GIT Department of Computer Engineering
CSE 222/505 - Spring 2022
Homework 1 Report

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1. SYSTEM REQUIREMENTS

1.1 Functional Requirements

This program creates and designs streets to use it's functions, a Street must be created and initialized.

A Street can be initialized by giving it's length property. Length must be positive integer to create Street.

After initializing parting is done, software is ready to use. User can both access editing and viewing modes of program via command menu:

Editing Mode:

- User can add an instance of Buildings by giving it's necessary properties.
- User also delete a Building from Street by entering it's location position and side.

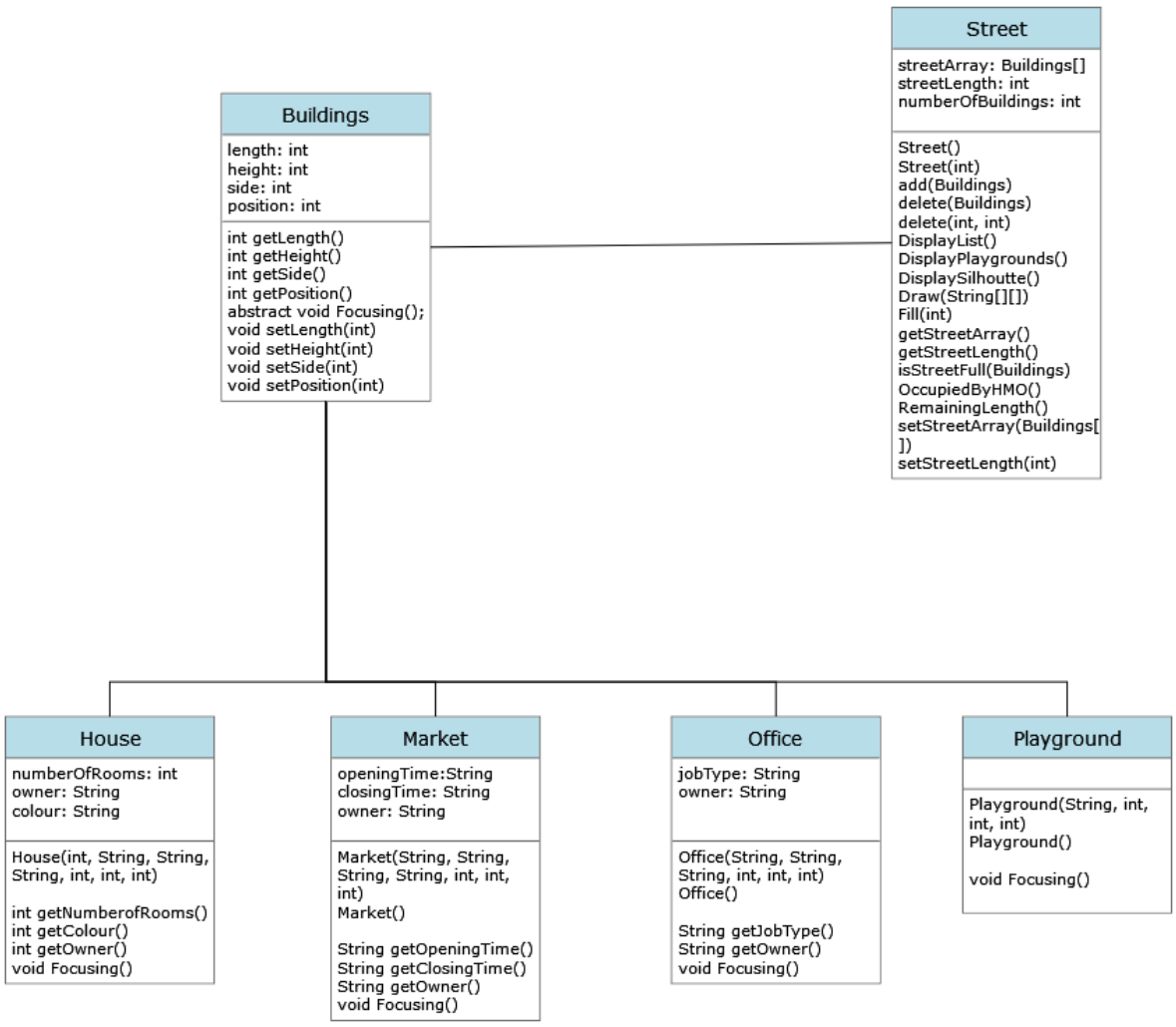
Viewing Mode:

- User can access RemainingLength() method of Street Class to display the total remaining length of lands on the street
- User can access DisplayList() method of Street Class to display the list of buildings on the street.
- With the help of DisplayPlayground() method of Street Class, the user could display the number and ratio of length of playgrounds in the street.
- OccupiedByHMO() method calculates the total length of street occupied by the markets, houses or offices.
- DisplaySilhoutte() method display the skyline silhouette of the street.

