Criterion B—Mock IA

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1 Systems Flow Chart

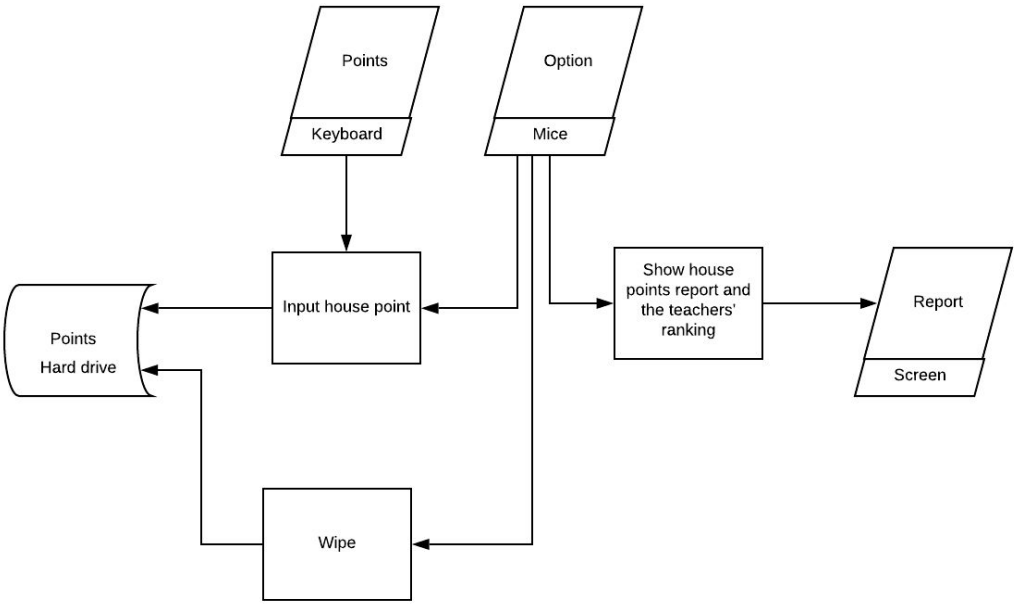

Figure 1: System flow chart

2 User Interface Design

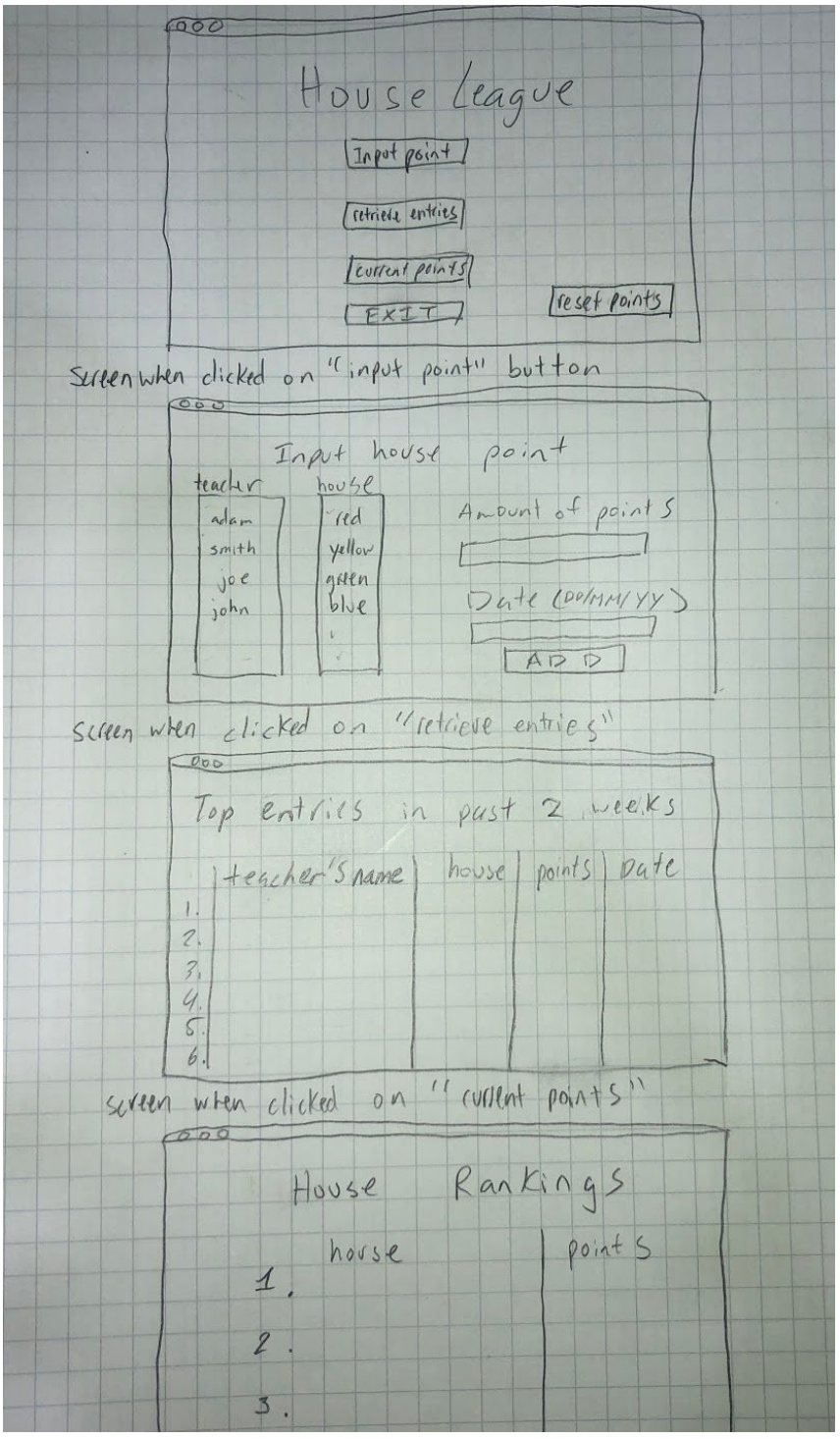

Figure 2: User Interface Design

3 Data Design

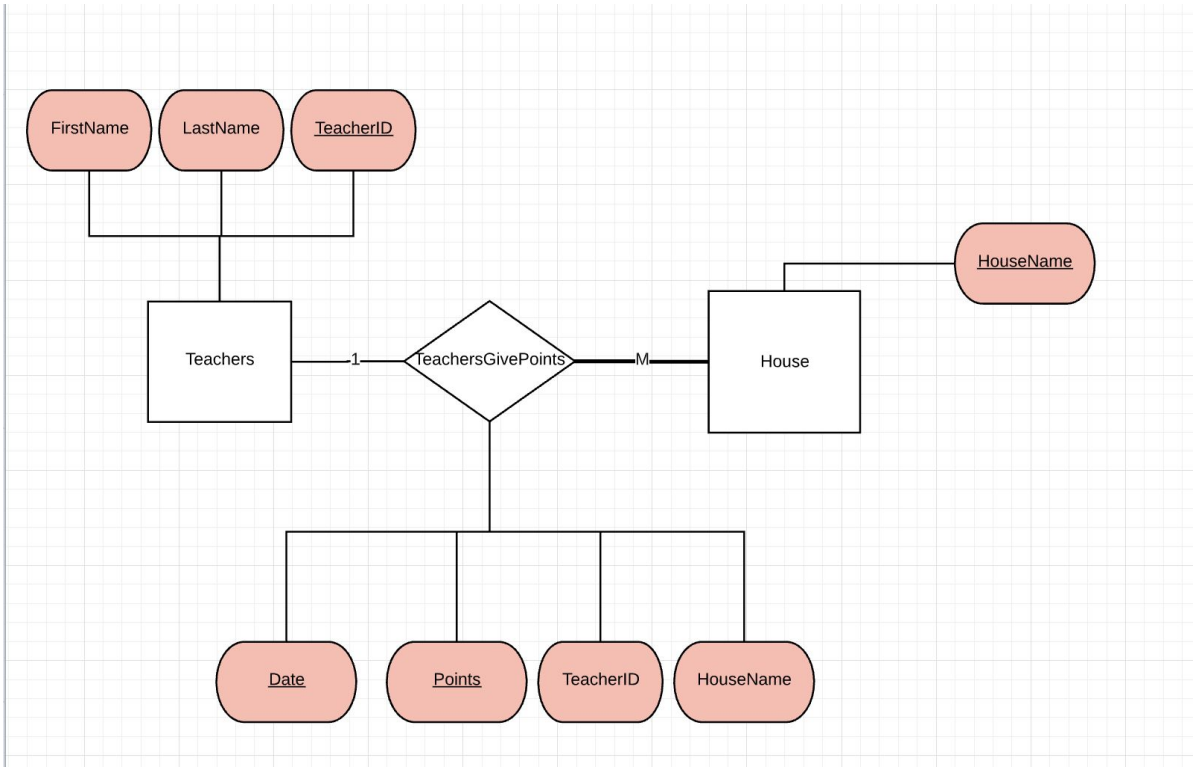

Figure 3: ERD

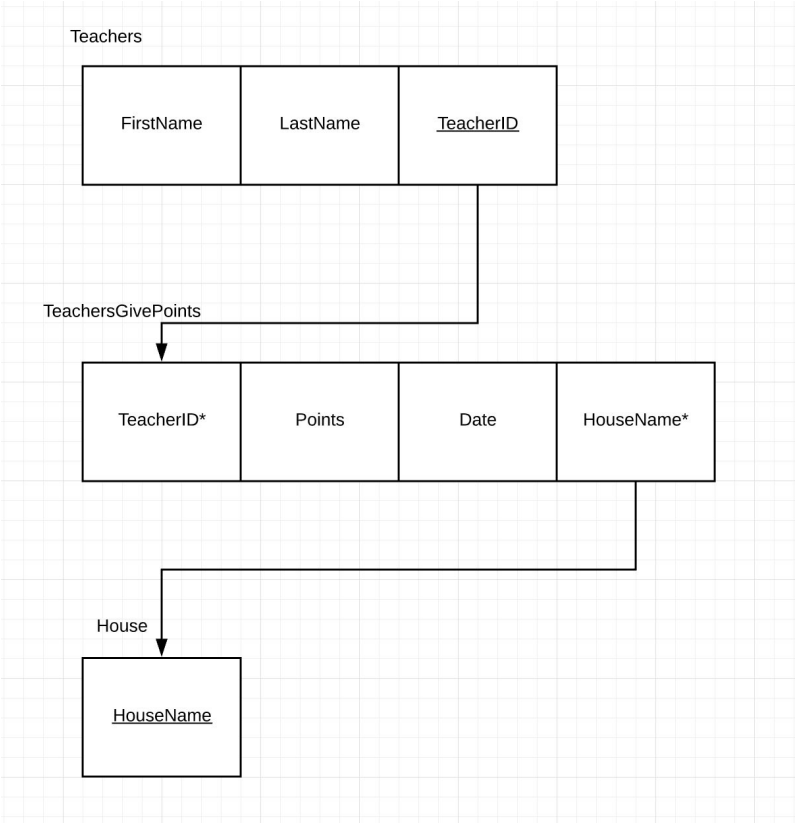

Figure 4: Relational Map

4 Algorithm Design

This is the general algorithm of the program. The algorithm will do the following:
When the client enters some point value for a certain house, the following will be executed and thus input the data into the data.

SQL INSERT INTO TeachersGivePoints (TeacherID) SELECT TeacherID FROM Teachers WHERE Teachers.FirstName == InputFirstName AND Teachers.LastName == InputLastName

SQL INSERT INTO TeachersGivePoints (House , Points) VALUES (inputHouse , inputPoints)

When the client clicks on the report button, a window will show up and execute these commands. The result of the execution will be displayed on the pop-up window

SQL SELECT Points, FirstName, LastName, Date FROM Teachers JOIN TeachersGivePoints WHERE Teachers.TeacherID == TeachersGivePoints.TeacherID ORDER BY Points DESC

