

CSC 343 Project

# MANAGEMENT APPLICATION FOR A CONSTRUCTION COMPANY

Group number (F23\_07)

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# **FUNCTIONAL REQUIREMENTS**

1. Add company information.
2. Update company information.
3. Delete company information.
4. View company information.
5. search company information.
6. Add branch information.
7. Update branch information.
8. Delete branch information.
9. View branch information.
10. search branch information.
11. Add manager information.
12. Update manager information.
13. Delete manager information.
14. View manager information.
15. search manager information.
16. Add department information.
17. Update department information.
18. Delete department information.
19. View department information.
20. search department information.
21. Add construction site information.
22. delete construction site information.

- 23.View construction site information.
- 24.Search construction site information.
- 25.Update construction site information.
- 26.Add staff information.
- 27.Update staff information.
- 28.Delete staff information.
- 29.View staff information.
- 30.search staff information.
- 31.add a branch to company.
- 32.Add department to a branch.
- 33.Add staff to department.
- 34.Assign a Branch manager.
- 35.Assign a department manager.
- 36.Assign a staff to construction site.
- 37.Assign a construction site to a Branch.
- 38.Generate report about Information of all Construction Sites on which Company (all branches) worked between two specific dates.
- 39.Generate report about Information of all current managers along with their branch's information.
- 40.Generate report about Information of all managers for a specific branch.
- 41.Generate report about Information of all construction sites on which some specific branch worked between two specific dates.
- 42.Generate report about Information of all staff members that worked on a specific construction site.
- 43.Generate report about Information of all construction sites who have purposed budget greater than given amount.

- 44. Generate report about Information of all staff members of the company along with the information of their current departments and branches.
- 45. Staff viewing their information.
- 46. Staff viewing there Assigned construction site.

## **NON-FUNCTIONAL REQUIREMENTS**

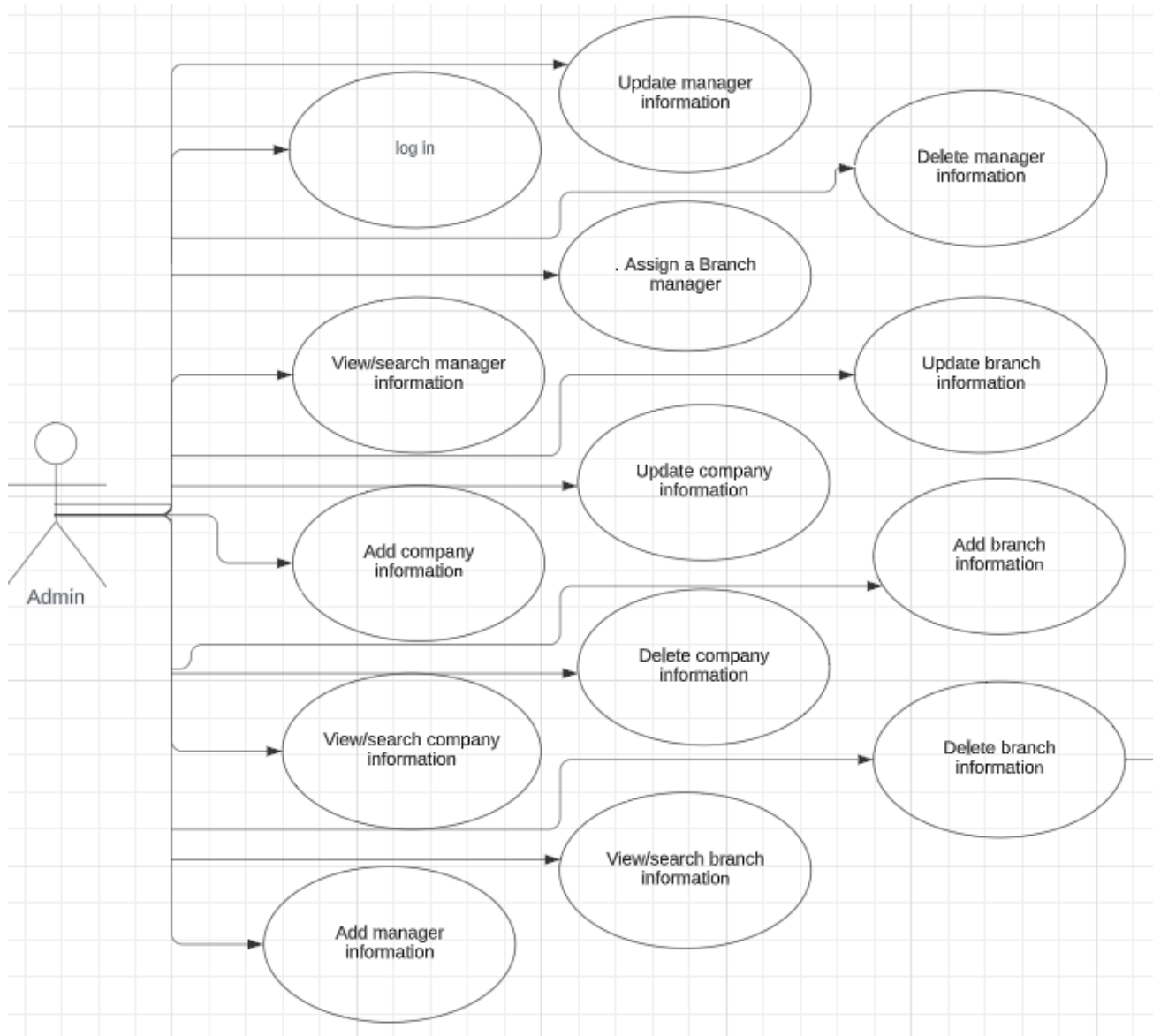
- 1. System should be implemented with windows 11.
- 2. The application should have responsive time less than 1 second.
- 3. User authentication and authorization by using character password from 0-9, A-Z capital or small letters.
- 4. The user interface should be simple first log in page with password and username and company logo up left the page and the main interface should be colored with black.

