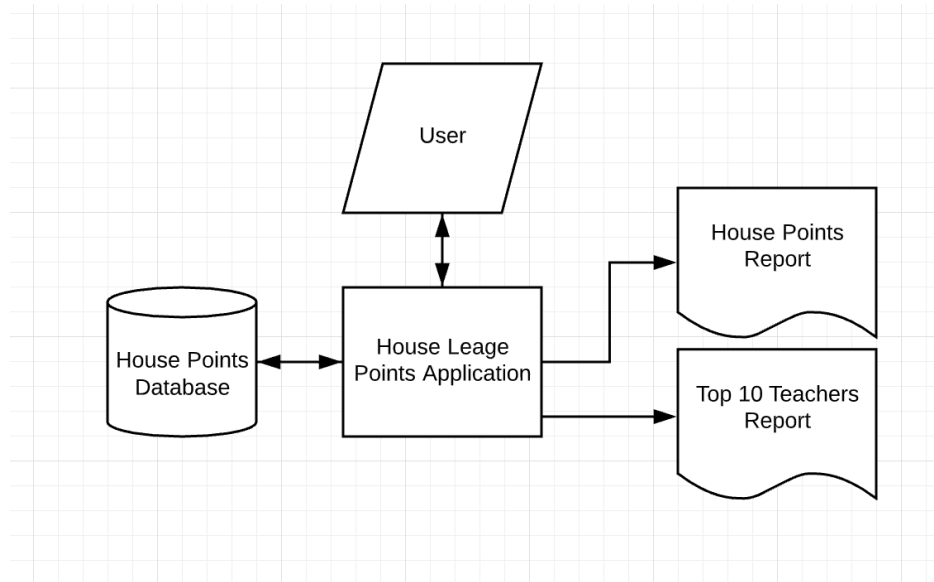
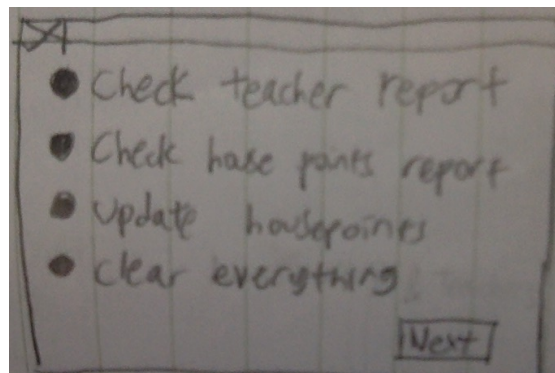


Criterion B:

a. Systems FlowChart



b. User Interface Design (hand drawn)



Home Window

☒ Time frame : Past ☐ Days

House \ Teacher	X	Y	Z	...	Total
A					
B					
C					
...					

Teacher Report

House	Total Points
X	300
Y	500
Z	450
...	...

House Points Report

☒

Teacher ☐ First Name ☐ Last Name

→ New Teacher

(Only fill if teacher is not in the options)

Point Awarded

House ☐ select New House

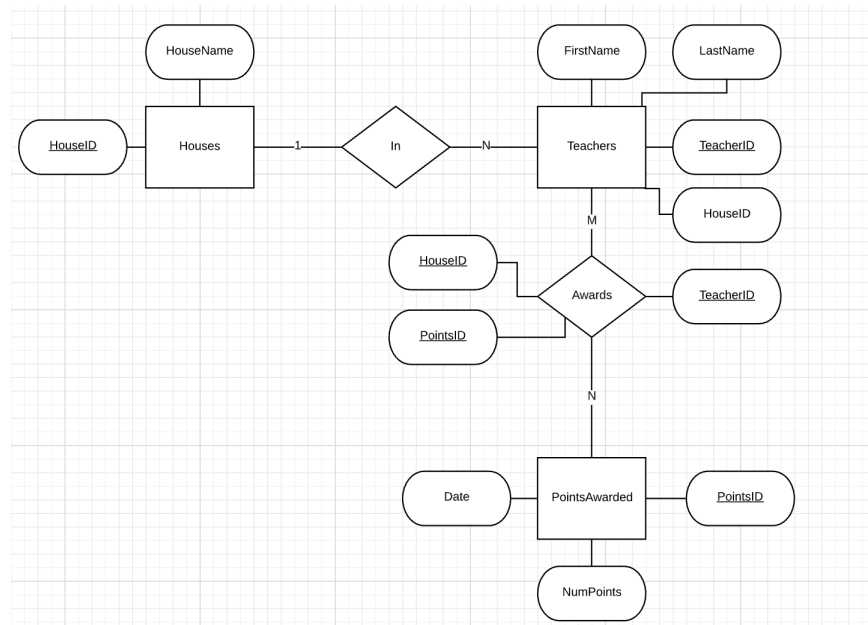
Day ☐ select Month ☐ select Year ☐ select

