

3 CONSTRUCTION MANAGEMENT

Group Members

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ABSTRACT

A construction company constructs houses for a number of clients. A client can have a number of houses/offices built by the same company. Client information is also maintained by the company. Site information is separately maintained. Material information including name, amount available and reorder level is also to be maintained. Materials used for each construction are to be stored which include the name, model, type (like iron, steel, plastic, etc.), quantity, company, etc. Information from the retailer which provides these materials are also stored.

The construction management system is a Web Application to manage all the day-to-day operations related to events for an organization. It starts from the process of collecting relevant details and requirements from the company. The scope of this application deals with the daily administration of the software. The administrator here is the advocate who deals with the handling of addition, deletion, and updating the detail. This Daily Board Software is limited to advocates only who is the manager of the software, who manages all the working and allows the client to enroll and handle the data of clients in their respective cases and its details.

Keywords: Construction Management System, Web Application.

Functional Requirements of the System

Employee:

1. Create Site.
2. Create material record.
3. Create Order
4. Create retailer.
5. Create Build-materials

Client:

1. View Client inventory
2. Purchase site.
3. View sites.

❖ *Employee*

- Login to the system
- He or she can change or create records.

❖ *Client*

- Login to the system.
- Can update/edit its records

Use cases

Perform requirement analysis of your system and list valid use cases here.

- Employee
 1. Login
 2. Edit
 3. Delete
 4. Register
 5. Logout
- Client
 1. Login
 2. Edit
 3. Delete
 4. Register
 5. Logout

Actors

Use Case Description

Describe your use cases here. For example.

Use case ID	Login/Logout
Brief description	The user can get access to the system using a username and password.
Primary actors	System user
Precondition	User must register with the system and should have valid login credentials.

Post condition	Already not a registered user, register with the system or perform transactions if the login attempt was successful.
Main success Scenario	If a valid user, then display welcome message and give access to his/her account else return error message.
Actor Action	System Response
1. The user enters login credentials and clicks on the login button.	2. Performs validation of login credentials. If a valid user, provides access.
3. The user gets access into the account main page.	
Alternate flow	
	2a. If not a valid user, the system returns an error message.

Use case ID	Create Site
Brief description	Site is created by an employee
Primary actors	Employee
Precondition	A panel will be visible only to the employee where he/she can enter required details and create a new site which will be stored in the system. Various options such as building no ,type ,name ,address and cost.
Post condition	Site gets created
Main success Scenario	Success message appears
Actor Action	System Response

1. Employee will be able to login with the correct credentials and gain access to various functionalities including creating new sites.	2. Employee will be able to create a new site in the management system.
Alternate flow	
	9a. Successful message is displayed on creation

Use case ID	Create material record
Brief description	A panel will be visible for the employee to create material records.
Primary actors	Employee
Precondition	The Employee should login with valid credentials.
Post condition	Perform transactions if the login attempt was successful.
Main success Scenario	Once all the valid details are entered, the system will return successful message
Actor Action	System Response
Employee will be able to login with the correct credentials and gain access to various functionalities.	Employee will be able to create a material record in the management system.
Alternate flow	
	The system will return an ERROR message.

Use case ID	Create Retailer
Brief description	Employee creates the retailers
Primary actors	Employee
Precondition	User must register with the system and should have a valid login credentials.
Post condition	Perform transactions if login attempt was successful.
Main success Scenario	Once all the valid details are entered, the system will return successful message
Actor Action	System Response
Employee with the correct credentials and gain access to various functionalities including creating, editing, and removing retailer details.	Employee will be able to create a new retailer in the management system.
3. The user get access into the account main page.	
Alternate flow	
	The system will return an ERROR message

Use case ID	Create order
Brief description	The employee gives order for the necessary materials from the retailer.
Primary actors	Employee
Precondition	User must register with the system and should have a valid login credentials.
Post condition	Perform transactions if login attempt was successful.
Main success Scenario	Once all the valid details are entered, the system will return successful message
Actor Action	System Response
Employee will be able to login with the correct credentials and gain access to various functionalities giving material order to retailer.	Admin will be able to create a orders in the management system.

Alternate flow	
	The system returns ERROR message.

Use case ID	Create Build-material
Brief description	Provides details of the materials a building of a particular site require.
Primary actors	Employee
Precondition	User must register with the system and should have a valid login credentials.
Post condition	Perform transactions if login attempt was successful.
Main success Scenario	Once all the valid details are entered, the system will return successful message
Actor Action	System Response
The employee creates the materials required for a building in a site.	Admin will be able to create a new build-material in the management system..
Alternate flow	
	The system returns ERROR message.

Use case ID	View client inventory
Brief description	The client gets to view, the site he has purchased.
Primary actors	Client
Precondition	User must register with the system and should have a valid login credentials.
Post condition	The client gets to view the transactions he/she has made.
Main success Scenario	Being able to keep track of the transactions correctly.
Actor Action	System Response

Client can view his transactions.	The system displays the transactions.
Alternate flow	
	The System gives ERROR message.

