```
    08, 769239856, 'C+'  
);
```

```
Insert Into Enrollment Values(  
    09, 345223958, 'A-'  
);
```

```
Insert Into Enrollment Values(  
    07, 682634629, 'B-'  
);
```

```
Insert Into Enrollment Values(  
    07, 345223958, 'B+'  
);
```

```
Insert Into Enrollment Values(  
    08, 682634629, 'A'  
);
```

```
Insert Into Enrollment Values(  
    04, 565489214, 'A-'  
);
```

```
Insert Into Enrollment Values(  
    07, 565489214, 'A+'  
);
```

```
Insert Into Enrollment Values(  
    09, 565489214, 'A'  
);
```

```
Insert Into Enrollment Values(  
    05, 123985476, 'B+'  
);
```

```
Insert Into Enrollment Values(  
    08, 123985476, 'C'  
);
```

```
Insert Into Enrollment Values(  
    06, 935167412, 'C+'  
);
```

```
Insert Into Enrollment Values(  
    09, 935167412, 'B-'  
);
```

```
Insert Into Enrollment Values(  
    06, 963147852, 'A+'  
);
```

```
Insert Into Enrollment Values(  
    07, 963147852, 'D'  
);
```

```
Insert Into Enrollment Values(  
    09, 963147852, 'A'  
);
```

## Interface Html Files (index.html, professor.html, student.html)

### index.html

```
<!DOCTYPE html>

<html>
<head>
<title>332 Project</title>
</head>
<body>

<div>
  <h1>CPSC 332 Term Project</h1>
  <h2>Created by:</h2>
  <h2>Armanul Ambia</h2>
  <h2>Iftekhharul Islam</h2>
  <h2>James Talavera</h2>
</div>

<div>
  <a href="professor.html"><button>Professor Queries</button></a>
  <a href="student.html"><button>Student Queries</button></a>
</div>

</body>
</html>
```



## **professor.html**

```
<!DOCTYPE html>
<html>
<head>
<title>Professor Information</title>
</head>
<body>

<div>
  <h1>Professor Information</h1>

  <div>
    <h3>Class Information</h3>
    <form action="ProfessorSchedule.php" method="POST">
      Enter the social security number: <input type="text" name="prof_sno"/>
      <input type="submit"/>
    </form>
  </div>

  <div>
    <h3>Grades</h3>
    <form action="CourseGrades.php" method="POST">
      Enter a course number: <input type="text" name="prof_cno"/>
      Enter a section number: <input type="text" name="prof_sec_no"/>
      <input type="submit"/>
    </form>
  </div>
</div>

</body>
</html>
```

## **student.html**

```
<!DOCTYPE html>
<html>
<head>
<title>Student Information</title>
</head>
<body>

<div>
  <h1>Student Information</h1>

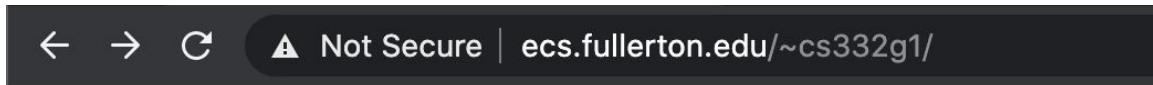
  <div>
    <h3>Class Information</h3>
    <form action="CourseSections.php" method="POST">
      Enter a course number: <input type="text" name="stu_cno"/>
      <input type="submit"/>
    </form>
  </div>

  <div>
    <h3>Your Course Information</h3>
    <form action="StudentEnrollment.php" method="POST">
      Enter your CWID: <input type="text" name="stu_cwid"/>
      <input type="submit"/>
    </form>
  </div>

</div>

</body>
</html>
```

## Interface Screenshot Without Data



# CPSC 332 Term Project

**Created by:**

**Armanul Ambia**

**Iftekharul Islam**

**James Talavera**

Professor Queries

Student Queries



## Professor Information

### Class Information

Enter the social security number:

### Grades

Enter a course number:  Enter a section number:



## Student Information

### Class Information

Enter a course number:

### Your Course Information

Enter your CWID:

