

GIT Department of Computer Engineering

CSE 222/505 - Spring 2022

Homework 3 Report

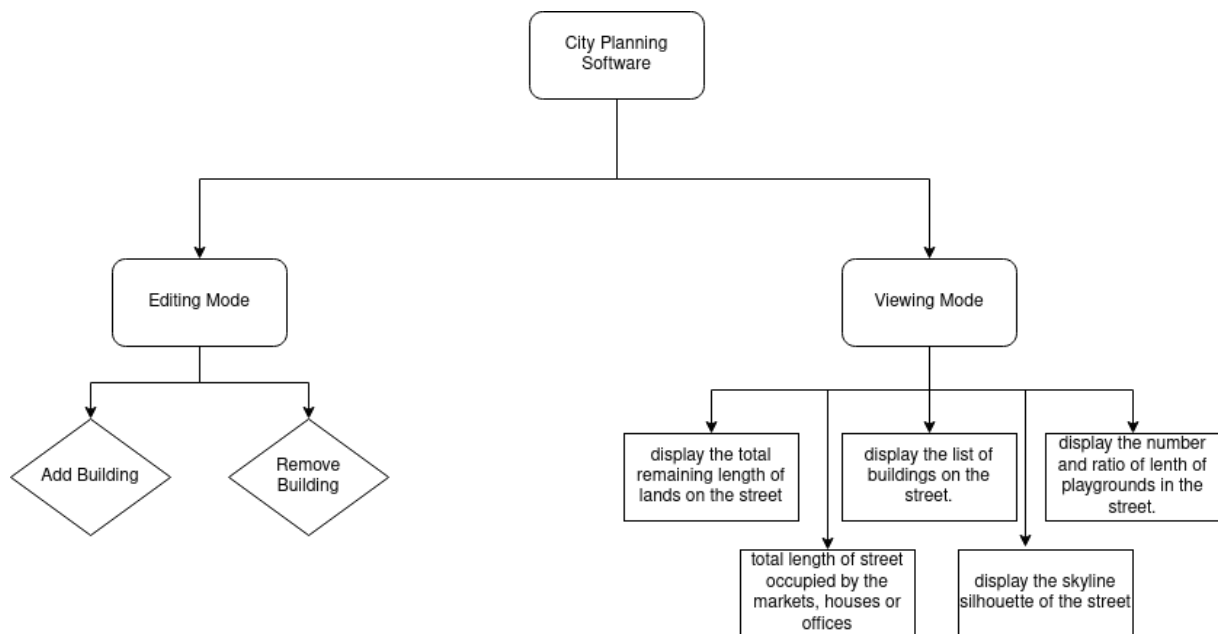
Mustafa MERT

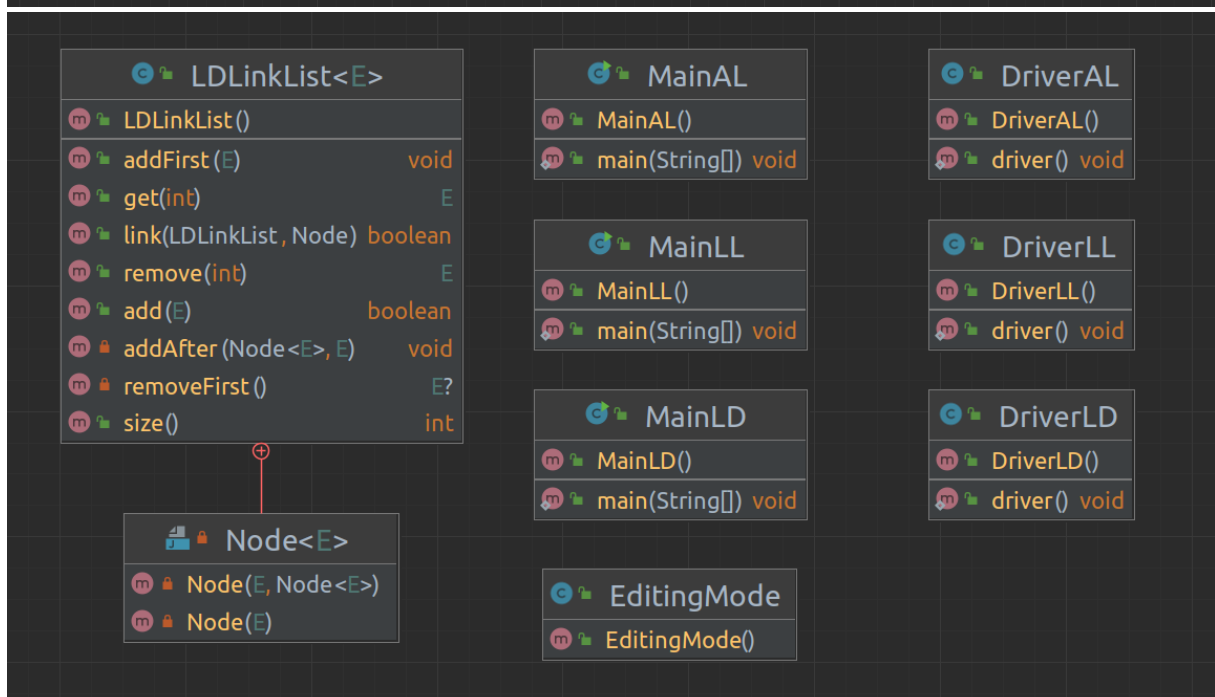