Use case ID	Purchase buildings
Brief description	The client gets to purchase the site.
Primary actors	Client
Precondition	User must register with the system and should have a valid login credentials.
Post condition	The client gets to purchase the site he/she wishes to.
Main success Scenario	The system returns successful message if the transaction has been made.
Actor Action	System Response

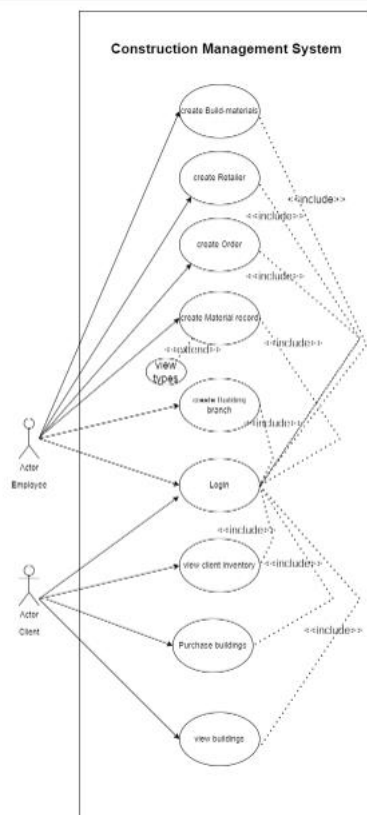
Client purchases the site.	The system gives successful message.
Alternate flow	
	The System gives ERROR message.

Use case ID	View buildings
Brief description	The client gets to view type of buildings available in a site.
Primary actors	Client
Precondition	User must register with the system and should have a valid login credentials.
Post condition	The client gets to view the availability of buildings in a site.
Main success Scenario	Being able to view the correct availability of buildings in site.
Actor Action	System Response

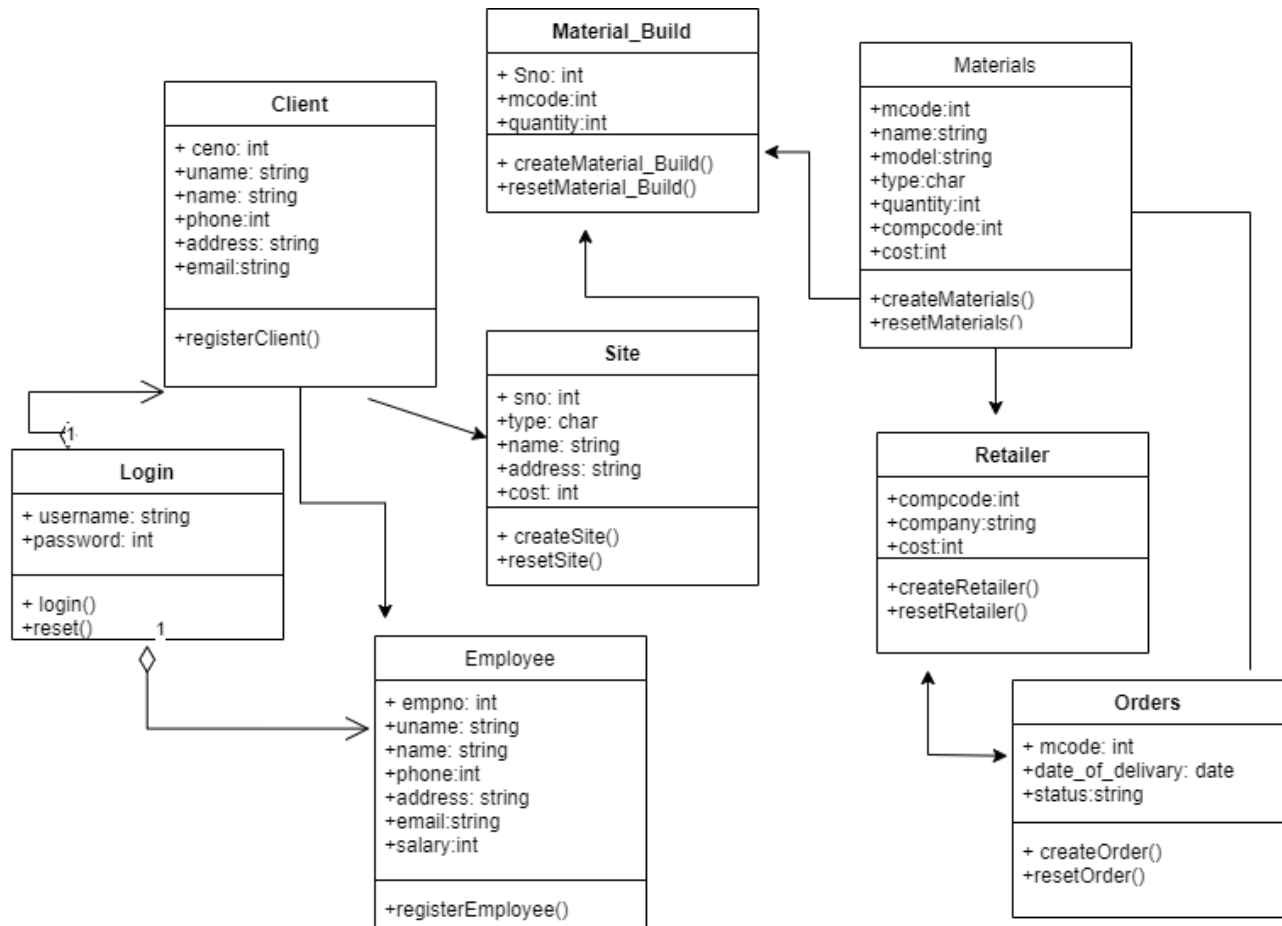
Client can view the availability.	The system displays the availability correctly.
Alternate flow	
	The System gives ERROR message.

Use case Diagram

Draw your use case diagram here.



