ER Diagram

Relational Model

College_Degree

ProfSSN	Degree

Professor

SSN	Sex	Title	Salary	Full_Name	Area_Code	Telephone	Street	City	State_Abr	Zip

Department

Dep_Number	Dep_Name	Office_Location	Telephone	PSSN

Student

DNumber	CWID	Stu_Address	Telephone	Fname	Lname

Minor

MDnumber	MCWID

Prerequisite

CourseNum	PreReqNum

Course

DNumber	Crs_Number	Title	Textbook	Units

Entrollment

SecNumber	SCWID	Grade

Section

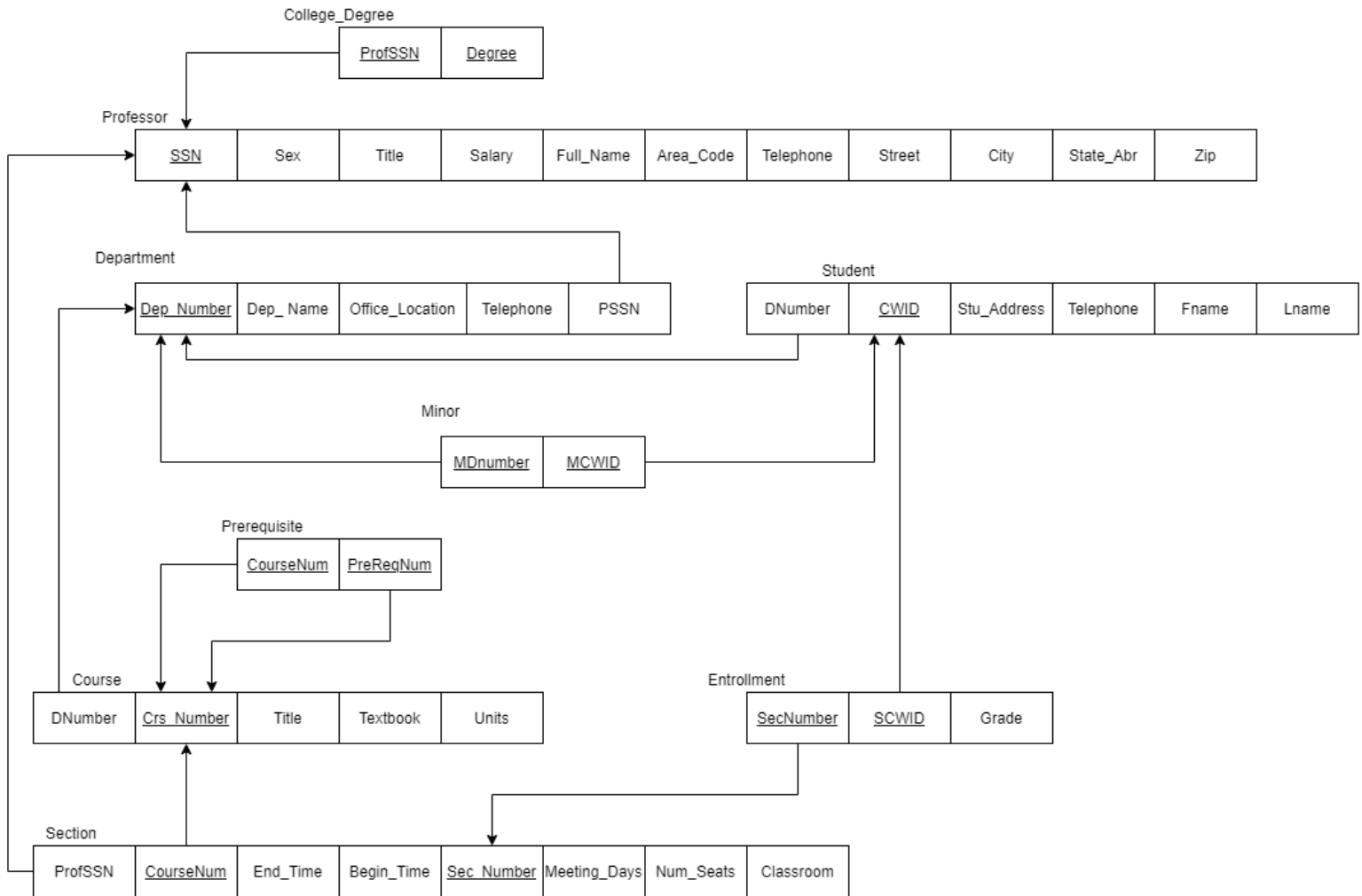| ProfSSN	CourseNum	End_Time	Begin_Time	Sec_Number	Meeting_Days	Num_Seats	Classroom

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;

```sql
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,
```

```sql
        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

