FUSWAP

Software Design Specification

– Hochiminh, June 2024 –

RECORD OF CHANGES

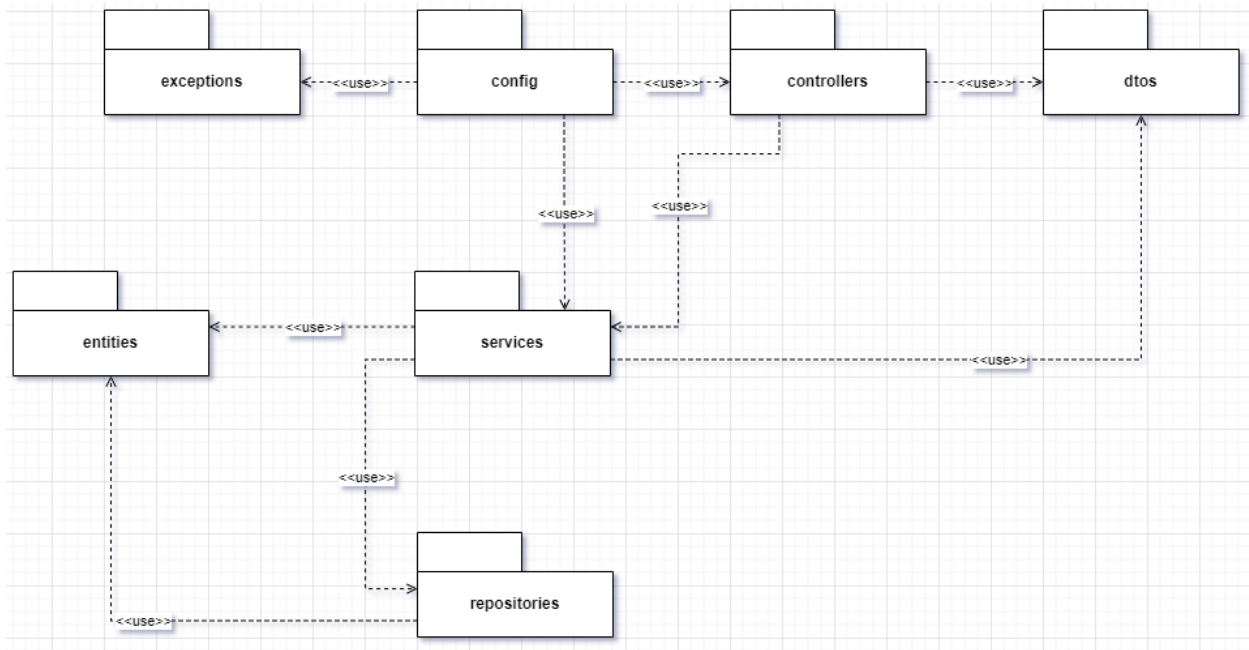| Date	A* M, D	In charge	Change Description

*A - Added M - Modified D - Deleted

Table of Contents

I. Overview

1. Code Packages

Package descriptions

| No	Package	Description
1	dtos	Package used to store all dto classes for interacting with the front-end
2	controllers	Package used to store all controller classes for request/response
3	services	Package used to store all service to perform logic, validation...
4	entities	Package used to store all entity classes for interacting with services and database
5	repositories	Package used to store all repository classes for interacting with database
6	config	Package used to store the entire configuration of the system
7	exceptions	Package used to customize exceptions