## Query 1

**Given the social security number of a professor, list the titles, classrooms, meeting days and time of his/her classes**

### SQL

- Professor SSN Sample Input: 123456789

```
SELECT      C.Title, S.Classroom, S.Meeting_Days, S.Begin_Time, S.End_Time
FROM        Course C, Section S, Professor P
WHERE       C.Crs_Number = S.CourseNum AND P.SSN = 123456789 AND P.SSN =
           S.ProfSSN;
```

### ProfessorSchedule.php - PHP IMPLEMENTATION SCRIPT

```
<html>
```

```
<body>
```

```
<?php
```

```
$link = mysql_connect('mariadb', 'cs332g1', 'giLia5bu');
```

```
if (!$link) {
    die('Could not connect: ' . mysql_error());
}
```

```
echo 'Connected successfully<br><br>';
```

```
$input = $_POST["prof_sno"];
```

```
mysql_select_db("cs332g1", $link);
```

```
$query = "SELECT C.Title, S.Classroom, S.Meeting_Days, S.Begin_Time, S.End_Time
          FROM Course C, Section S, Professor P
          WHERE C.Crs_Number = S.CourseNum AND P.SSN = $input AND P.SSN =
          S.ProfSSN ";
```

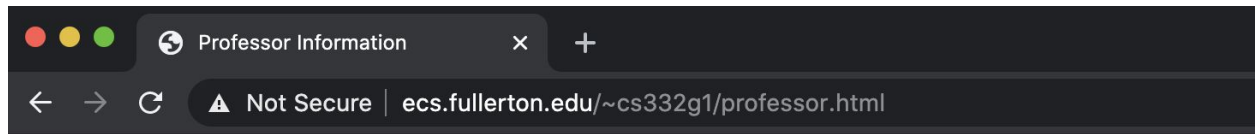
```
$result = mysql_query($query, $link);

if(!$result){
    echo "invalid";
}
else if (mysql_numrows($result) == 0){
    echo "Professor with Provided SSN does not exist<br><br>";
}
else {
    echo "Showing Results for Professor with Provided SSN<br><br>";

    for($i = 0; $i < mysql_numrows($result); $i++){
        echo "Title: ", mysql_result($result,$i,"Title"),
            "<br>Classroom: ", mysql_result($result,$i,"Classroom"),
            "<br>Meeting Days: ", mysql_result($result,$i,"Meeting_Days"),
            "<br>Begin Time: ", mysql_result($result,$i,"Begin_Time"),
            "<br>End Time: ", mysql_result($result,$i,"End_Time"), "<br><br>";
    }
}

mysql_close($link);
?>
</body>
</html>
```

## Query 1 - Interface Input Screenshot



# Professor Information

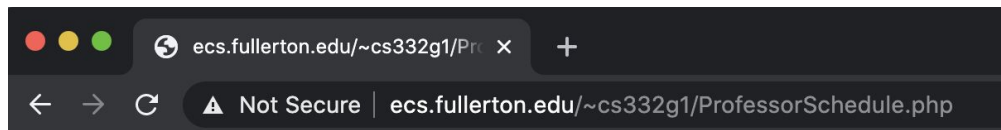
## Class Information

Enter the social security number:

## Grades

Enter a course number:  Enter a section number:

## Query 1 - Sample Run Screenshot



Connected successfully

Showing Results for Professor with Provided SSN

Title: Intro to Law  
Classroom: POSC-205  
Meeting Days: Mo We  
Begin Time: 8:00 am  
End Time: 9:50 am

Title: Intro to Law  
Classroom: POSC-213  
Meeting Days: Mo We  
Begin Time: 10:00 am  
End Time: 11:50 am

Title: Gender and Politics  
Classroom: POSC-410  
Meeting Days: Tu Th  
Begin Time: 1:00 pm  
End Time: 2:50 pm

## Query 2

Given a course number and a section number, count how many students get each distinct grade, i.e. 'A', 'A-', 'B+', 'B', 'B-', etc.

