A black background with blue text

Description automatically generated A logo with a yellow circle and blue text

Description automatically generated

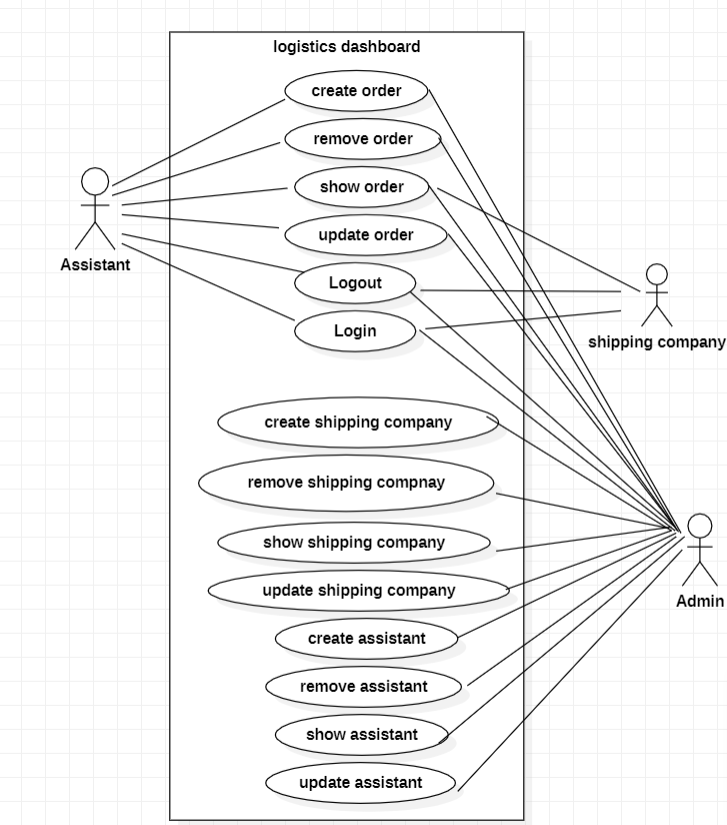
Software Engineering-2

Logistics Dashboard

Index:

1. Use-Case Diagram ………………………………………………………………………………… 3
2. Activity Diagram ………………………………………………………………………………….. 4
3. Sequence Diagram ……………………………………………………………………………….. 12
4. Class Diagram ……………………………………………………………………………………….. 15
5. OCL ………………………………………………………………………………………………………. 16
6. ERD ……………………………………………………………………………………………………….. 20

Use Case



Activity

1. Login

A screenshot of a computer

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1. Add order

A screenshot of a diagram

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A screenshot of a diagram

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1. Add Assistants/shipping company

