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**Project CSC343**

**Management Application for a**

**Construction Company**

**F23\_08**

**Suliman AlAkeel**

**Abdullah AlQahtani**

**Abdulrahman AlMyman**

**Introduction**

We are working on a management application for a construction company using the skills we learned this semester, such as the functional and non-functional, use case diagram, actor-goal list, class diagram, and activity diagram. The goal of the project is to use each of these technologies on the notion.

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**Functional Requirements:**

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| --- |
| 1. The application shouldadd company information. |
| 1. The application should update company information. |
| 1. The application should update company information. |
| 1. The application shouldview company information. |
| 1. The application should search company information. |
| 1. The application shouldadd branches information. |
| 1. The application should update branches information. |
| 1. The application should delete branches information. |
| 1. The application should view branches information. |
| 1. The application should search branches information. |
| 1. The application shouldadd managers information. |
| 1. The application should update managers information. |
| 1. The application should delete managers information. |
| 1. The application should view manages information. |
| 1. The application should search manages information. |
| 1. The application shouldadd department information. |
| 1. The application should update department information. |
| 1. The application should delete department information. |
| 1. The application should view department information. |
| 1. The application should search department information. |
| 1. The application shouldadd staff information. |
| 1. The application should update staff information. |
| 1. The application should delete staff information. |
| 1. The application should view staff information. |
| 1. The application should search staff information. |
| 1. The application should add construction site information. |
| 1. The application should update construction site information. |
| 1. The application should delete construction site information. |
| 1. The application should view construction site information. |
| 1. The application should search construction site information. |
| 1. The application should assign staff to department. |
| 1. The application should addingdepartment to a branch. |
| 1. The application should addingbranch to company. |
| 1. The application should assigningmanager to branch. |
| 1. The application should assigningconstruction site to a branch. |