### SQL

- Course Number Sample Input: CPSC-131
- Section Number Sample Input: 04

```
SELECT      E.Grade, COUNT(*) AS TOTAL
FROM        Section S, Enrollment E
WHERE       S.CourseNum = 'CPSC-131' AND E.SecNumber = '04' AND
           S.Sec_Number = E.SecNumber
GROUP BY    E.Grade";
```

### CourseGrades.php - PHP IMPLEMENTATION SCRIPT

```
<html>
```

```
<body>
```

```
<?php
```

```
$link = mysql_connect('mariadb', 'cs332g1', 'giLia5bu');
```

```
if (!$link) {
```

```
    die('Could not connect: ' . mysql_error());
```

```
}
```

```
echo 'Connected successfully<br><br>';
```

```
mysql_select_db("cs332g1", $link);
```

```
$inputSec = $_POST["prof_sec_no"];
```

```
$inputCrs = $_POST["prof_cno"];
```

```
$query = "SELECT E.Grade, COUNT(*) AS TOTAL
```

```
FROM Section S, Enrollment E
```

```
WHERE S.CourseNum = '$inputCrs' AND E.SecNumber = $inputSec AND S.Sec_Number =  
E.SecNumber
```

```
GROUP BY E.Grade";
```

```
$result = mysql_query($query,$link);
```

```
if(!$result){
```

```
    echo "invalid";
```

```
}
```

```
else if (mysql_numrows($result) == 0){
```

```
    echo "Section with Provided Course Number and Section Number Does Not Exist";
```

```
}
```

```
else {
```

```
    echo "Showing Results for Section with Provided Course Number and Section  
Number<br><br>";
```

```
    for($i = 0; $i < mysql_numrows($result); $i++){
```

```
        echo "Letter Grade: ", mysql_result($result,$i,"Grade"),
```

```
            "<br>Number Of Students: ", mysql_result($result,$i,"TOTAL"), "<br><br>";
```

```
    }
```

```
}
```

```
mysql_close($link);
```

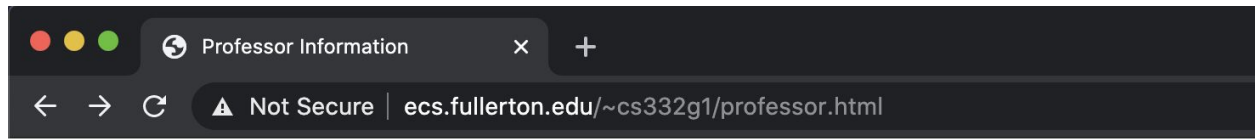
```
?>
```

```
</body>
```

```
</html>
```



## Query 2 - Interface Input Screenshot



# Professor Information

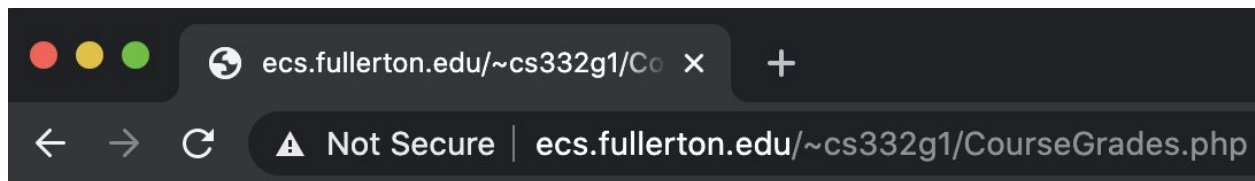
## Class Information

Enter the social security number:

## Grades

Enter a course number:  Enter a section number:

## Query 2 - Sample Run Screenshot



Connected successfully

Showing Results for Section with Provided Course Number and Section Number

Letter Grade: A-  
Number Of Students: 1

Letter Grade: B-  
Number Of Students: 1

## Query 3

**Given a course number list the sections of the course, including the classrooms, the meeting days and time, and the number of students enrolled in each section.**

### SQL

- Course Number Sample Input: POSC-101

```
SELECT      S.Sec_Number, S.Classroom, S.Meeting_Days, S.Begin_Time, S.End_Time,
            COUNT(ST.CWID) AS TOTAL
FROM        Section S, Enrollment E, Student ST
WHERE       S.CourseNum = 'POSC-101' AND E.SecNumber = S.Sec_Number AND
            ST.CWID = E.SCWID
GROUP BY    S.Sec_Number;
```

