

MILESTONE 3

Team Name: College Crusaders

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Github Repository Link: <https://github.com/TaylorJesse/CSCI3308CollegeCrusaders>

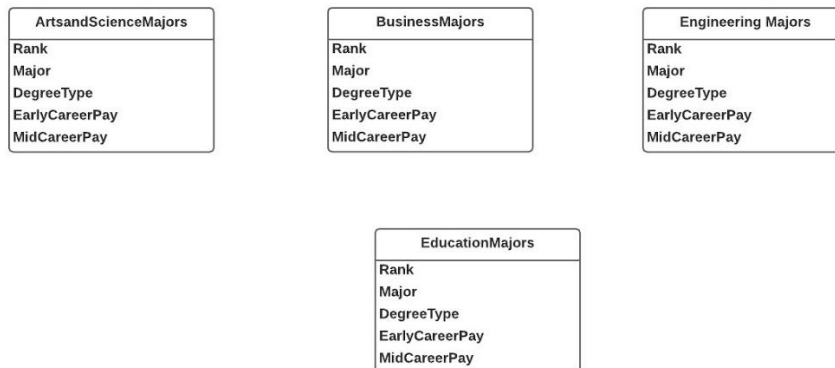
Database:

Select your database tool(s). Create a database and populate it with at least 3 tables, 4 attributes, and 5 rows within each table.

Below is an ER Diagram that visually represents each table in our database. Our team created our database using mySQL. Our database script will be found on our GitHub page under the folder "MYSQL Database" and the build file is named "script.sql". Sources for our publicly available data include: Payscale Human Capital (<http://www.payscale.com/>).

COLLEGE CRUSADERS DATABASE

Taylor Jesse | October 27, 2016



As shown in our ER diagram, our database consists of four exclusive tables, each with five attributes. Since relationships and keys were not required, we are initially keeping it simple and not including keys and relationships in our database. There may be changes/additions for future iterations. Our tables are listed as follows:

1. Table 1: Arts_and_Science (Currently 222 rows)
 - a. This table is composed of all majors under the general Arts and Science colleges throughout the United States.
2. Table 2: Business (Currently 54 rows)
 - a. This table is composed of all majors under the general Business schools in the United States.
3. Table 3: Engineering (Currently 45 rows)
 - a. This table is comprised of all common engineering majors in the United States.
4. Table 4: Education(Currently 14 rows)

- a. This table relates all majors that come from the School of Education across the United States.

All five attributes are the same for each table and are as follows:

1. Rank: The overall rank of the major compared to other majors in the database (#1 is best).
2. Major: The name of the college major.
3. DegreeType: Type of degree (Bachelors, Masters, etc.).
4. EarlyPay: The average salary of that specific college major right after graduation.
5. MidPay: The average salary of said college major during the mid-career period of the graduate.

Below are screenshots of our populated database tables:

MySQL Database - File Man... Terminal - user@cu-cs-vm:~ / Dropbox/CS/CS13308/collegeCrusaders/MySQL Database

File Edit View Terminal Tabs Help

336 rows in set (0.00 sec)

mysql> show tables;

Tables in College_Majors

All Majors
Arts_and_Science
Business
Education
Engineering

5 rows in set (0.00 sec)

mysql> select * from Arts_and_Science;