```sql
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'
);
```

```sql
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

```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>Iftekharul 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>
```
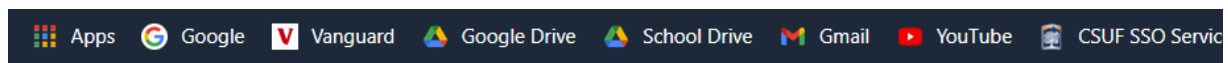
professor.html

```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

```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>
```

← → C   ⚠ Not Secure | ecs.fullerton.edu/~cs332g1/

CPSC 332 Term Project

Created by:

Armanul Ambia

Iftekharul Islam

James Talavera

[Professor Queries] [Student Queries]

⠿ Apps   G Google   V Vanguard   ▲ Google Drive   ▲ School Drive   M Gmail   ▶ YouTube   ⬡ CSUF SSO Servic

Professor Information

Class Information

Enter the social security number: [_____] [Submit]

Grades

Enter a course number: [_____]   Enter a section number: [_____] [Submit]

⠿ Apps   G Google   V Vanguard   ▲ Google Drive   ▲ Schoo

Student Information

Class Information

Enter a course number: [_____] [Submit]

Your Course Information

Enter your CWID: [_____] [Submit]

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

```php
<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 ";
```

```php
$result = mysql_query($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
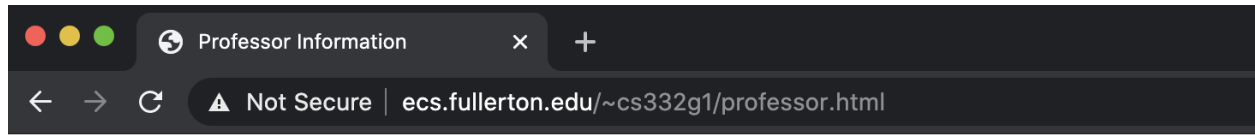
Query 1 - Sample Run Screenshot
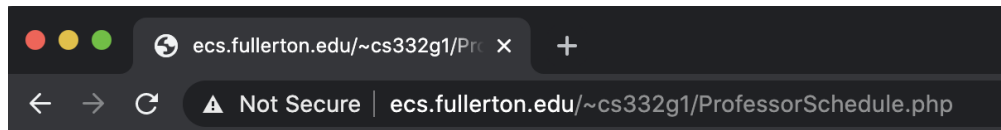
Connected successfully

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

```php
<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
```

```php
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>
```
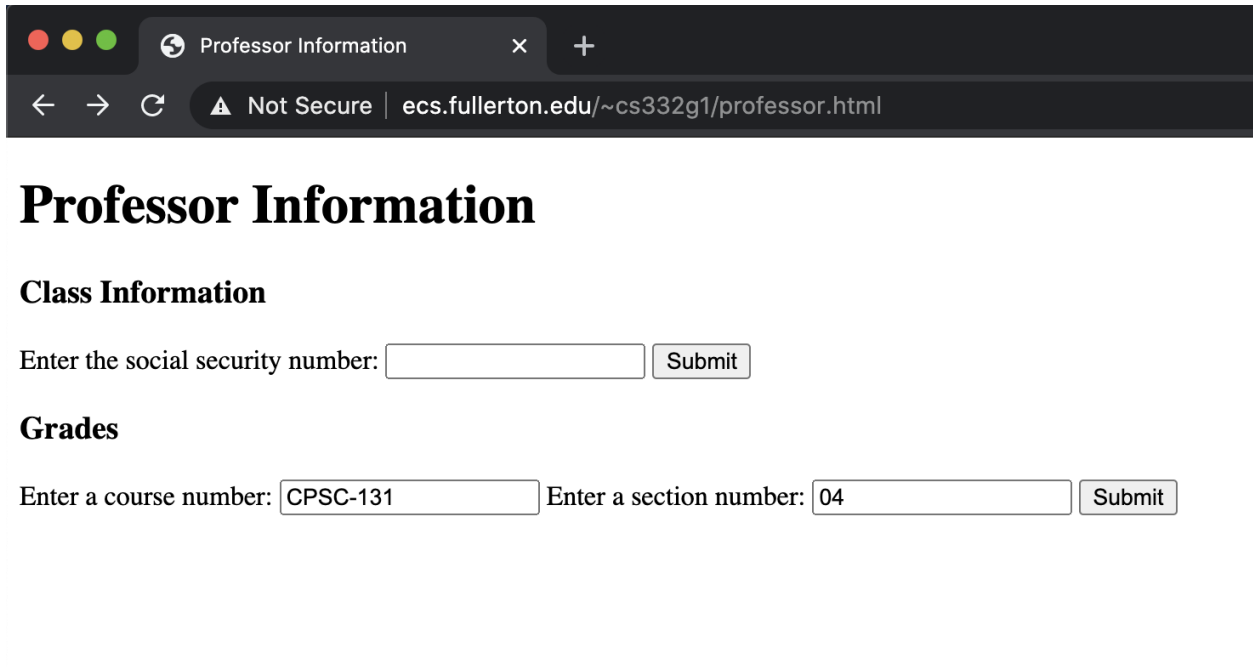
Query 2 - Interface Input Screenshot
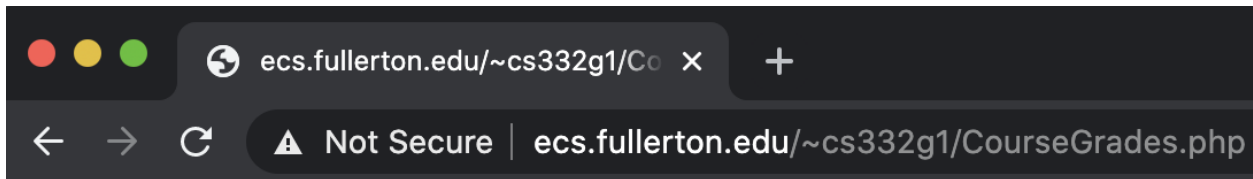
Query 2 - Sample Run Screenshot