### CourseSections.php - PHP IMPLEMENTATION SCRIPT

```
<html>
```

```
<body>
```

```
<?php
```

```
$link = mysql_connect('mariadb', 'cs332g1', 'giLia5bu');
```

```
if (!$link) {
```

```
    die('Could not connect: ' . mysql_error());
```

```
}
```

```
echo 'Connected successfully<br><br>';
```

```
mysql_select_db("cs332g1", $link);
```

```
$inputCrs = $_POST["stu_cno"];
```

```
$query = "SELECT S.Sec_Number, S.Classroom, S.Meeting_Days, S.Begin_Time,
```

```
S.End_Time, COUNT(ST.CWID) AS TOTAL
```

```
FROM Section S, Enrollment E, Student ST
```

```
WHERE S.CourseNum = '$inputCrs' AND E.SecNumber = S.Sec_Number AND ST.CWID =  
E.SCWID
```

```
GROUP BY S.Sec_Number
```

```
";
```

```
$result = mysql_query($query,$link);
```

```
if(!$result){
```

```
    echo "invalid";
```

```
}
```

```
else if (mysql_numrows($result) == 0){
```

```
    echo "Section with Provided Course Number Does Not Exist";
```

```
}
```

```
else {
```

```
    echo "Showing Results for Section with Provided Course Number<br><br>";
```

```
    for($i = 0; $i < mysql_numrows($result); $i++){
```

```
        echo "Section Number: ", mysql_result($result,$i,"Sec_Number"),
```

```
        "<br>Classroom: ", mysql_result($result,$i,"Classroom"),
```

```
        "<br>Meeting Days: ", mysql_result($result,$i,"Meeting_Days"),
```

```
        "<br>Begin Time: ", mysql_result($result,$i,"Begin_Time"),
```

```
        "<br>End Time: ", mysql_result($result,$i,"End_Time"),
```

```
        "<br>Number of Students: ", mysql_result($result,$i,"TOTAL"), "<br><br>";
```

```
    }
```

```
}
```

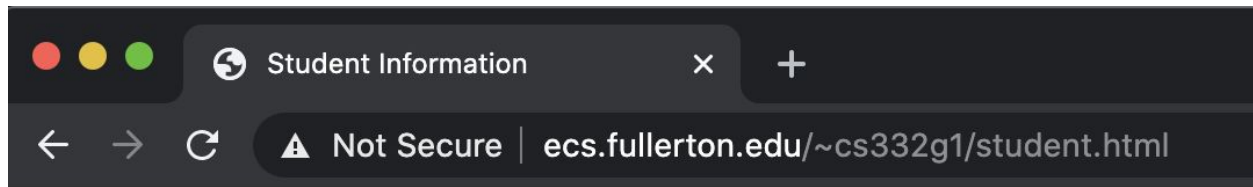
```
mysql_close($link);
```

```
?>
```

```
</body>
```

```
</html>
```

### Query 3 - Interface Input Screenshot



# Student Information

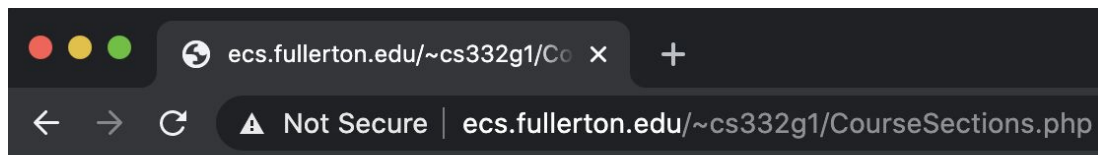
## Class Information

Enter a course number:

## Your Course Information

Enter your CWID:

### Query 3 - Sample Run Screenshot



Connected successfully

Showing Results for Section with Provided Course Number

Section Number: 1  
Classroom: POSC-205  
Meeting Days: Mo We  
Begin Time: 8:00 am  
End Time: 9:50 am  
Number of Students: 1