2. Database Design

a. Database Schema
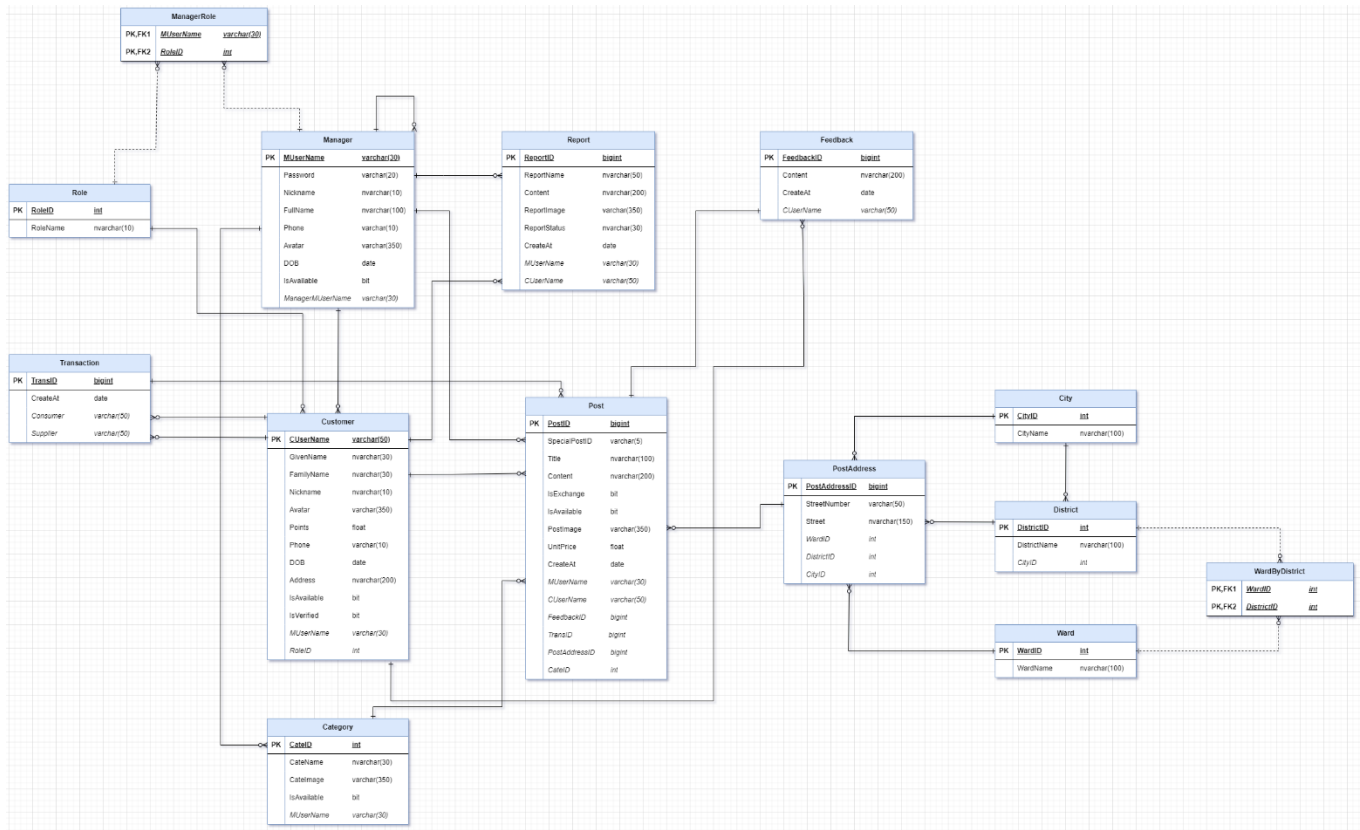
b. Table Description

No	Table	Description
01	Customer	Used to store data of suppliers and consumers
02	Manager	Used to store data of administrator and moderators
03	Post	Used to store data of a post that suppliers create
04	Feedback	Used to store feedback of each customer for each post
05	Report	Used to store customer reports complaining about suppliers
06	Category	Used to store category of each post
07	Transaction	Used to store transaction such as sell or exchange
08	Role	Used to store roles
09	PortAddress	Used to store address for each post
10	City	Used to store city
11	District	Used to store district
12	Ward	Used to store ward
13	ManagerRole	Used to store roles of each manager
14	WardByDistrict	Used to store wards of each district