| Ranking | Major | DegreeType | EarlyPay | MidPay |
|---------|---------------------------------------|------------|----------|-----------|
| 3 | Actuarial Science | Bachelor's | \$60,800 | \$119,000 |
| 11 | Physics & Mathematics | Bachelor's | \$56,200 | \$111,000 |
| 15 | Physics | Bachelor's | \$55,100 | \$108,000 |
| 19 | Computer Science (CS) | Bachelor's | \$65,300 | \$107,000 |
| 24 | Government | Bachelor's | \$49,600 | \$105,000 |
| 28 | Physician Assistant Studies | Bachelor's | \$85,200 | \$103,000 |
| 32 | Economics | Bachelor's | \$53,900 | \$100,000 |
| 37 | Biochemistry & Molecular Biology | Bachelor's | \$46,000 | \$97,500 |
| 37 | Statistics | Bachelor's | \$57,400 | \$97,500 |
| 42 | Mathematics | Bachelor's | \$54,000 | \$95,700 |
| 43 | Computing | Bachelor's | \$51,400 | \$95,500 |
| 44 | Mathematics & Statistics | Bachelor's | \$53,700 | \$95,300 |
| 60 | Government & Politics | Bachelor's | \$44,600 | \$90,400 |
| 61 | Aviation Management | Bachelor's | \$41,900 | \$90,200 |
| 62 | Molecular Biology | Bachelor's | \$45,500 | \$90,100 |
| 64 | Environmental Health & Safety | Bachelor's | \$51,200 | \$89,800 |
| 67 | Computer Information Systems (CIS) | Bachelor's | \$54,300 | \$89,500 |
| 69 | Industrial Management | Bachelor's | \$51,600 | \$88,200 |
| 70 | Telecommunications Management | Bachelor's | \$50,000 | \$87,500 |
| 73 | Information Systems Management | Bachelor's | \$54,000 | \$87,200 |
| 74 | Information Technology (IT) & Systems | Bachelor's | \$52,800 | \$87,100 |
| 74 | Telecommunications | Bachelor's | \$40,800 | \$87,100 |
| 76 | Information Technology Management | Bachelor's | \$53,700 | \$86,800 |
| 78 | Physical Therapy | Bachelor's | \$60,300 | \$86,600 |
| 79 | International Relations | Bachelor's | \$46,500 | \$86,400 |
| 82 | Information Security | Bachelor's | \$58,300 | \$85,000 |

