

### Written Explanation of Program:

When the program starts up, it connects to the database (and quits if there was an error). Once connected, it goes in a while loop indefinitely and then provides the user with 6 options:

1. List all organizations and their corresponding leaders.");
2. List all student's and their Advisor's name.");
3. Remove a student from a class.");
4. Alter all faculty's salary by a certain percentage.");
5. Add a student to the database.");
6. Quit application.

The user can select one which then will execute the corresponding numbered function with the corresponding query, with some options asking for user input. Once they have completed that option, it returns to the list and asks for input again. The user can select the last option to close the program.

**Screenshot #1-** Select all of the organizations and their corresponding leaders if they have any. Here's the bottom of the console showing partial results (since they don't all fit on one page).

```
Organization 'Hhomwq' with leader 'C Bz'
Organization 'Orw' with leader 'null'
Organization 'Egnsiussyo' with leader 'null'
Organization 'Aikcwezww' with leader 'null'
Organization 'Rpieijsn' with leader 'Nl Ttdmqfv'
Organization 'Rfeiyaklqtoqbldvoi' with leader 'null'
Organization 'Gcdyxtqlwkkda' with leader 'null'
Organization 'Luuccdzycrwn' with leader 'null'
Organization 'Wcsgofm' with leader 'null'
Organization 'Texas Aggie Traditions' with leader 'Jennifer Welch'
Organization 'Aggie Swamp' with leader 'James Caverlee'
Organization 'Math Nerds' with leader 'Adam Thomas'
Organization 'Ultimate Frisbee' with leader 'John Keyser'
Organization 'Texas A&M Swimming' with leader 'Radu Stoleru'
Organization 'Ping Pong' with leader 'null'
1. List all organizations and their corresponding leaders.
2. List all student's and their Advisor's name.
3. Remove a student from a class.
4. Alter all faculty's salary by a certain percentage.
5. Add a student to the database.
6. Quit application.
Please enter an option:
```

**Screenshot #2-** Delete a student from an organization. The screenshot below shows the line the user inputed the student's UIN and a partial list of the resulting student's in the group (with said previous user not in it).

```
Type in the student UIN that you want to delete from the organization: 18192
18192
Creating the statement...
```

Below is the organization you initially selected and the current members.

```
Student = Pp Vwi, UIN = 11471
Student = Aw Zokksdkakj, UIN = 11838
Student = Jx Nwhxnpjthsh, UIN = 11934
Student = Nix Tcgl, UIN = 12318
Student = Sx Cr1rl, UIN = 12361
Student = Wnljhx Qg, UIN = 12399
Student = R Ikqmuqui, UIN = 12451
Student = B Xstp, UIN = 12841
Student = N Yit, UIN = 13086
Student = Dlcuo Nv, UIN = 13097
Student = Enwpa Djieg, UIN = 13151
Student = K Bloytnc, UIN = 13596
Student = Twsvm Qbohcrd, UIN = 14316
Student = Slti W, UIN = 14344
Student = Xytx Mdrange, UIN = 14467
Student = Xxtd Rnszjzmop, UIN = 14991
```

### Screenshot #3- Alter salary of one, some, or all faculty

This function allows the user to either increase or decrease the salary of one faculty member, a range of faculty, or all faculty in the university by a percentage. The user chooses which type of change to make, specifies which faculty to apply the change to, and the percentage by which to change the value.

Before:

+ Options

			FacultyID	Name	Salary
<input type="checkbox"/>			10000	Sdjelu Dciwncwzfo	64157
<input type="checkbox"/>			10001	Xbpksv Asrzx	24721
<input type="checkbox"/>			10002	Bz Akw	28372
<input type="checkbox"/>			10003	Zdg Xvsw	29526
<input type="checkbox"/>			10004	A Ymooibnwew	27482
<input type="checkbox"/>			10005	N Lxcgsiyha	92113
<input type="checkbox"/>			10006	Amsx Km	63530
<input type="checkbox"/>			10007	Caane Zmzvfue	92825
<input type="checkbox"/>			10008	Yxovk Vxi	67475
<input type="checkbox"/>			10009	Bkwlfv Ax	58901
<input type="checkbox"/>			10010	Fpaq Q	92084
<input type="checkbox"/>			10011	Kz Eqcui	77649
<input type="checkbox"/>			10012	Vwvm Ndwuhbvo	60479
<input type="checkbox"/>			10013	Ayhete Pbwii	69450
<input type="checkbox"/>			10014	Mrzlm Bcatbjkgje	62782
<input type="checkbox"/>			10015	Za Rfyb	54048
<input type="checkbox"/>			10016	Mgj Af	81891
<input type="checkbox"/>			10017	Ki Ynrter	92764
<input type="checkbox"/>			10018	Fv Vteuf	63611