SQL SELECT SUM(Points, HouseName) FROM House JOIN Points WHERE House.HouseName = TeachersGivePoints.HouseName

If the user so chooses to wipe then the following command will be executed. Hence, deleting all points from the houses

SQL DELETE FROM Points

5 Algorithm Flowchart

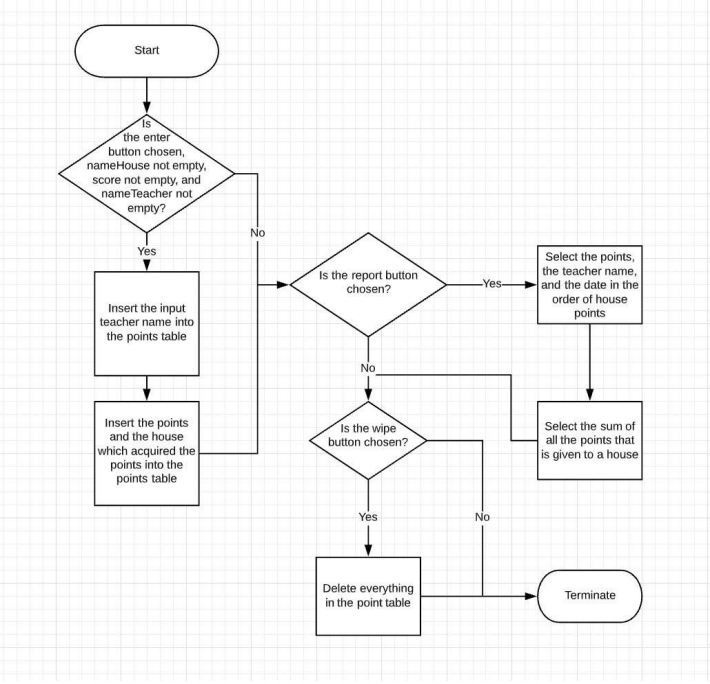

Figure 5: Algorithm flow chart

6 Test Plan

Success criteria	Planned Test	Expected
The main display of the program should have five buttons	When the program starts the main screen should be displayed with five buttons	The main screen should display every time the program is started
	The “input points” button should be on the main screen and allows user to click on	Should be displayed on the main screen and allows user to click and bring the user to the correct screen
	The “retrieve entries” button should be on the main screen and allows user to click on	Should be displayed on the main screen and allows user to click and bring the user to the correct screen
	The “current points” button should be on the main screen and allows user to click on	Should be displayed on the main screen and allows user to click and bring the user to the correct screen
	The “exit” button should be on the main screen and allows user to click on	Should be displayed on the main screen and allows user to close the main screen and program
	The “reset point” button should be on the main screen and allows user to click on	Should be displayed on the main screen and allows user to click to remove all data
The program should allow the client to input house points entries, display current entries, and view total house points multiple times.	Test if the program will continue to input entries multiple times into the database	The program should update multiple entries into the database
	Test if the program will display a list of entries multiple times	The program should display the list of entries multiple times in a session when the user requests it
	Test if the program will display total house points multiple times with most recent scores	The program should display the list of total house scores multiple times in a session when the user requests it
New entries inputted by a user must be stored in the database, so when a user opens program all added entries are saved.	Test if data is stored in the database when the program is closed	All the data should be saved after each session
	Test if multiple data can be stored and saved after the program is closed	When user input multiple entries, all data should be saved
	Test if resetting the database will remove all entries and will not appear when the program is	If the user resets all entries, the program should not display any entries unless new entries are

	re-opened later	added in this session.
When inputting the program should display a list of teacher's name, what house the point is given too, amount of points, and the date inputted.	Test if the list of teachers name display every time	When the user is in the inputting screen, the list of teachers should be displayed and allow the user to click to choose
	Test if the name of the houses are displayed every time	When the user is in the inputting screen, the list of houses should be displayed and allow the user to click to choose
	Test if typing the wrong format for the date will prevent the user from inputting	When the user is inputting, the program should not add an entry if the format of date is wrong
	Test if typing wrong format for the number of points will prevent the user from inputting	When the user is inputting, the program should not add an entry if the format of points is wrong