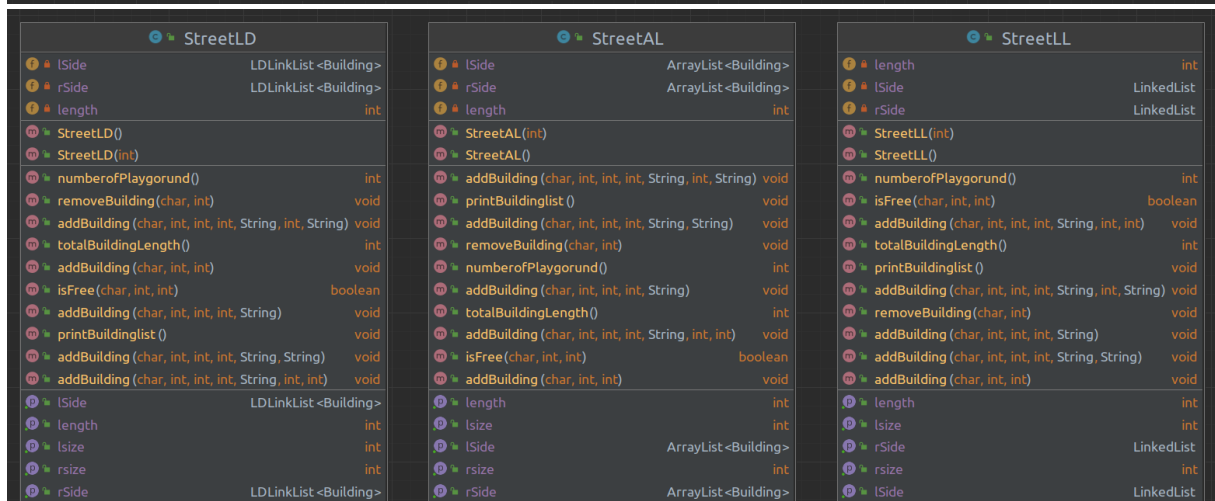
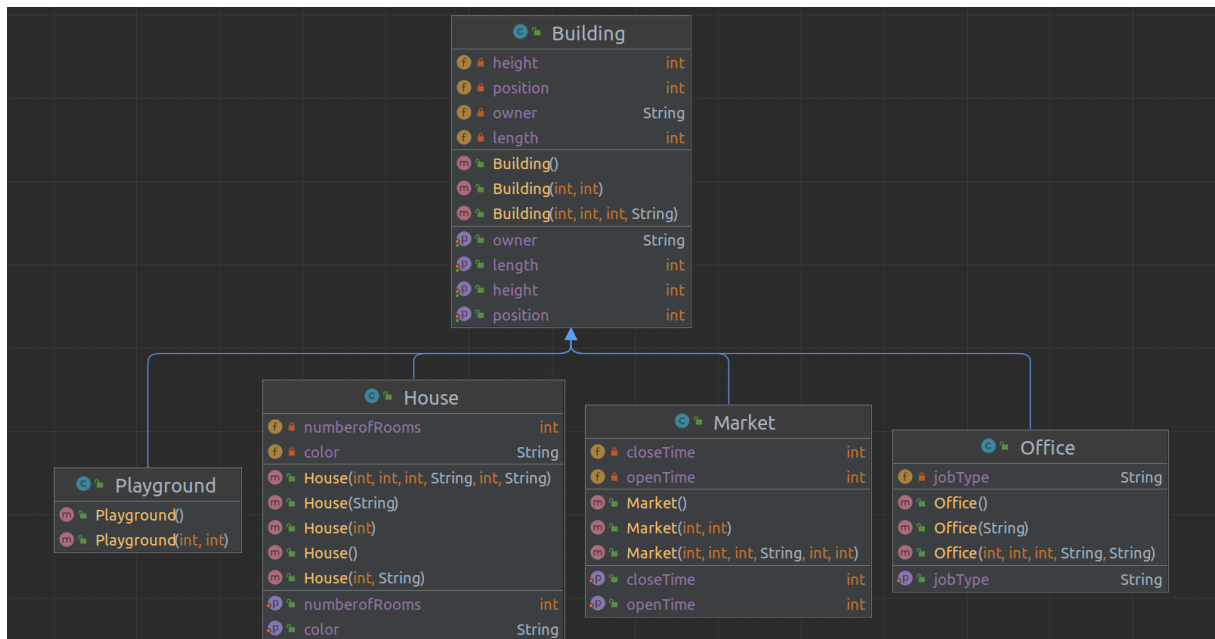
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## 1. SYSTEM REQUIREMENTS

