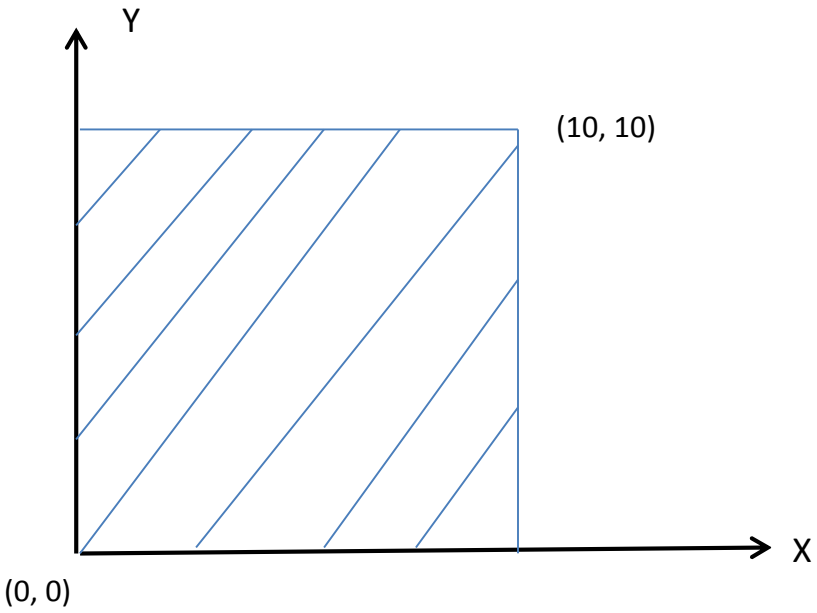
CS222 Intermediate C++ Project 1

Background

Suppose that you are managing a company with 4 tow trucks owned by four different drivers (You pick up the names). Each tow truck has its "home" where the driver will return after each service. The service range that your company covers is a 10 miles by 10 miles area, which can be modeled as a square in the coordinate system as illustrated in the following graph. The coordinates of the "home" of the 4 tow trucks are (3.5, 3.5), (3.5, 7), (6, 4), and (7,7) respectively. When an operator get a call for requesting a towing service, he/she will ask for the location (X/Y coordinate information) where towing services are needed. Ignore the request that has address out of the coverage. Then the program will pick the tow truck whose "home" is closest to this accident location. The driver of this tow truck will get a payment proportional to the one-way distance that he needs to drive, with the rate being $15/mile. **The service requests processing will continue till the operator quit the program**. Print out the total revenue of each tow truck driver (show their names) when the operator quit the program.



Guidelines

1. Write C++ programs to implement this project.
2. Define the class first based on in-class discussions or use your own design that is justified .
3. Implement the class and the .cpp file that contains the main function.
4. Use functions for object array processing in the main function. Declare the prototypes of these functions in a separate .h file. Refer to Week 3 sample code for the GradeBook class.
5. Follow the coding rule, including program structures, comments, naming conventions, and formatting.

Submission

Put all of your files into a folder, compress it into a .zip file and submit to Canvas Project1 dropbox before the deadline.