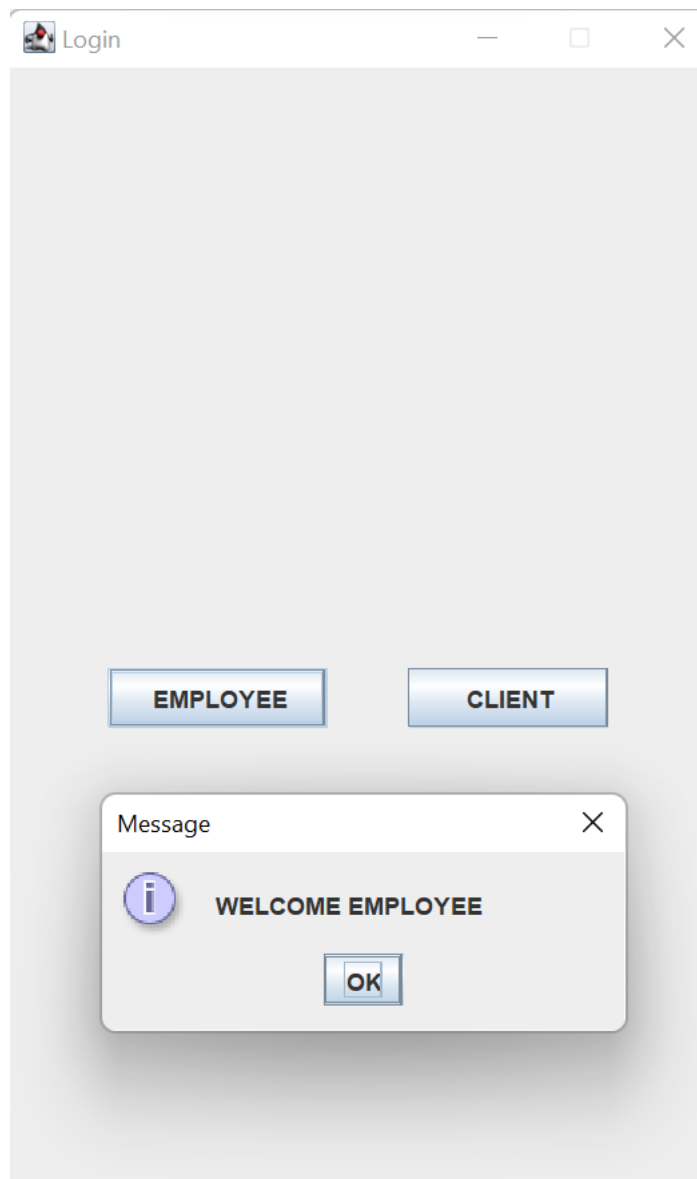
Class diagram



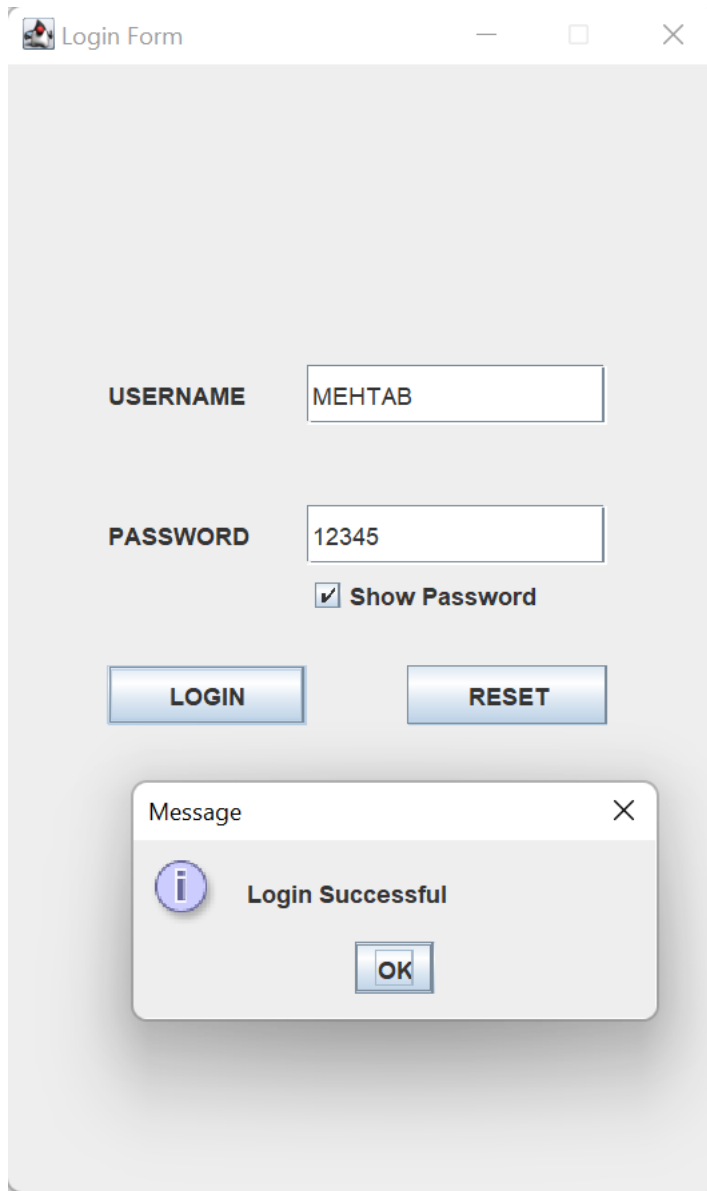
User Interface Design

Give details of your user interface design as shown below. Draw all the UI screens planned for your project. You may use a pen or pencil to draw a rough UI at this stage.

1. Login



2 Login Frame



The image shows a Java Swing window titled "Login Form" with standard window controls (minimize, maximize, close). Inside the window, there are two text input fields. The first is labeled "USERNAME" and contains the text "MEHTAB". The second is labeled "PASSWORD" and contains the text "12345". Below the password field is a checkbox labeled "Show Password" which is checked. There are two buttons: "LOGIN" and "RESET". A modal message dialog is open in the foreground, titled "Message", with an information icon and the text "Login Successful". It has an "OK" button.