Console input - I'll alter the salary of a range of faculty, since that is the least trivial. How about id#'s 10001 - 10004, they have very low salary right now:

```
Options:
  1: Alter salary of a specific faculty id
  2: Alter salary of a specific range of faculty ids
  3: Give a sweeping raise/cut to all faculty
2
Enter lower bounding ID
10001
Enter upper bounding ID
10004
Enter percentage change in salary
100%
4 row(s) modified
```

After:

+ Options

	← T →	FacultyID	Name	Salary	
<input type="checkbox"/>			10000	Sdjelu Dciwncwzfo	64157
<input type="checkbox"/>			10001	Xbpksv Asrzx	49442
<input type="checkbox"/>			10002	Bz Akw	56744
<input type="checkbox"/>			10003	Zdg Xvsw	59052
<input type="checkbox"/>			10004	A Ymooibnwew	54964
<input type="checkbox"/>			10005	N Lxcgsiyha	92113
<input type="checkbox"/>			10006	Amsx Km	63530
<input type="checkbox"/>			10007	Caane Zmzvfue	92825
<input type="checkbox"/>			10008	Yxovk Vxi	67475
<input type="checkbox"/>			10009	Bkwlfv Ax	58901
<input type="checkbox"/>			10010	Fpaq Q	92084
<input type="checkbox"/>			10011	Kz Eqcui	77649
<input type="checkbox"/>			10012	Vwvm Ndwuhbvo	60479
<input type="checkbox"/>			10013	Ayhete Pbwii	69450
<input type="checkbox"/>			10014	Mrzlm Bcatbjkgje	62782
<input type="checkbox"/>			10015	Za Rfyb	54048

#### Screenshot #4- Alek's Insert a student into the university

This function requests from the user the name of the student, and their desired major. From this, it queries the Student table to find the largest UIN, increments it by 1, and assigns that to the student. It then finds an advisor for the student by looking through the list of courses taught to find a professor who teaches a class in the same department as the student's major. That facultyID is also assigned to the student, and then a query is made to find the name of the faculty who is associated with the ID, because its always nice to know your advisor's name, even if the database schema doesn't require it. Finally, the student is inserted into the Student table.

```
Database connection established
Enter the name of the student you wish to add
Bobby joe
What is the student's major?
BLXW
Bobby joe has been assigned UIN 987654568
Bobby joe has been assignedXrxymm Eztmjivzv as an advisor
Database connection terminated
```

Output:

Showing rows 0 - 0 (1 total, Query took 0.0131 sec)

```
SELECT *
FROM Student
WHERE UIN =987654568
LIMIT 0 , 30
```

Show:  row(s) starting from record #

in  mode and repeat headers after  cells

+ Options

	UIN	Name	Major	Advisor
<input type="checkbox"/>	987654568	Bobby joe	BLXW	10603

Check All / Uncheck All With selected:

**Screenshot #5-** Select the list of students and their advisors names (not all since they won't all fit on the screen):

Mfrwh Sda's advisor is 'J Pmtorvhwdt'  
Hya Oprbbxpcs's advisor is 'Yxovk Vxi'  
Odqqc I's advisor is 'Jxivkz Jfpffk'  
Yvzy Dicvdi's advisor is 'Uam Dzgya'  
Hmedbn Eyzly's advisor is 'Cot Seuex'  
P Ybfwdvsmu's advisor is 'Stgai S'  
Gvysn Dchmtjek's advisor is 'Kub Xauc'  
Ben Beadle's advisor is 'James Caverlee'  
Ana Parra's advisor is 'Radu Stoleru'  
Alek Poteet's advisor is 'Adam Thomas'  
Amanda Cofsky's advisor is 'John Keyser'  
Kimberly Lewis's advisor is 'James Caverlee'  
Mathew McFadden's advisor is 'Jennifer Welch'  
Patrick Cumming's advisor is 'Radu Stoleru'  
Paul Hagseth's advisor is 'James Caverlee'  
Blake Pavel's advisor is 'Adam Thomas'  
Nick Melynk's advisor is 'Radu Stoleru'  
Bobby joe's advisor is 'Xrxymm Eztmjivzv'

1. List all organizations and their corresponding leaders.
  2. List all student's and their Advisor's name.
  3. Remove a student from a class.
  4. Alter all faculty's salary by a certain percentage.
  5. Add a student to the database.
  6. Quit application.
- Please enter an option:

**Screenshot #6-** Quitting the program

1. List all organizations and their corresponding leaders.
  2. List all student's and their Advisor's name.
  3. Remove a student from a class.
  4. Alter all faculty's salary by a certain percentage.
  5. Add a student to the database.
  6. Quit application.
- Please enter an option: 6  
Thanks for using our program! Goodbye!