Update House Points

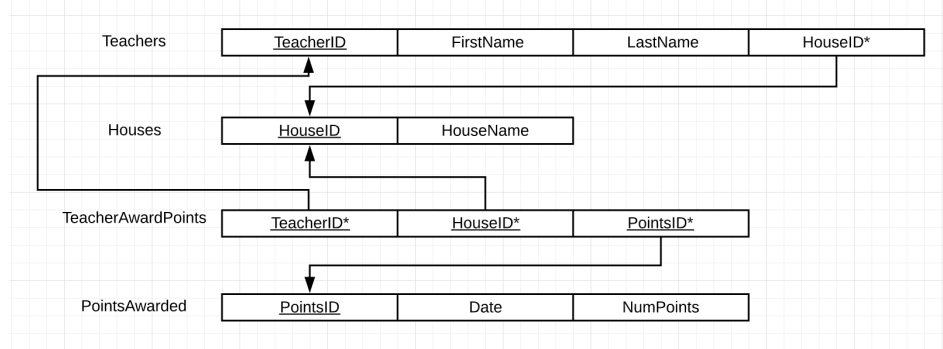
*When there are new teachers or houses, instead of choosing a teacher and house from the drop down menu, the user should type in the new house and teacher.

c. Data Design (ERD, Relational mapping --- no need for the DDL or Data Dictionary)

ERD:



Relational Mapping:



d. Algorithm Design (Flowchart and/or Pseudocode ; SQL if significant processing is done using the database)

SQL Code for getting top 10 teachers:

```

SELECT Teachers.FirstName, Teachers.LastName
FROM Teachers JOIN TeacherAwardPoints JOIN PointsAwarded
WHERE Teachers.TeacherID = TeacherAwardPoints.TeacherID AND
TeacherAwardPoints.PointsID = PointsAwarded.PointsID
GROUP BY Teachers.TeacherID
ORDER by SUM(PointsAwarded.PointsID) LIMIT 10
    
```

SQL Code for getting total house points:

```

SELECT Houses.HouseName, SUM(TeacherAwardPoints.PointsID)
FROM Houses JOIN TeacherAwardPoints
WHERE Houses.HouseID = TeacherAwardPoints.HouseID
Group By Houses.HouseID

```

e. Record of Tasks

Action	Details	Comments/Follow up	Target Completion Date	Criterion
Meeting with client (Recorded)	She talked about her problem with the school house points	We proposed a solution where she can view how the who are entering the house points	March 28th	A
Start planning out the solution	This will be the rationale and planning in criteria A	It is essential to word the planning clearly.	April 14	A
Write the success criteria	Make objectives that the proposed program should do	Writing the success criteria helps check for mistakes or holes not covered previously	April 17	A
Create a flow chart, ERD, relational mapping, and the user interface design.	The flow chart, ERD, and relational mapping is created on a website, while user interface design is hand drawn.	This helps the reader of the documentation and us, the creators of the program, to visualize things better	May 4	B
Create a database to store data (house points, teachers, etc.)	Database is created using DDL in SQLite	By building the database first, data that are inputted into a code would be stored.	May 28	C
Creating	The written python	After the client	June 28	C

python code to retrieve input data.	code is created in idle	inputs something, the information gets processed by the code, where it then stores it in the database.		
Create App	The app is created with tkinter	The app helps the client visualize what is going on better (it has descriptions and buttons you can press on).	July 14	C
Record a video of the app functioning	This is done using quick time player, going through the success criteria	This helps check if the code is functioning properly.	July 25	D
Get feedback from client to improve application	Let the client explore the application. Conduct an interview to find out whether there is anything to improve.	The interview should be recorded so that it can be referenced in the future.	Aug 31	E
Improve the application	Improve the application according to the interview	Improving the application helps the client be satisfied with the application.	Sept 15	E

f. Test Plan

Situations to be Tested	Expected Outcome
Client chooses to view the teachers report	A table with the names of the top 10 teachers who awarded the most house points within a specific period of time is presented in a separate window.
Client choose to view the house points report	A table with the names of each house and

	their total points should be presented in a separate window.
Client exits the application.	The application should close gracefully without any unnecessary messages.
Client enters newly awarded house points.	The next time the client views the reports, the teacher report and the house points report should be updated accordingly.
Client clears everything.	The next time the client views the reports, the house points in the teacher report and the house points report should be blank.
Client enters a negative number for house points awarded (ex. -10)	Client should be notified with an error message.
Client enters a non number for house points awarded (ex. ten)	Client should be notified with an error message.
Client enters an invalid date (ex. 13/32/2021)	Client should be notified with an error message.
Client enters new house name.	<p>The next time the client views the reports, the new house should be added to the teacher report and house points report.</p> <p>The new house should appear in the drop down menu for selecting a house the next time the client enters house points.</p>
Client enters new teacher name.	<p>The next time the client views the reports, the new teacher should be added to the teacher report.</p> <p>The new teacher should appear in the drop down menu for selecting teachers the next time the client enters house points.</p>
Client simultaneously chooses from an existing teacher and enters a new teacher name.	Client should be notified with an error message.
Client simultaneously chooses from an existing house and enters new house name.	Client should be notified with an error message.