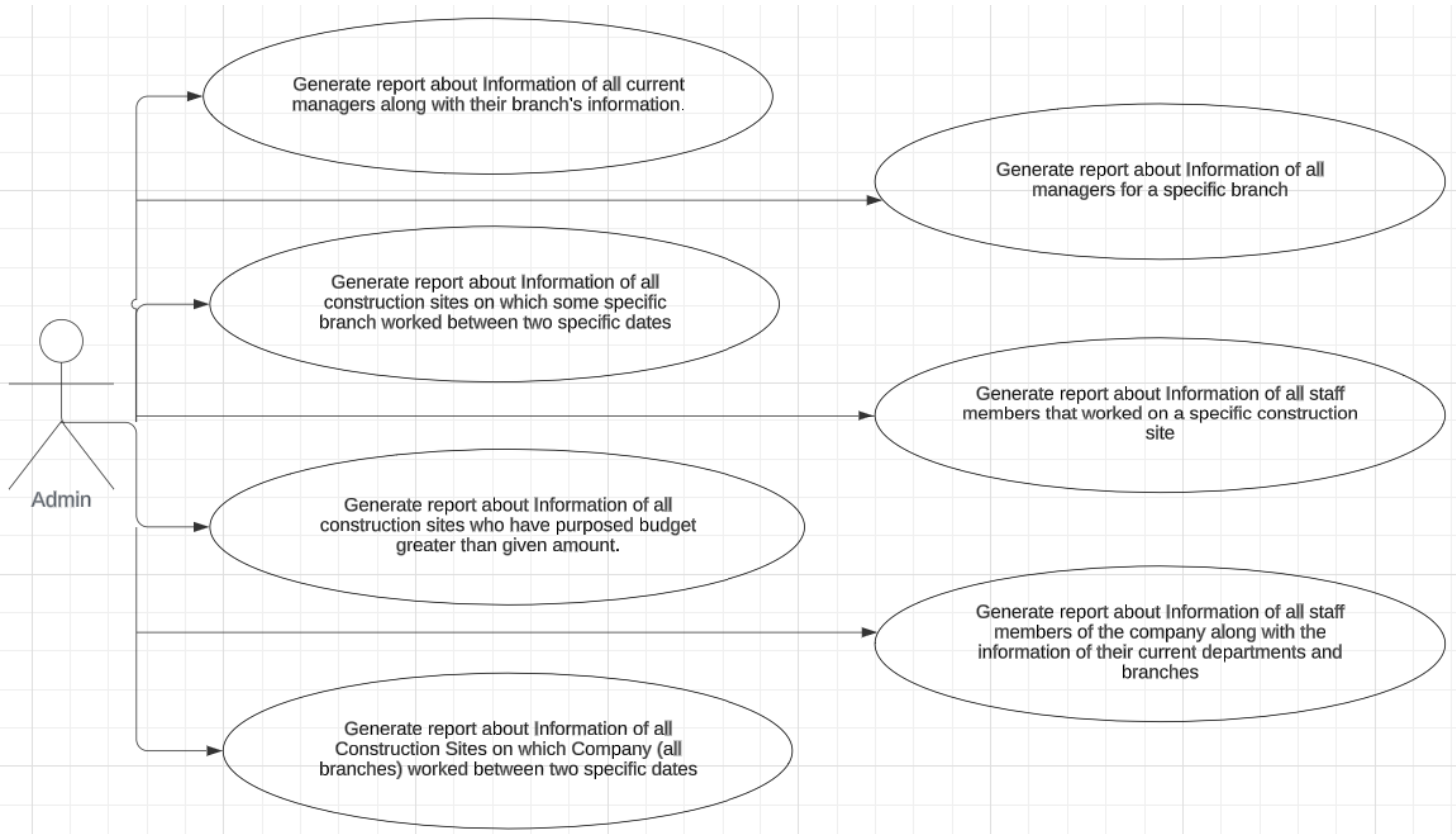
# ACTOR GOALS LIST

Actor	Goal
Administrator	<ol style="list-style-type: none"> <li>1. Add company information.</li> <li>2. Update company information.</li> <li>3. Delete company information.</li> <li>4. View company information.</li> <li>5. Search company information.</li> <li>6. Add branch information.</li> <li>7. Update branch information.</li> <li>8. Delete branch information.</li> <li>9. View branch information</li> <li>10. Search branch information.</li> <li>11. Add manager information.</li> <li>12. Update manager information.</li> <li>13. Delete manager information.</li> <li>14. View manager information.</li> <li>15. Search manager information.</li> <li>16. Generate report about Information of all Construction Sites on which Company (all branches) worked between two specific dates.</li> <li>17. Generate report about Information of all current managers along with their branch's information.</li> <li>18. Generate report about Information of all managers for a specific branch.</li> <li>19. Generate report about Information of all construction sites on which some specific branch worked between two specific dates.</li> <li>20. Generate report about Information of all staff members that worked on a specific construction site.</li> <li>21. Generate report about Information of all construction sites who have purposed budget greater than given amount.</li> <li>22. Generate report about Information of all staff members of the company along with the information of their current departments and branches.</li> <li>23. Add a branch to company.</li> <li>24. Assign a Branch manager.</li> </ol>