USERNAME MEHTAB

PASSWORD 12345

☒ Show Password

LOGIN **RESET**

Message

i Login Successful

OK

3. Employee Registration

The screenshot displays a Java Swing application titled "EMPLOYEE REGISTER". The application consists of a registration form and a code editor in the background.

Registration Form Fields:

- EMPNO:** 123
- UNAME:** devs
- NAME:** Devika H
- PHONE:** 9034233444
- ADDRESS:** n,Kerala,India,ASIA,EARTH
- EMAIL:** devika345@gmail.com
- SALARY:** 40000

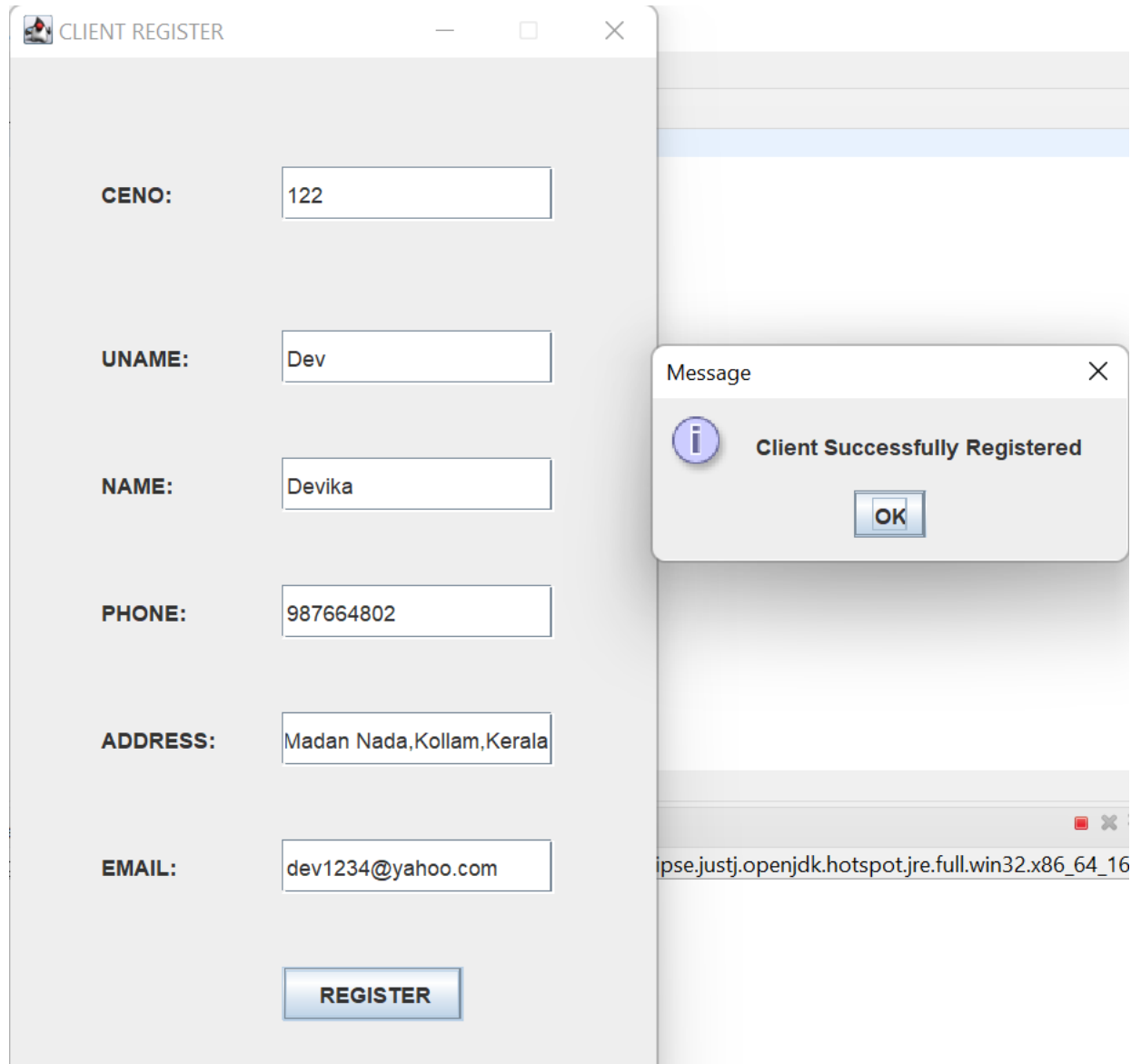
REGISTER Button: A blue button labeled "REGISTER" is located at the bottom of the form.

Code Editor: The background shows a code editor with the following code snippet:

```
...register();  
  
EXIT_ON_CLOSE);
```

Message Dialog: A "Message" dialog box is displayed, indicating "Employee Successfully Registered" with an "OK" button.

4 Client Registration




The image shows a Java Swing application window titled "CLIENT REGISTER". It contains a registration form with the following fields and values:

Field	Value
CENO:	122
UNAME:	Dev
NAME:	Devika
PHONE:	987664802
ADDRESS:	Madan Nada, Kollam, Kerala
EMAIL:	dev1234@yahoo.com

At the bottom of the form is a "REGISTER" button. A "Message" dialog box is displayed over the form, indicating "Client Successfully Registered" with an "OK" button.