A screenshot of a computer

Description automatically generated

1. Delete Assistants/ shipping company

A screenshot of a computer

Description automatically generated

1. Update Orders

A screenshot of a diagram

Description automatically generated

1. Shipping Order State

A screenshot of a diagram

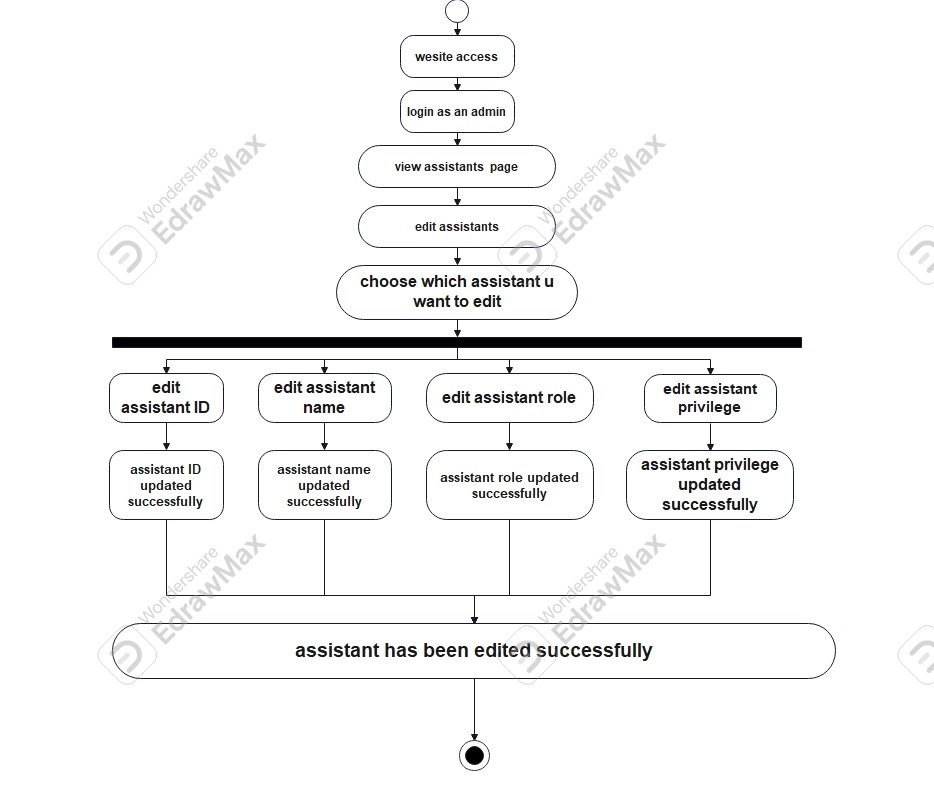
Description automatically generated

1. Update Shipping company/ Order

A diagram of a company

Description automatically generated

1. Update assistant



Sequence

1. Login

A screenshot of a diagram

Description automatically generated

1. Add Assistants

A screenshot of a computer screen

Description automatically generated

1. Update Assistants

A screenshot of a computer screen

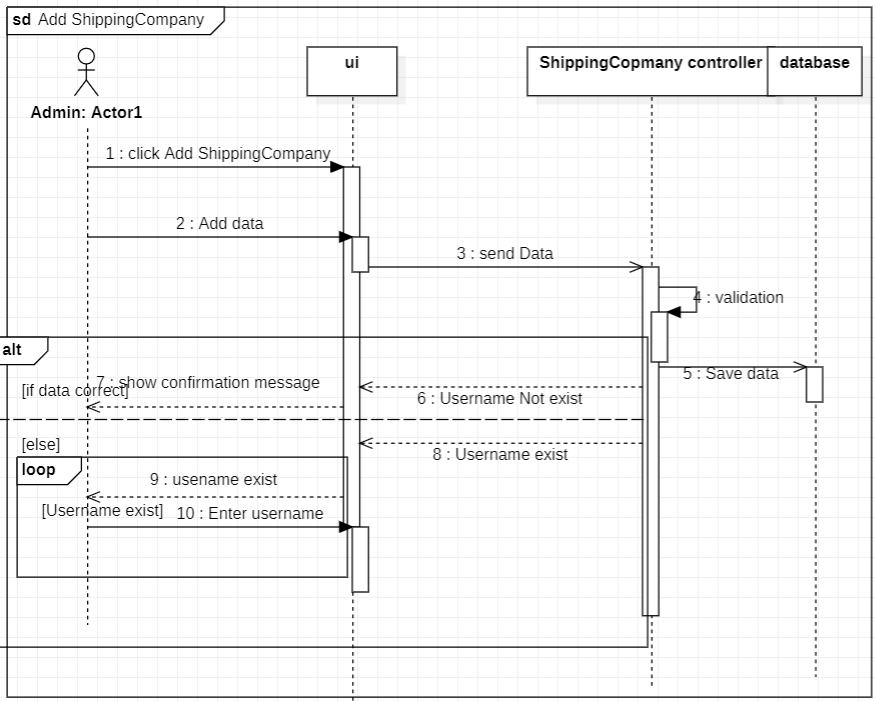
Description automatically generated

1. Delete Assistants

A screenshot of a computer screen

Description automatically generated

1. Add Shipping Company



1. Delete Shipping Company

A screenshot of a diagram

Description automatically generated

1. Update Shipping Company

A diagram of a shipping company

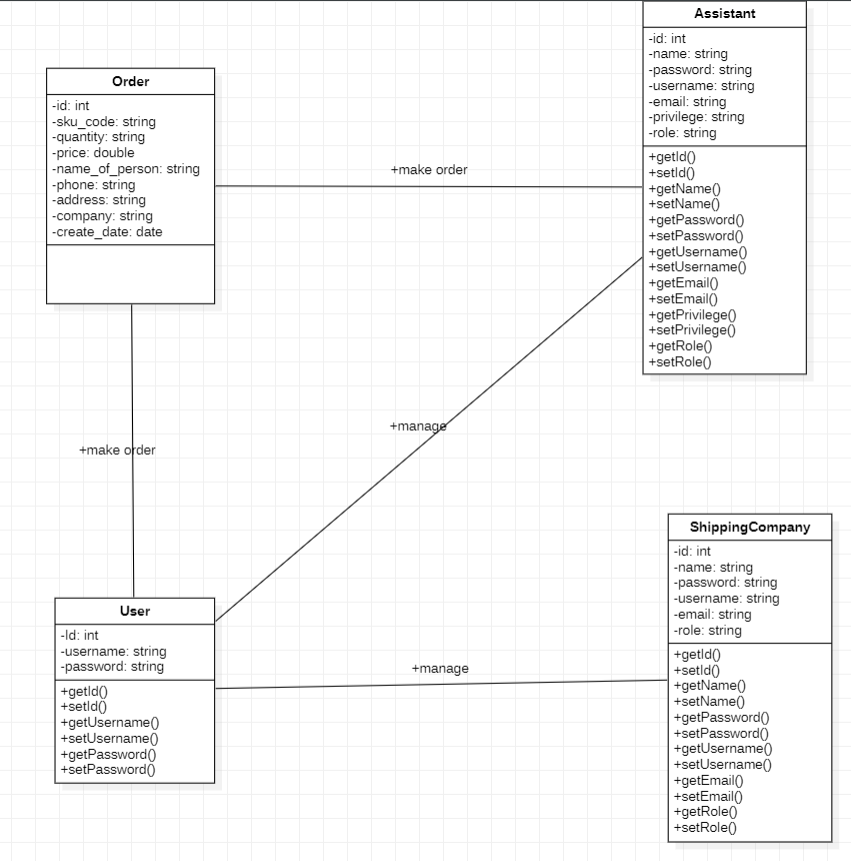
Description automatically generated

1. Create Order

A screenshot of a diagram

Description automatically generated

Class



OCL

1. User

Username should not be null or empty

context User

inv UsernameNotEmpty: username <> null and not username.isEmpty()

Password should not be null or empty

inv PasswordNotEmpty: password <> null and not password.isEmpty()

1. Assistant

Each Assistant must have a unique identifier

context Assistant

inv UniqueId: Assistant.allInstances()->isUnique(id)

Name should not be null or empty

inv NameNotEmpty: name <> null and not name.isEmpty()

Password should not be null or empty

inv PasswordNotEmpty: password <> null and not password.isEmpty()

Username should not be null or empty

inv UsernameNotEmpty: username <> null and not username.isEmpty()

Email should not be null or empty

inv EmailNotEmpty: email <> null and not email.isEmpty()