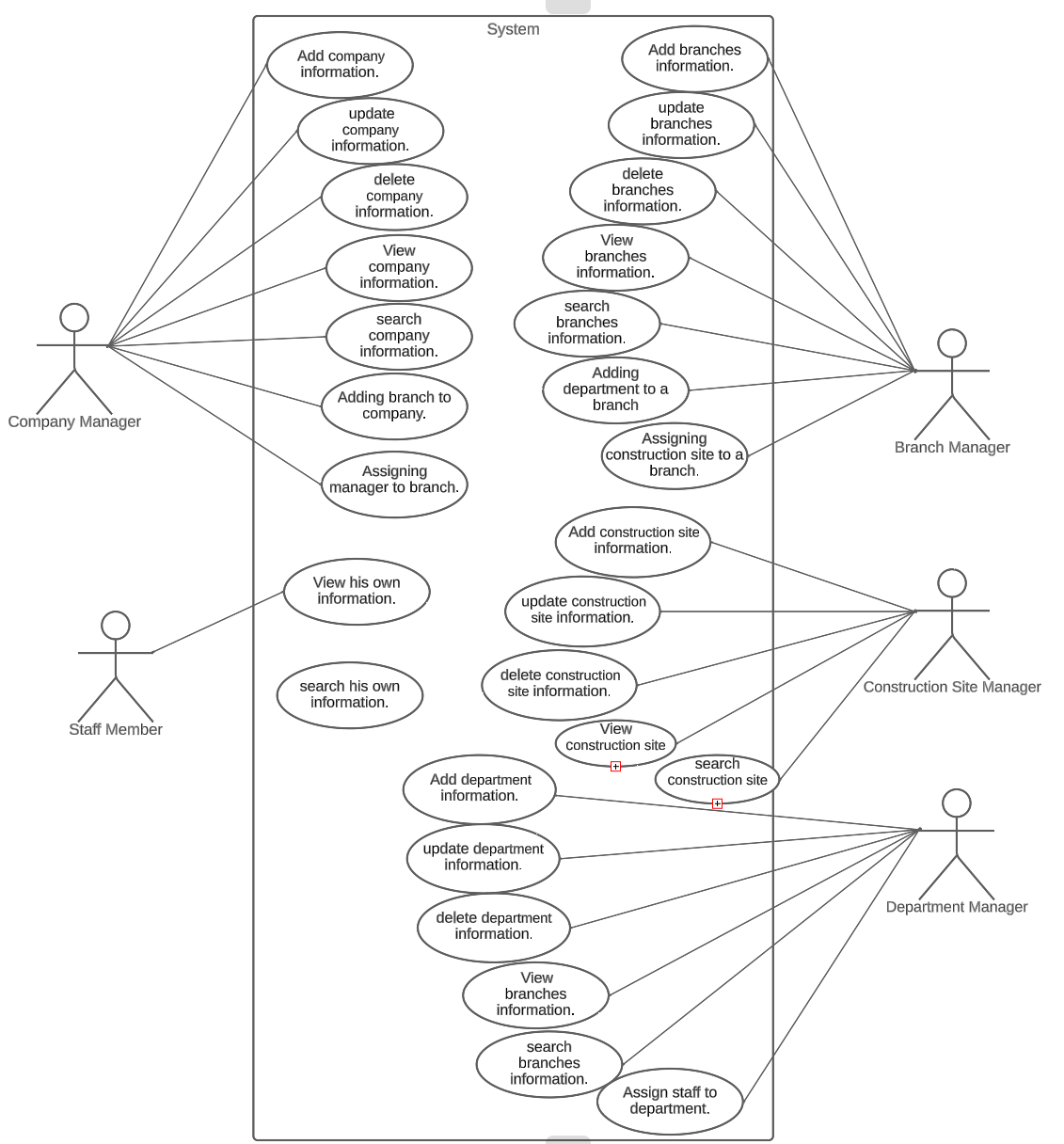
**Non-Functional Requirements:**

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| 1. The Application must be implemented on windows 11. |
| 1. The Application must have a user-friendly Gui. |

**Actor-Goal Lis:**

|  |  |
| --- | --- |
| **Actor** | **Goal** |
| **Company Manager** | 1. Add company information. 2. Update company information. 3. Delete company information. 4. View company information. 5. Search company information. 6. Adding branch to company. 7. Assigning manager to branch. |
| **Branch Manager** | 1. Add branches information. 2. Update branches information. 3. Delete branches information. 4. View branches information. 5. Search branches information. 6. Adding department to a branch 7. Assigning construction site to a branch. |
| **Department Manager** | 1. Add departmentinformation. 2. Update departmentinformation. 3. Delete departmentinformation. 4. View departmentinformation. 5. Search departmentinformation. 6. Assign staff to department. |
| **Staff Member** | 1. View his own information. 2. Search his own information. |
| **Construction Site Manager** | 1. Add construction site information. 2. Update construction site information. 3. Delete construction site information. 4. View constructionsiteinformation. 5. Search constructionsiteinformation. |

**Use-Case Diagram:**

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**Description Of Use-Case:**

**Situation:** The company has many branches, and every branch has a manager. One branch can work for different construction sites. Different branches can work on the same construction site. Every Branch will have the same kind of departments and department will have staff members working for that department.

***Use case Name:*** ***Adding Staff to Department***

*Actor: Company Manager*

*Precondition:* Staff has no department.

Post condition: staff are added to Department.

**User Actions System Response**

|  |  |
| --- | --- |
| 1. The Company Manager enters his credentials to the system. | 1. System responses with the validation message. **Exp1** |
| 1. The Company Manager checks if the staff and department’s information are correct and available. | 1. System responses with the availability of staff and department message. **Exp2** |
| 1. The Company Manager Adds the staff to department. **Alt1** | 1. The system responses with the confirmation message. |

**Exception 1: credentials are not validated. No Adding Staff to Department. Use case** ends.

**Exception 2: staff or department are not available. Go to step ii or end the use case.**

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

***Use case Name:*** ***Assigning Construction Site to a branch.***

*Actor: Company Manager*

*Precondition:* Construction site is not assigned to a branch.

Post condition: Construction site is assigned to a branch.