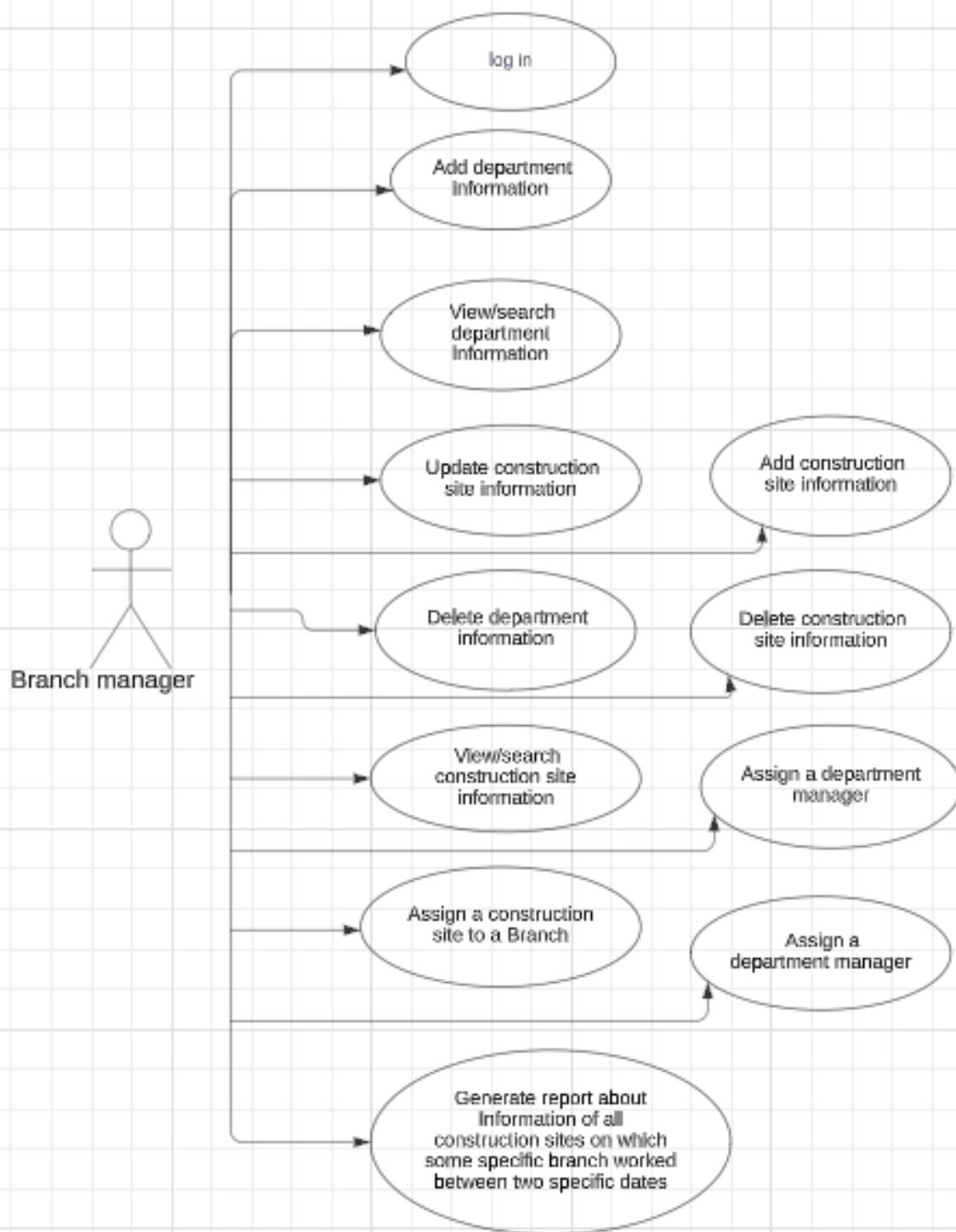
Branche manager	<ol style="list-style-type: none"> <li>1. Add department information.</li> <li>2. Update department information.</li> <li>3. Delete department information.</li> <li>4. View department information.</li> <li>5. search department information.</li> <li>6. Add construction site information.</li> <li>7. delete construction site information.</li> <li>8. View construction site information.</li> <li>9. Search construction site information.</li> <li>10. Assign a department manager.</li> <li>11. Assign a construction site to a Branch.</li> <li>12. Generate report about Information of all construction sites on which some specific branch worked between two specific dates.</li> <li>13. Assign a department manager.</li> </ol>
Department manager	<ol style="list-style-type: none"> <li>1. Add staff information.</li> <li>2. Update staff information.</li> <li>3. Delete staff information.</li> <li>4. View/search staff information.</li> <li>5. Add staff to department.</li> <li>6. Assign a staff to construction site.</li> </ol>
staff	<ol style="list-style-type: none"> <li>1. View information.</li> <li>2. View the Assigned construction site.</li> </ol>