The image shows a terminal window with a MySQL prompt. At the top, there's a title bar for a terminal window titled "Terminal - user@cu-cs-vm: ~". Below the title bar, the terminal shows an error message: "ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'shot tables' at line 1". The user then enters the command "mysql> show tables;". The output shows a list of tables in the 'College_Majors' database: 'All Majors', 'Arts and Science', 'Business', 'Education', and 'Engineering'. The user then enters the command "mysql> select * from Business;". The output shows a table with 5 columns: 'Ranking', 'Major', 'DegreeType', 'EarlyPay', and 'MidPay'. The table contains 20 rows of data, listing various majors and their associated rankings, degree types, and pay scales.

```
[MySQL Database - File Man... Terminal - user@cu-cs-vm: ~] 29 Oct, 15:54
Terminal - user@cu-cs-vm: ~/Dropbox/CS13308/CS13308CollegeCrusaders/MYSQL Database

mysql> show tables;
+-----+
| Tables_in_College_Majors |
+-----+
| All_Majors                |
| Arts_and_Science         |
| Business                  |
| Education                 |
| Engineering               |
+-----+
5 rows in set (0.00 sec)

mysql> select * from Engineering;
+-----+-----+-----+-----+-----+
| Ranking | Major                                     | DegreeType | EarlyPay | MidPay |
+-----+-----+-----+-----+-----+
| 1       | Petroleum Engineering                   | Bachelor's | $96,700  | $172,800 |
| 2       | Systems Engineering                    | Bachelor's | $66,400  | $121,000 |
| 3       | Chemical Engineering                   | Bachelor's | $60,800  | $119,000 |
| 5       | Computer Science (CS) & Engineering    | Bachelor's | $71,200  | $116,000 |
| 5       | Nuclear Engineering                    | Bachelor's | $68,500  | $116,000 |
| 7       | Electronics & Communications Engineering | Bachelor's | $68,000  | $115,000 |
| 8       | Electrical & Computer Engineering (ECE) | Bachelor's | $68,100  | $114,000 |
| 9       | Aeronautical Engineering               | Bachelor's | $69,000  | $113,000 |
| 9       | Computer Engineering (CE)              | Bachelor's | $60,600  | $113,000 |
| 11      | Computer Science (CS) & Mathematics    | Bachelor's | $63,500  | $111,000 |
| 13      | Applied Mathematics                    | Bachelor's | $56,100  | $110,000 |
| 13      | Electrical Engineering (EE)            | Bachelor's | $67,000  | $110,000 |
| 15      | Electrical & Electronics Engineering (EEE) | Bachelor's | $64,000  | $109,000 |
| 15      | Industrial & Systems Engineering        | Bachelor's | $69,800  | $109,000 |
| 15      | Materials Science & Engineering        | Bachelor's | $65,800  | $108,000 |
| 19      | Engineering                             | Bachelor's | $62,600  | $107,000 |
| 19      | Industrial Distribution                 | Bachelor's | $56,800  | $107,000 |
| 19      | Mining Engineering                     | Bachelor's | $70,200  | $107,000 |
| 23      | Aerospace Engineering                  | Bachelor's | $65,400  | $106,000 |
| 25      | Biomedical Engineering (BME)           | Bachelor's | $62,700  | $104,000 |
| 25      | Industrial Engineering (IE)             | Bachelor's | $63,800  | $104,000 |
| 25      | Structural Engineering (SE)            | Bachelor's | $58,700  | $104,000 |
| 28      | Mechanical Engineering (ME)            | Bachelor's | $63,500  | $103,000 |
| 30      | Construction Engineering Management     | Bachelor's | $59,500  | $102,000 |
| 33      | Electronics Engineering                 | Bachelor's | $61,300  | $99,600  |
| 34      | Engineering Management                  | Bachelor's | $62,800  | $98,400  |
| 36      | Software Engineering                   | Bachelor's | $64,700  | $98,100  |
| 40      | Building Construction Management        | Bachelor's | $54,400  | $96,500  |
+-----+-----+-----+-----+-----+
```

```
[MySQL Database - File Man... Terminal - user@cu-cs-vm: ~] 29 Oct, 15:53
Terminal - user@cu-cs-vm: ~/Dropbox/CS13308/CS13308CollegeCrusaders/MYSQL Database

mysql> select * from Education;
+-----+-----+-----+-----+-----+
| Ranking | Major                                     | DegreeType | EarlyPay | MidPay |
+-----+-----+-----+-----+-----+
| 181     | Accounting & Management                 | Bachelor's | $48,700  | $70,800  |
| 184     | Accounting & Business                   | Bachelor's | $45,200  | $70,500  |
| 196     | Human Resources Management (HRM)        | Bachelor's | $42,300  | $68,100  |
| 201     | Business Administration & Accounting    | Bachelor's | $44,900  | $67,500  |
| 207     | Business Management & Administration    | Bachelor's | $46,100  | $66,700  |
| 210     | Human Resources (HR)                    | Bachelor's | $41,900  | $66,300  |
| 210     | Organizational Management               | Bachelor's | $44,000  | $66,300  |
| 243     | Business & Healthcare Management        | Bachelor's | $40,000  | $62,500  |
+-----+-----+-----+-----+-----+
54 rows in set (0.00 sec)

mysql> show tables;
+-----+
| Tables_in_College_Majors |
+-----+
| All_Majors                |
| Arts_and_Science         |
| Business                  |
| Education                 |
| Engineering               |
+-----+
5 rows in set (0.00 sec)

mysql> select * from Education;
+-----+-----+-----+-----+-----+
| Ranking | Major                                     | DegreeType | EarlyPay | MidPay |
+-----+-----+-----+-----+-----+
| 255     | Secondary Education                     | Bachelor's | $40,200  | $61,400  |
| 266     | Health & Physical Education Teaching    | Bachelor's | $35,900  | $60,100  |
| 288     | English Teacher Education                | Bachelor's | $35,900  | $58,000  |
| 289     | Education                               | Bachelor's | $38,700  | $57,800  |
| 292     | Physical Education Teaching              | Bachelor's | $39,500  | $57,300  |
| 304     | Music Teacher Education                  | Bachelor's | $36,800  | $55,600  |
| 307     | Community Health Education               | Bachelor's | $37,200  | $55,200  |
| 318     | Special Education                       | Bachelor's | $35,000  | $51,500  |
| 320     | Art Teacher Education                    | Bachelor's | $35,300  | $51,300  |
| 327     | Elementary Education                     | Bachelor's | $34,700  | $49,900  |
| 333     | Child Development                       | Bachelor's | $32,000  | $42,500  |
| 334     | Early Childhood & Elementary Education | Bachelor's | $34,800  | $41,900  |
| 335     | Child & Family Studies                  | Bachelor's | $31,400  | $40,700  |
| 336     | Early Childhood Education                | Bachelor's | $30,700  | $37,500  |
+-----+-----+-----+-----+-----+
14 rows in set (0.00 sec)

mysql>
```