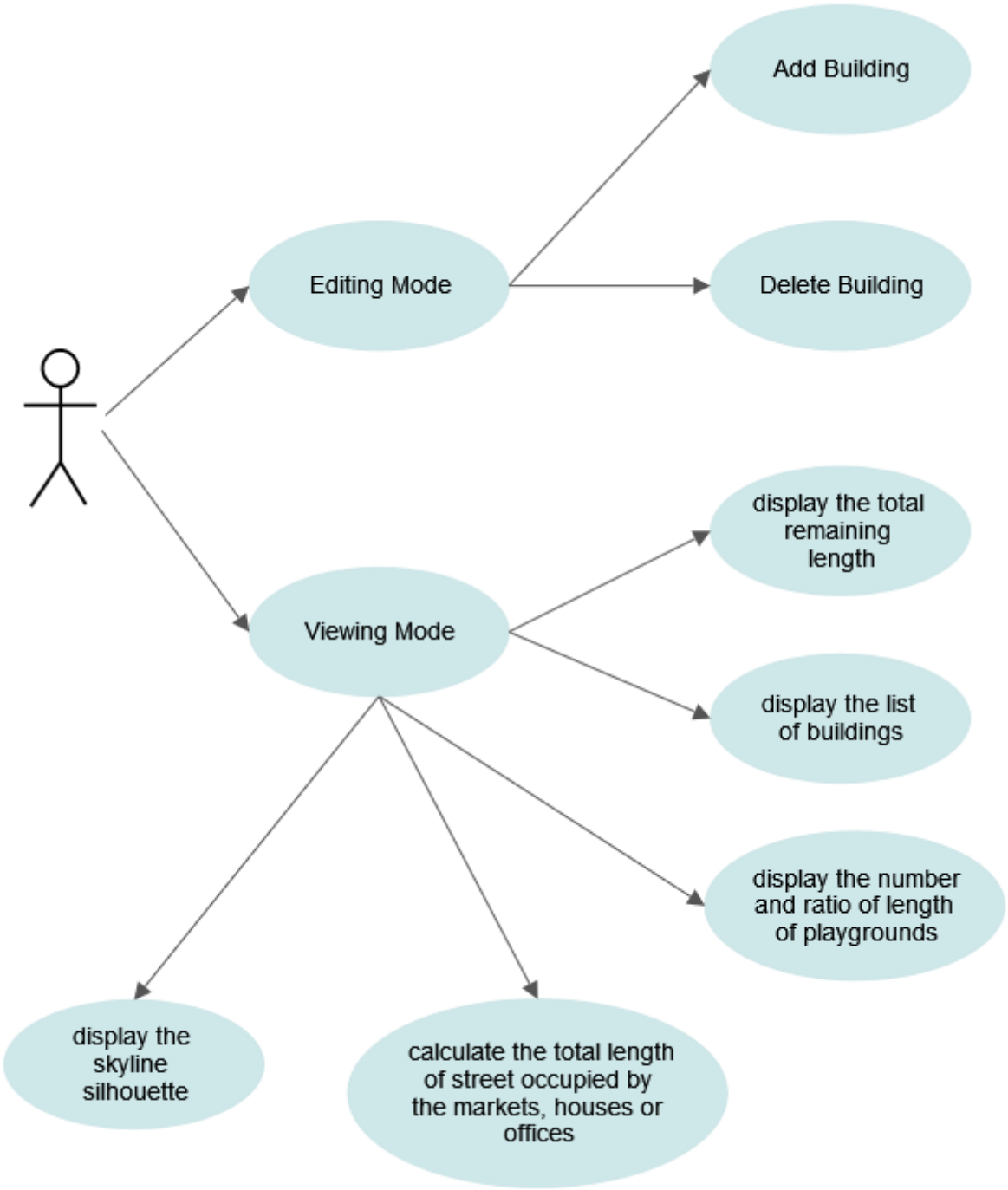
1.2 Non-functional Requirements

- Add method blocks to add a building if given position or street is full.
- Delete method blocks to delete if given position is already empty.
- numberOfBuildings variable keeps to total number of buildings for a street.
- streetLength variable must be a positive integer to be able to create streetArray.
- User inputs shouldn't throw exceptions which unhandled.

2. CLASS DIAGRAMS



3. USE CASE DIAGRAM



4. PROBLEM SOLUTION APPROACH

Write your problem solution approach. To solve a problem, you should define the problem, divide it into sub-problems, create a plan of steps, try if your approach works, etc. You can find useful articles on problem solving by googling “problem solving in software engineering”.

5. TEST CASES

Write test cases to check whether your system works properly. A test case is a set of conditions or variables under which a tester determines whether the software satisfies **requirements** and **functions** properly.

Here are good definitions and examples to create test cases:

https://www.guru99.com/test-case.html

6. RUNNING AND RESULTS

Run your system, check your test cases, add your results as screenshots and tables.