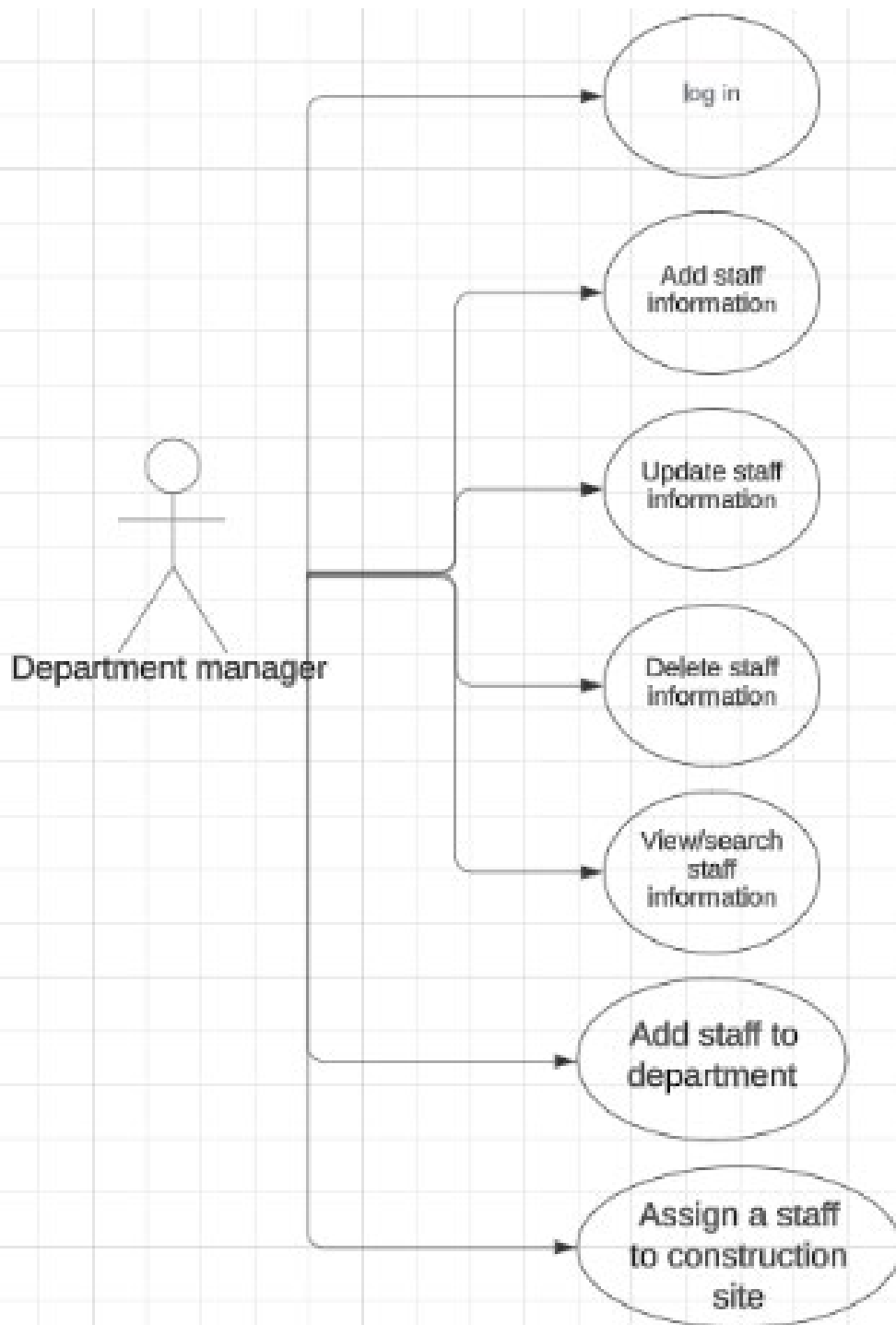
# USE CASE DIAGRAM

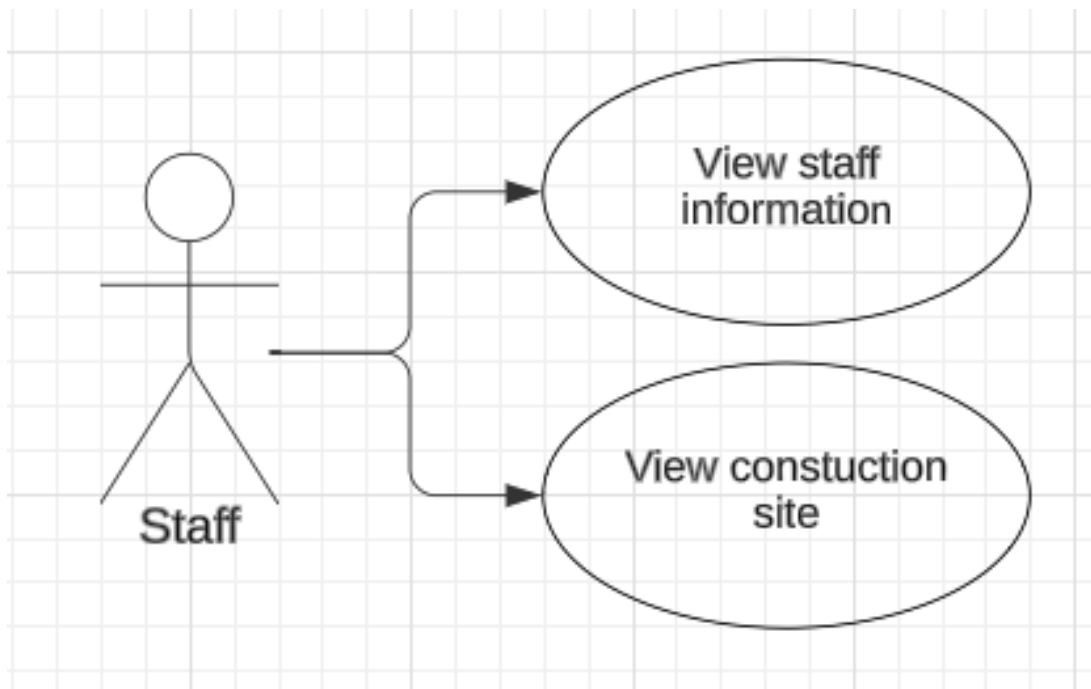












## USE CASE DESCRIPTION:

### Use case 1: Assign staff to construction site:

Actor: Department manager.

Precondition: Staff is not Assigned.

Postcondition: Staff is Assigned.

<u>User action</u>	<u>System response</u>
i. The user enters the staff id to check if he is Assigned previously.	i. System responses with the validation message, <b>Exp1,Exp2</b>
ii. The user enters the construction site information (construction site id-location-capacity of staffs-manager-under which department).	ii. System responses with the availability of the construction site. <b>Exp3,Exp4</b>
iii. The user directs the system to Assign the staff.	iii. The System responses with the Assigning message.

to construction site. <b>Alt1</b>	case ends.
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**Exception 1:** staff already Assigned to a construction site. Use case ends.

**Exception 2:** staff id is not correct. go to step i. or end use case.

**Exception 3:** construction site id is not correct. go to step ii. or end use case.

**Exception 4:** construction site has maximum capacity of staff. Go to step ii. or end use case.

**Alternative 1:** User directs the system to cancel the Assigning. Use case ends.

## Use case 2: Generate report about Information of all Construction Sites on which Company (all branches) worked between two specific dates.

Actor: Administrator.

Precondition: The report is not generated.

Postcondition: The report is generated.

### User action

### System response

i. The user enters company information(company id, company name).	ii. System responses with the validation message <b>Exp1</b>
ii. The user enters the two dates to generate the report.	ii. System responses with the validation message <b>Exp3,Exp4</b>
ii. The user directs the system to generate a report with information of all Construction Sites on which Company (all branches) worked between two specific dates. <b>Alt1</b>	ii. The System responses with the generated report. Use case ends