5. Client Inventory

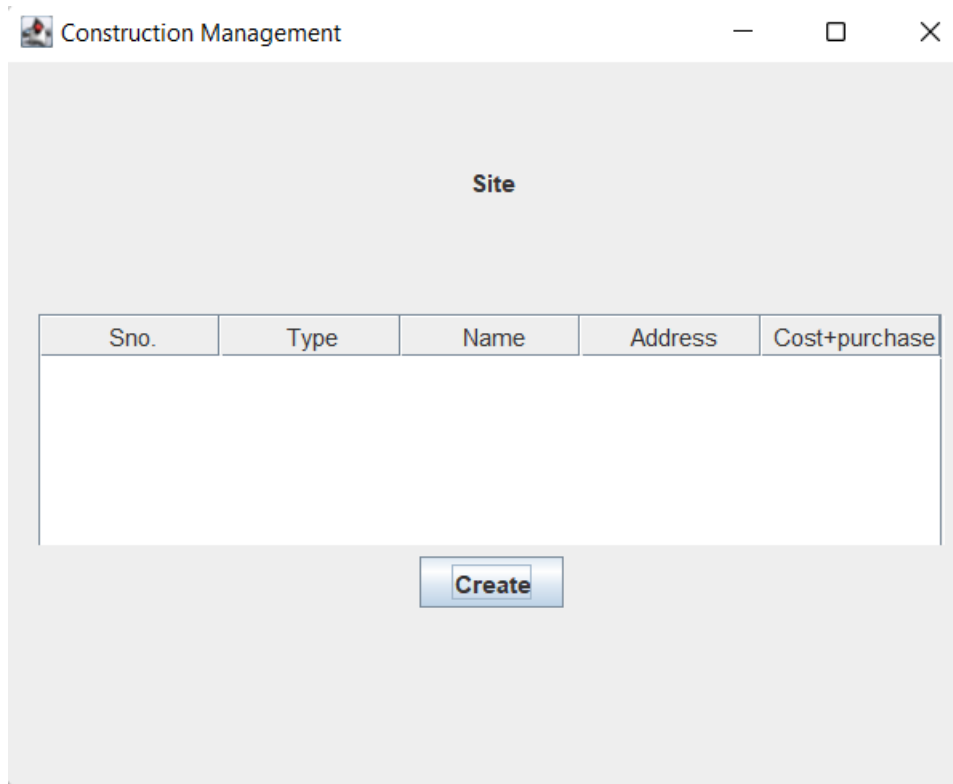
 CLIENT INVENTORY

RegNo	SNo	STATUS
1	A1	PURCHASED
2	E27	PENDING

6 Availability

AVAILABILITY	
TYPE	QUANTITY
HOUSE	34
OFFICE	27

7. Display Site Details



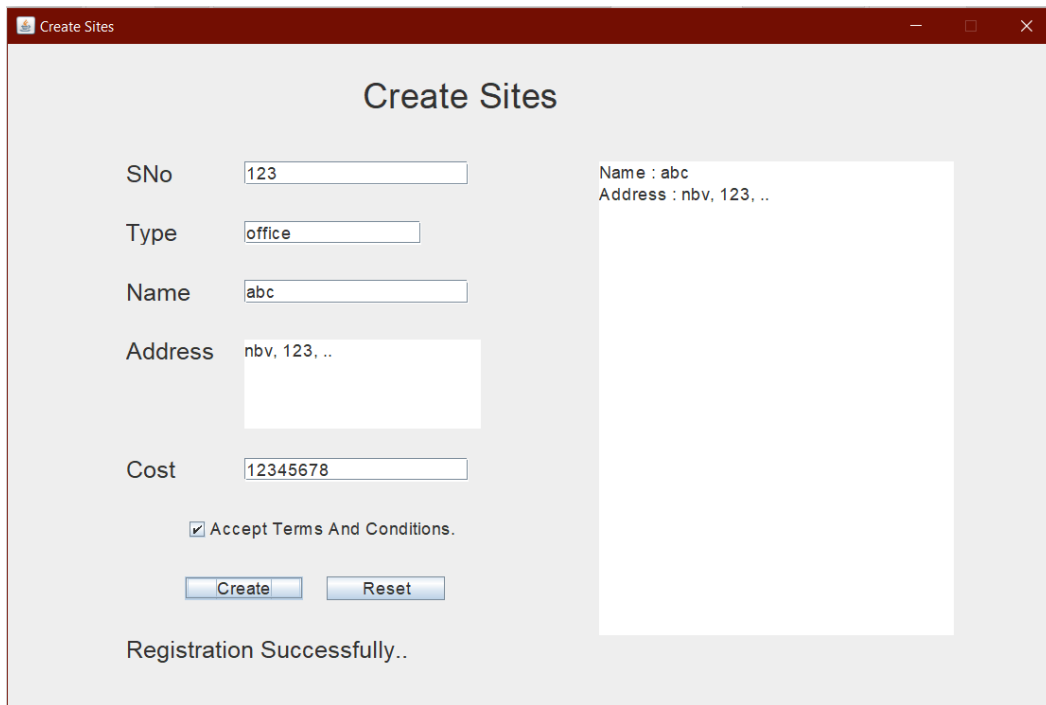
Construction Management

Site

Sno.	Type	Name	Address	Cost+purchase
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Create

8. Create new site



Create Sites

SNo: 123

Type: office

Name: abc

Address: nbv, 123, ..

Cost: 12345678

☒ Accept Terms And Conditions.

Create Reset

Registration Successfully..

Preview:

Name : abc

Address : nbv, 123, ..

9.Display Material Details.