In this software which developed for city planning, superclass which named 'Building' with common variables and funtions. "House, Office, Market and Playgorund" derived from the Building class.

## 2. USE CASE AND CLASS DIAGRAMS





### 3. PROBLEM SOLUTION APPROACH

Every city needs to be structured in a planned way, and we have developed a city planning software as a response to this need. May be the best solution for planning small towns consisting of a few streets. To plan a street you need to add some different types of buildings and remove them. Also every building type has its own properties. You can store the spesific informations about the building with this software. In the “Viewing Mode” you can see anything you want as ratio of playgrounds to street and also total length occupied by buildings on the street and many other thing. It should not be forgotten that one of the most important details of a city is its silhouette, thanks to this program, you can easily see the silhouette of the city you have planned.

### 5. TEST CASES

Test Case #	Test Case Description	Test Data	Expected Result	Actual Result	Pass/Fail
1	Adding building to the street	Side:1 position:5 height:4 length:3 owner:Emir number of Rooms:4 color:yellow	Should add a building to street array to correct side	Added building to correct side	Pass
2	Remove building from the street	Side:1 position:12	Should remove the building in the given position	Removed the building in the correct position	Pass
3	Checking if the land is free	Side:1 position:12 length:3	Should return true if land is free	Returned true	Pass
4	Calculation ratio of playgrounds to street	Street arrays	Should show the ratio	Output is correct	Pass

## 6. RUNNING AND RESULTS

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

```
Driver code starts...
----Left Side----
House
Office
Market
Playground
----Right Side----
House
Office
Market
Playground
Tuna's Law Office at left side position 12 is deleted

----Left Side----
House
Market
Playground
----Right Side----
House
Office
Market
Playground
After deleting the building lets check is land free?
this land is free
Total remaining length 43
Length of playgrounds are 6. Ratio of playgrounds in the street is 0.09375
Total length of all buildings are 21
End of the driver code.
Main program starting....
```

-----City Planning Software-----

1-Editing Mode

2-Viewing Mode

3-Exit

1

-----Editing Mode-----

1-Add Building

2-Remove Building

3-Return Main Menu

1

-----Add Building-----

1-House

2-Office

3-Market

4-Playground

1

Please enter the properties to add 'house'

side(l-r): 1

position: 30

height: 4

length: 1

owner: GTU

numberOfRooms: 22

color: white

-----City Planning Software-----

1-Editing Mode

2-Viewing Mode

3-Exit

3

Process finished with exit code 0