Privilege should not be null or empty

inv PrivilegeNotEmpty: privilege <> null and not privilege.isEmpty()

Role should not be null or empty

inv RoleNotEmpty: Role <> null and not Role.isEmpty()

1. Company

Ensures each shipping company has a unique identifier

context ShippingCompany

inv UniqueId: ShippingCompany.allInstances()->isUnique(id)

Ensures the name attribute is not null or empty

inv NameNotEmpty: name <> null and not name.isEmpty()

Ensures the password attribute is not null or empty

inv PasswordNotEmpty: password <> null and not password.isEmpty()

Ensures the username attribute is not null or empty

inv UsernameNotEmpty: username <> null and not username.isEmpty()

Ensures the email attribute is not null or empty

inv EmailNotEmpty: email <> null and not email.isEmpty()

Ensures the Role attribute is not null or empty

inv RoleNotEmpty: Role <> null and not Role.isEmpty()

Define Admin Capabilities:

context User

inv: self.type = 'admin' implies self.canAddAssistants and self.canAddShippingCompanies and self.canAddOrders

Define Assistant Capabilities:

context User

inv: self.type = 'assistant' implies not self.canAddAssistants and not self.canAddShippingCompanies and self.canAddOrders

Define Shipping Company Capabilities:

context User

inv: self.type = 'shipping\_company' implies not self.canAddAssistants and not self.canAddShippingCompanies and not self.canAddOrders

Define Login Validation

context User

inv: self.checkCredentials(username, password) implies self.existsInDatabase(username, password)

Define Admin's Ability to Add Users:

context Admin

inv: self.addUser(user) implies (user.type = 'assistant' or user.type = 'shipping\_company')

Define Shipping Company's Ability to View Orders:

context ShippingCompany

inv: self.viewOrders() implies self.canViewOrders

Admin Role Preconditions for Adding Users:

context Admin::addUser(user)

pre: self.type = 'admin' and (user.type = 'assistant' or user.type = 'shipping\_company')

ERD