Construction Management

Materials

Mcode	Name	Model	Type	Quantity	Comp code	Cost

Create

10.Create new materials

Create Materials

mcode

name

model

type

quantity

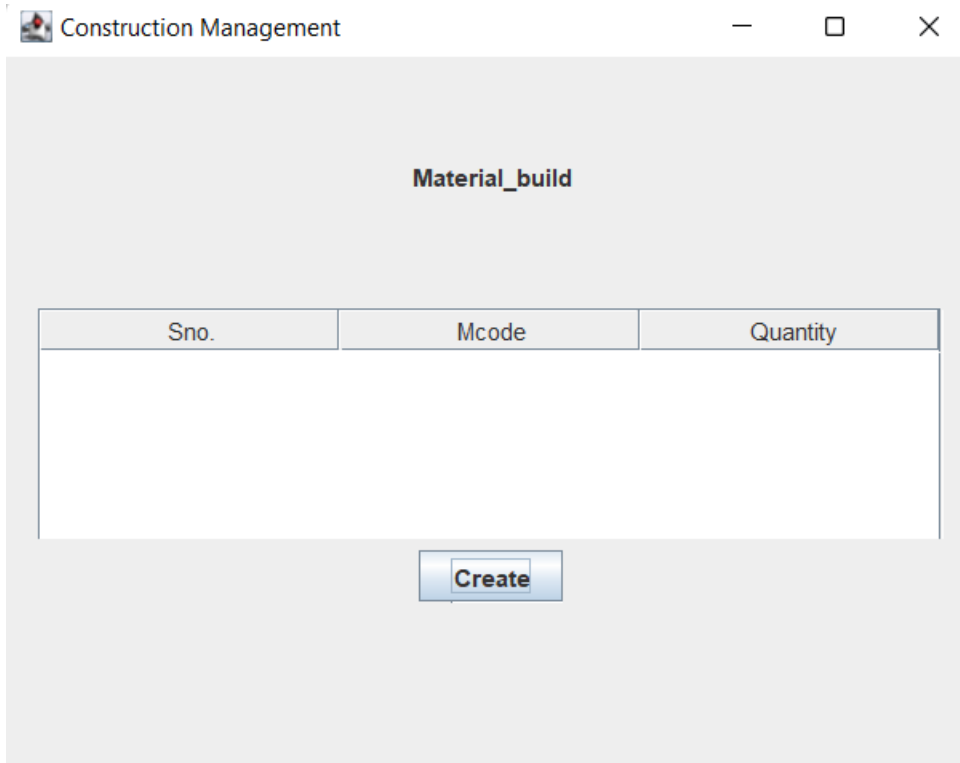
comp_co...

cost

☐ Accept Terms And Conditions.