Section Number: 2  
Classroom: POSC-213  
Meeting Days: Mo We  
Begin Time: 10:00 am  
End Time: 11:50 am  
Number of Students: 1

## Query 4

**Given the campus wide ID of a student, list all courses the student took and the grades.**

### SQL

- Student CWID Sample Input: 565489214

```
SELECT      C.Crs_Number, E.Grade
FROM        Course C, Student S, Enrollment E, Section SE
WHERE       S.CWID = '565489214' AND E.SCWID = S.CWID AND E.SecNumber =
           SE.Sec_Number AND C.Crs_Number = SE.CourseNum;
```

### StudentEnrollment.php - PHP IMPLEMENTATION SCRIPT

```
<html>
```

```
<body>
```

```
<?php
```

```
$link = mysql_connect('mariadb', 'cs332g1', 'giLia5bu');
```

```
if (!$link) {
```

```
    die('Could not connect: ' . mysql_error());
```

```
}
```

```
echo 'Connected successfully<br><br>';
```

```
mysql_select_db("cs332g1",$link);
```

```
$input = $_POST["stu_cwid"];
```

```
$query = "SELECT C.Crs_Number, E.Grade
```

```
FROM Course C, Student S, Enrollment E, Section SE
```

```
WHERE S.CWID = $input AND E.SCWID = S.CWID
```

```
AND E.SecNumber = SE.Sec_Number AND C.Crs_Number = SE.CourseNum
```

```
";
```

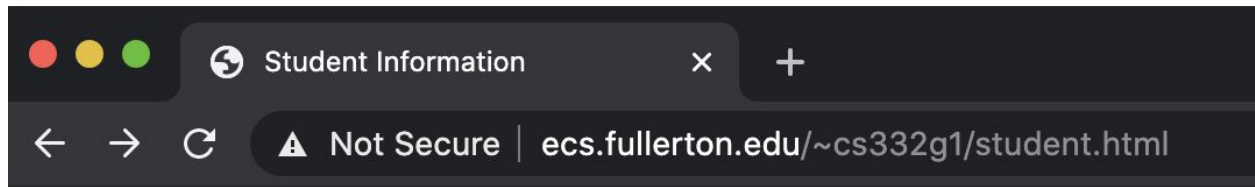
```
$result = mysql_query($query,$link);
```

```
if(!$result){
    echo "invalid";
}
else if (mysql_numrows($result) == 0){
    echo "Student with Provided CWID Does Not Exist";
}
else {
    echo "Showing Results for Student with Provided CWID<br><br>";

    for($i = 0; $i < mysql_numrows($result); $i++){
        echo "Course Number: ", mysql_result($result,$i,"Crs_Number"),
            "<br>Grade: ", mysql_result($result,$i,"Grade"), "<br><br>";
    }
}

mysql_close($link);
?>
</body>
</html>
```

#### Query 4 - Interface Input Screenshot



## Student Information

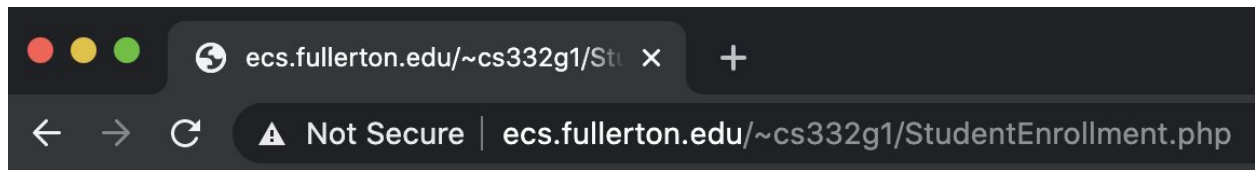
### Class Information

Enter a course number:

### Your Course Information

Enter your CWID:

#### Query 4 - Sample Run Screenshot



Connected successfully

Showing Results for Student with Provided CWID

Course Number: CPSC-131

Grade: A-

Course Number: GEN-101

Grade: A+

Course Number: GEN-181

Grade: A