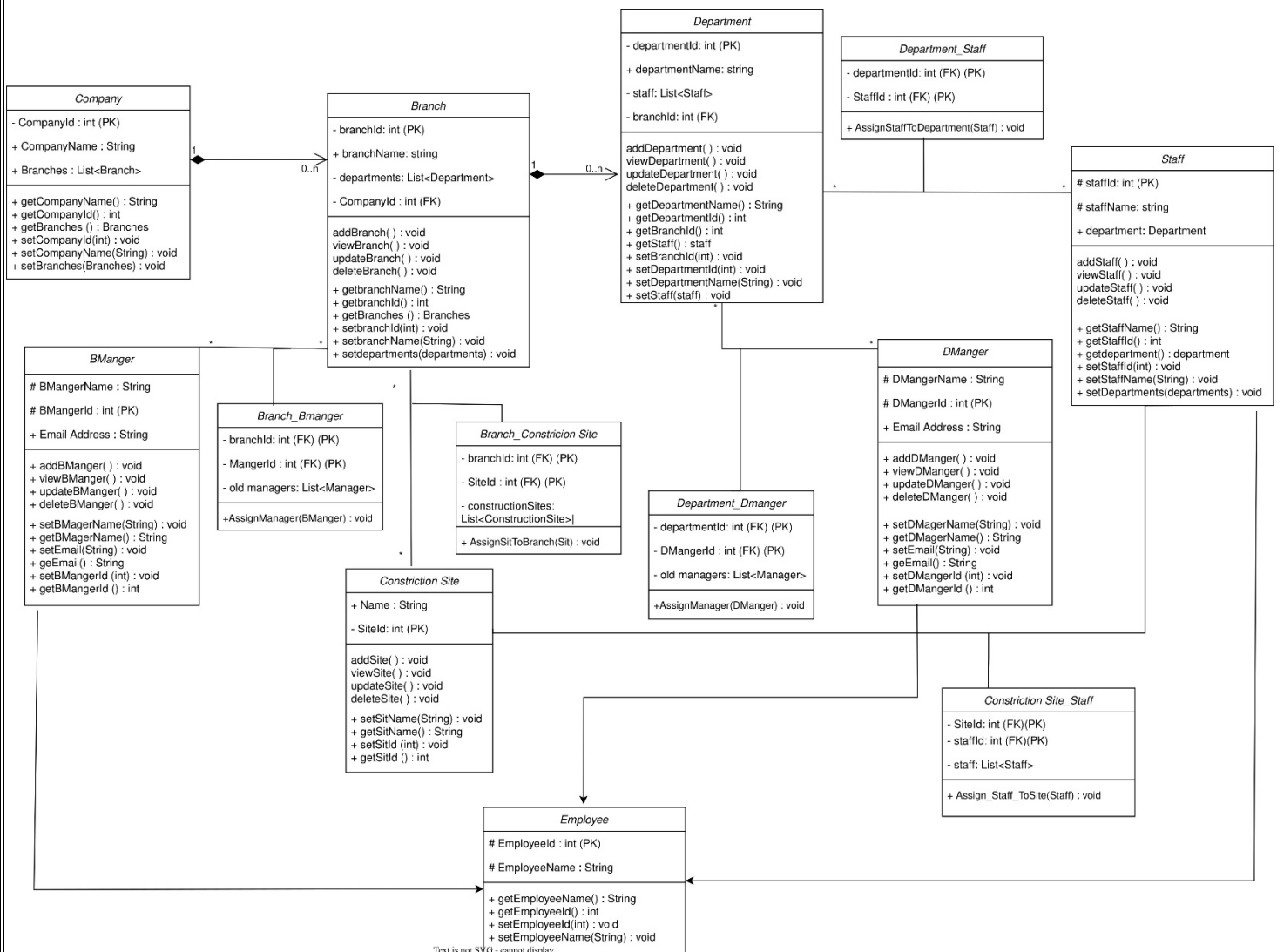
**Exception 1:** The user entered invalid company id. Go step i. or end use case.

**Exception 2:** There is no branch that worked on a construction site. Use case ends.

**Exception 3:** The user entered invalid dates. Go to step ii. or end use case.

**Alternative 1:** User directs the system to cancel the report. Use case ends.

## CLASS DIAGRAM:



# ACTIVITY DIAGRAM: ASSIGN STAFF TO A CONSTRUCTION SITE.