Create Reset

11. Display Material_Build



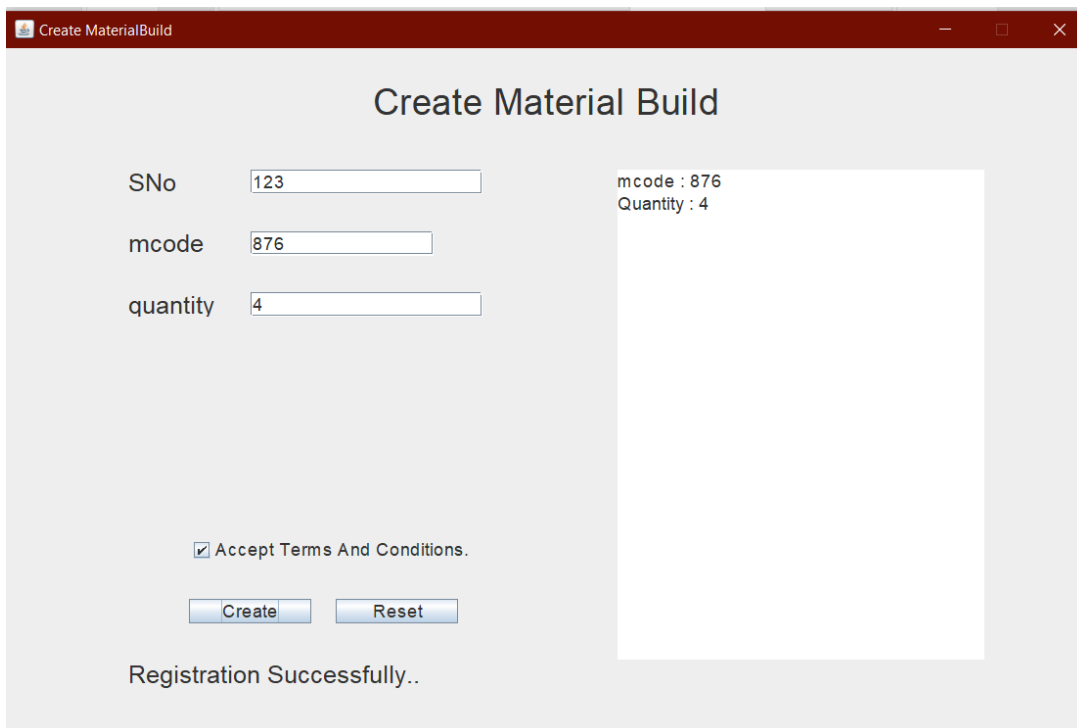
Construction Management

Material_build

Sno.	Mcode	Quantity
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Create

12. Create new Material_Build details



Create MaterialBuild

Create Material Build

SNo 123

mcode 876

quantity 4

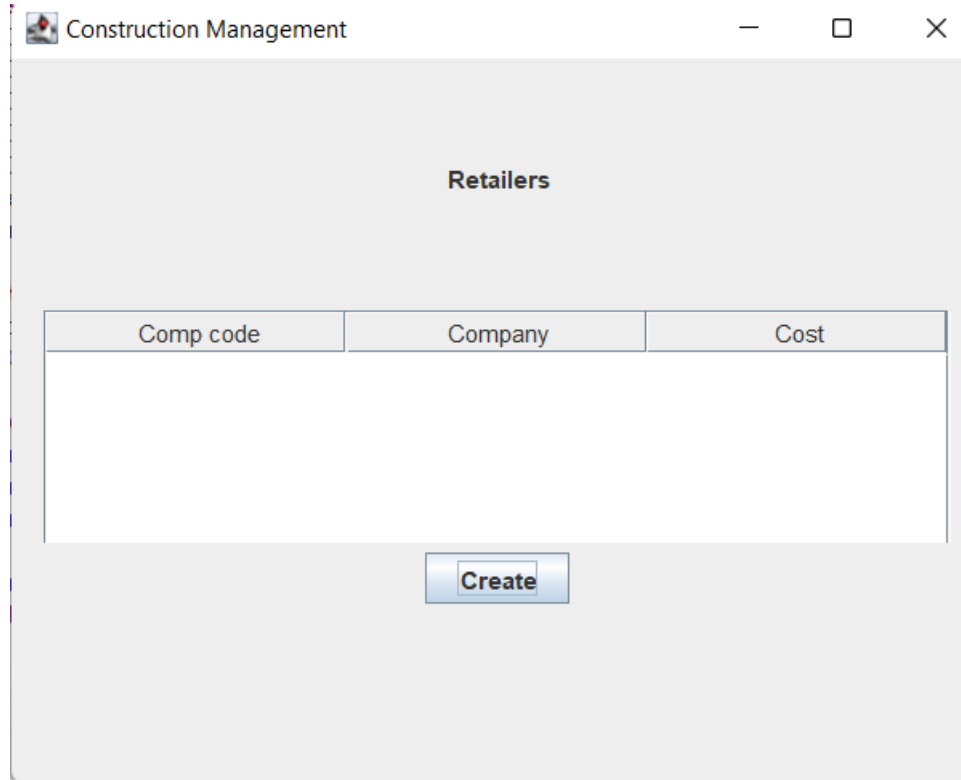
mcode : 876
Quantity : 4

☒ Accept Terms And Conditions.

Create Reset

Registration Successfully..

13. Display details on Retailers



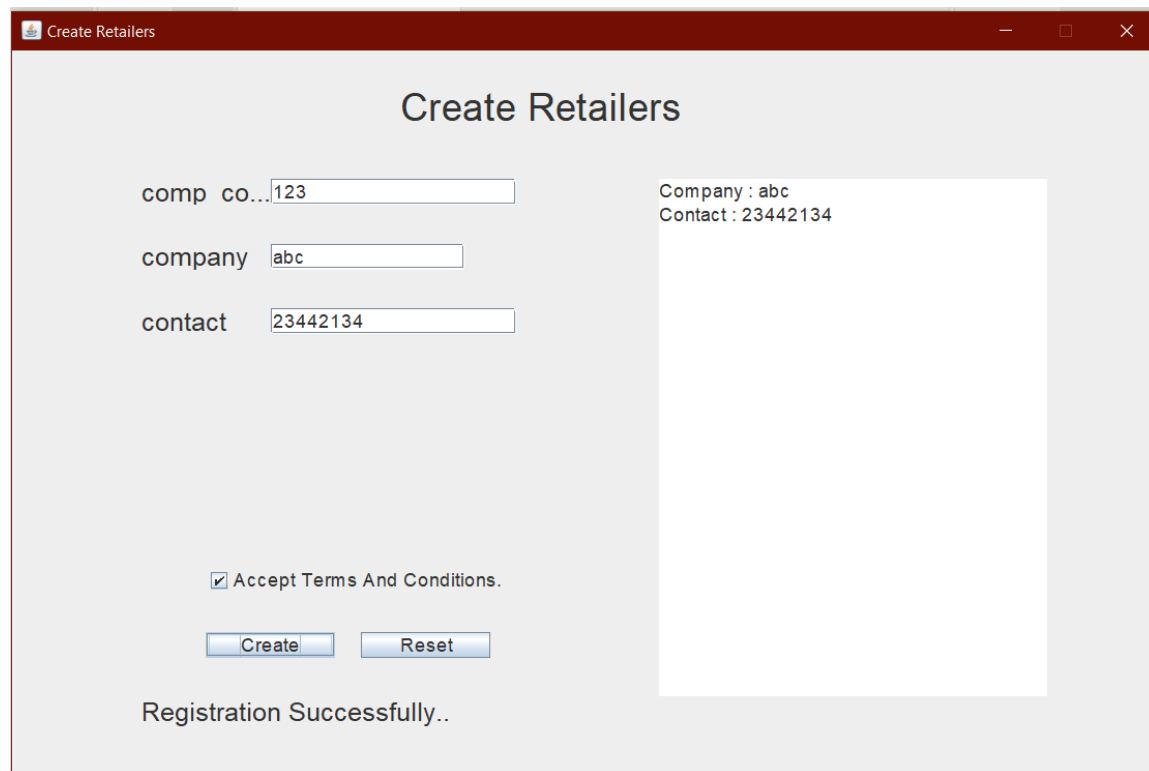
Construction Management

Retailers

Comp code	Company	Cost
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Create