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
```

```php
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>
```
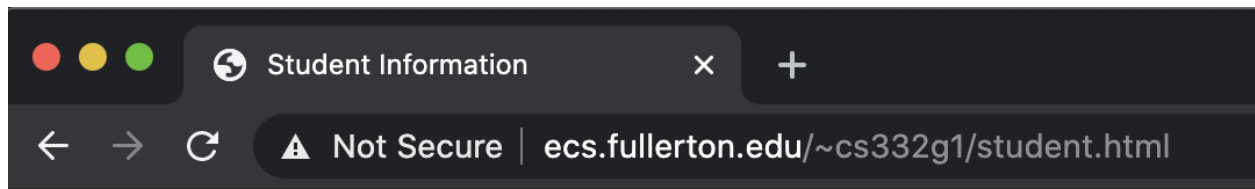
Query 3 - Interface Input Screenshot

Student Information

Class Information

Enter a course number: POSC-101 | Submit

Your Course Information

Enter your CWID: | Submit

Query 3 - Sample Run Screenshot
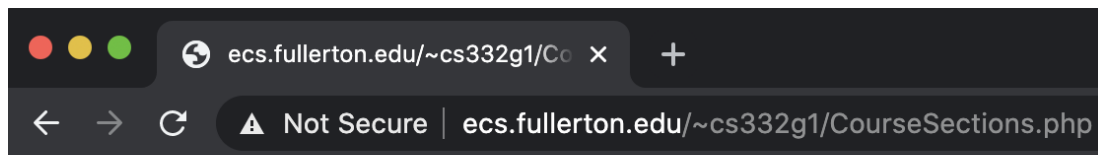
Connected successfully

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

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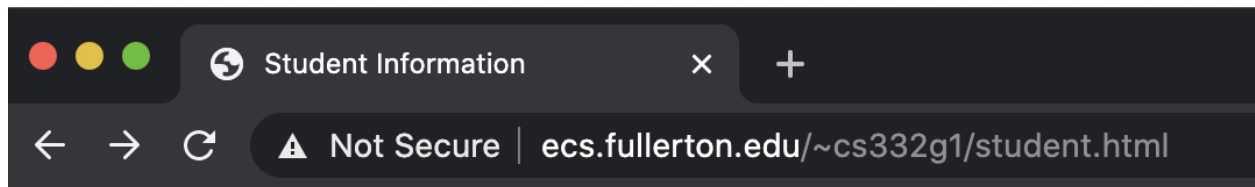
```php
if(!$result){
    echo "invalid";
}
else if (mysql_numrows($result) == 0){
    echo "Student with Provided CWID Does Not Exist";
}
else {
    echo "Showing Results for Student with Provided CWID<br><br>";

    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>
```
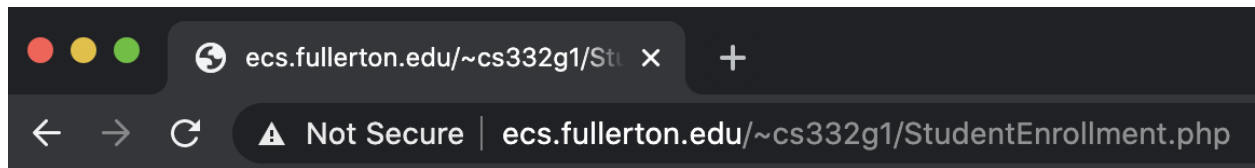
Query 4 - Interface Input Screenshot

Query 4 - Sample Run Screenshot