**User Actions System Response**

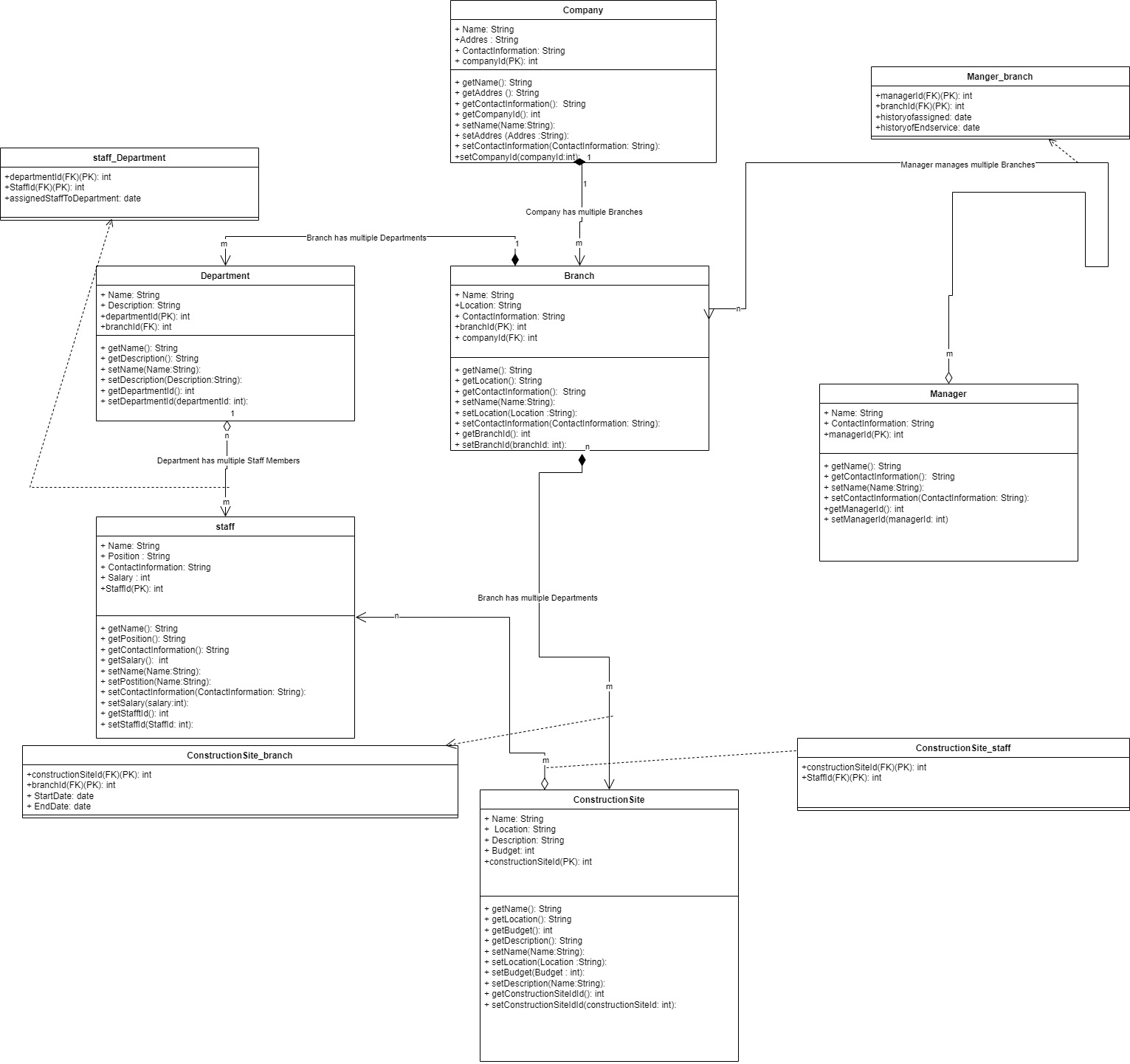
|  |  |
| --- | --- |
| 1. The Company Manager enters his credentials to the system. | 1. System responses with the validation message. **Exp1** |
| 1. The Company Manager checks if the staff and department’s information are correct and available. | 1. System responds with the availability of construction site and branch message. **Exp2** |
| 1. The Company Manager Assign Construction site to department **Alt1** | 1. The system responses with the confirmation message |

**Exception 1: credentials are not validated. No Assigning** **Construction Site to a branch. Use case ends.**

**Exception 2: Construction Site or branch are not available. Go to step ii or end the use case.**

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

**Class Diagram:**

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**Activity Diagram:**

A screen shot of a computer

Description automatically generatedAdding staff to department.