14. Create new retailer



Create Retailers

comp co... 123

company abc

contact 23442134

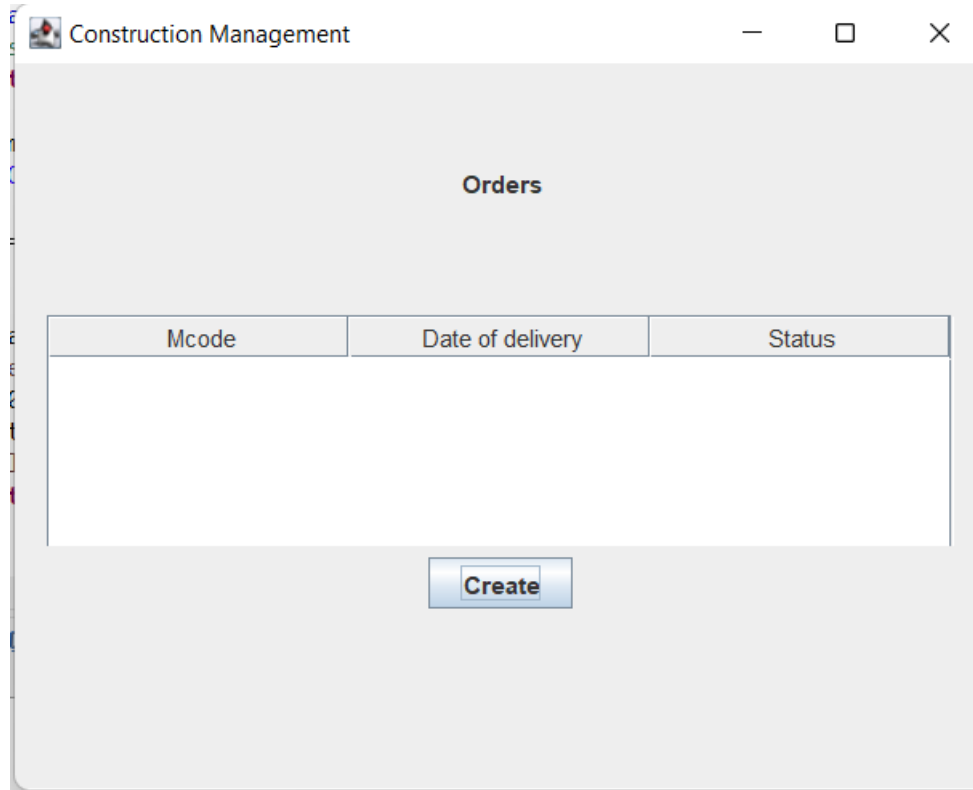
Company : abc
Contact : 23442134

☒ Accept Terms And Conditions.

Create Reset

Registration Successfully..

15. Display details on Order

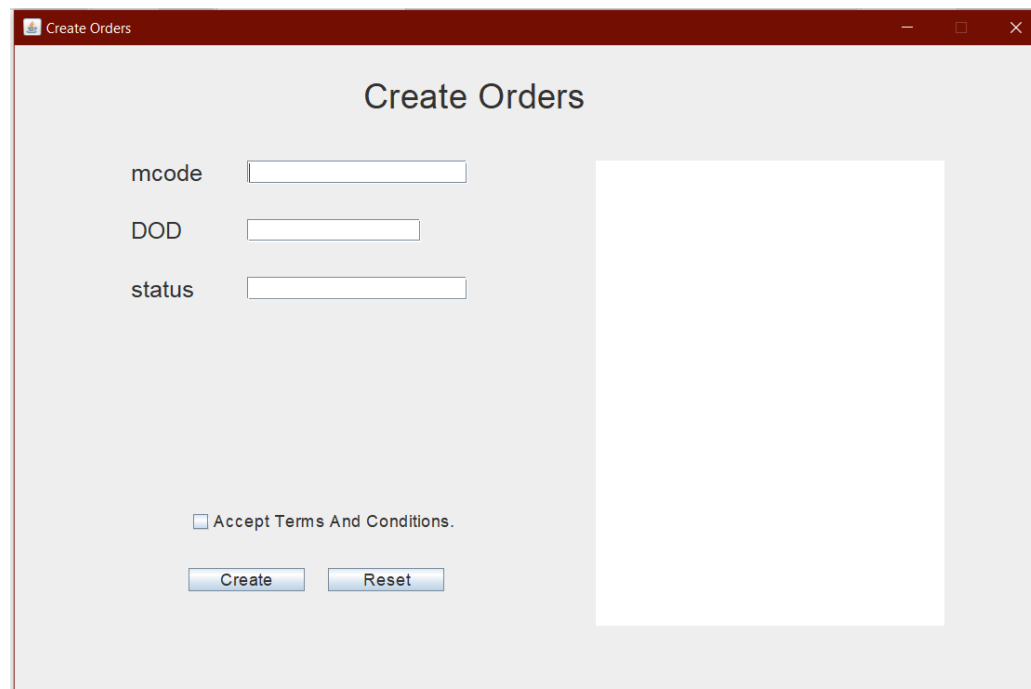


The screenshot shows a window titled "Construction Management" with standard Windows window controls (minimize, maximize, close). The main content area is titled "Orders". Below the title is a table with three columns: "Mcode", "Date of delivery", and "Status". The table is currently empty. Below the table is a blue "Create" button.

Mcode	Date of delivery	Status
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Create

16. Create new order



The screenshot shows a window titled "Create Orders" with standard Windows window controls. The main content area is titled "Create Orders". On the left side, there are three input fields labeled "mcode", "DOD", and "status". To the right of these fields is a large, empty rectangular box. Below the input fields is a checkbox labeled "Accept Terms And Conditions.". At the bottom left, there are two buttons: "Create" and "Reset".

mcode

DOD

status

☐ Accept Terms And Conditions.

Create Reset