II. Code Designs

1. Create a goods post

a. Class Diagram
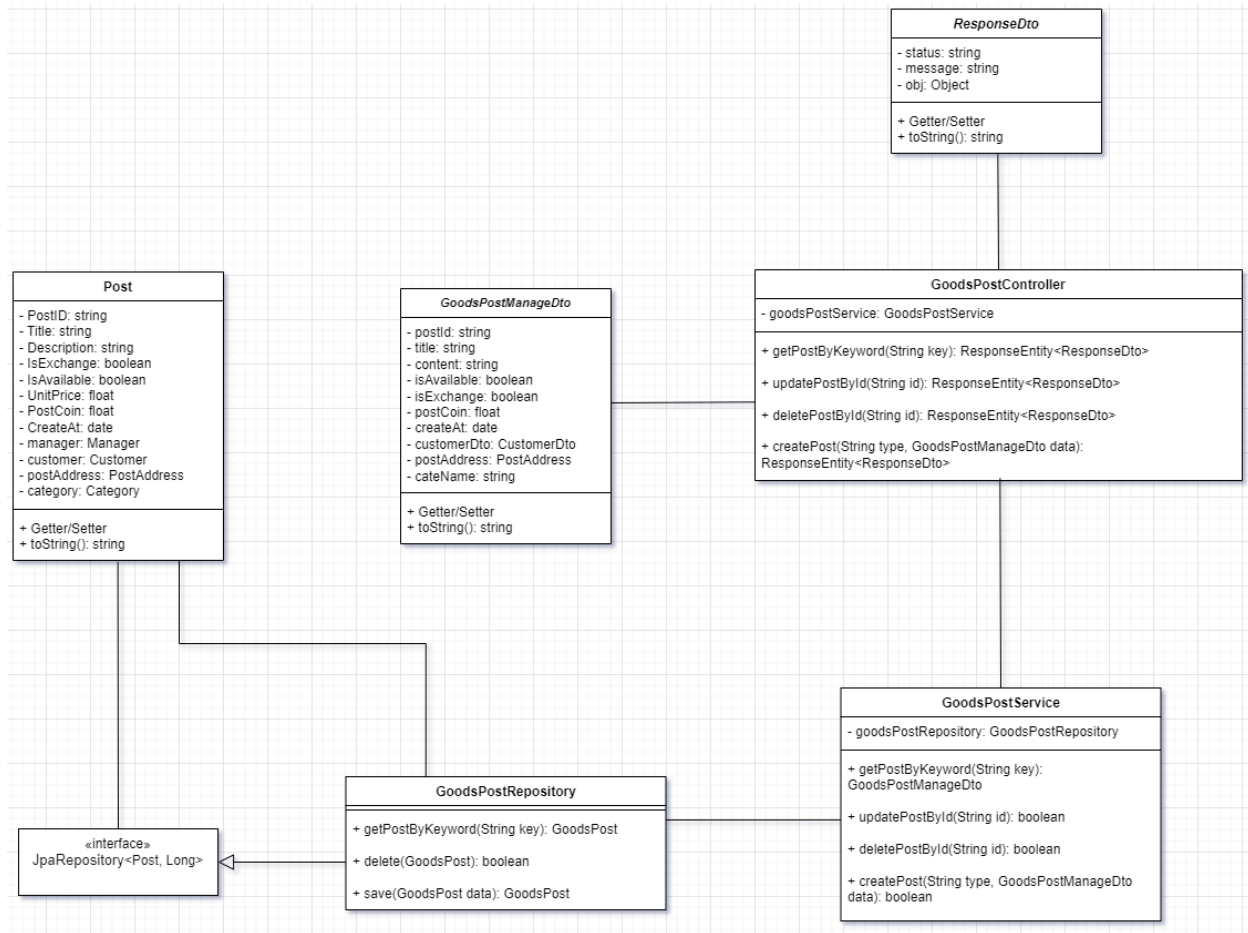
b. Class Specifications

GoodsPost - GoodsPostManageDto - ResponseDto

GoodsPost class used to interact with table in database
GoodsPostManageDto used to interact with clients
ResponseDto class used to send message, data to clients

No	Method	Description
01	Getters	Methods used to get data of each field
02	Setters	Methods used to set data of each field
03	toString	Methods used to print all data

GoodsPostController – GoodsPostService - GoodsPostReporitory
GoodsPostController class used to interact with client and GoodsPostService
GoodsPostService class used to interact with GoodsPostController and GoodsPostRepository
GoodsPostRepository class used to interact with GoodsPostService, GoodsPost and database

No	Method	Description
01	getPostByKeyWord	Method used to get posts list by keywords
02	updatePostById	Method used to update data for specific post
03	deletePostById	Method used to delete a specific post

04	createPost	Method used to create a post
05	delete	A method of JPA to delete a record
06	save	A method of JPA to save a record

JpaRepository
This is an interface that class GoodsPostRepository inherits

c. Sequence Diagram(s)
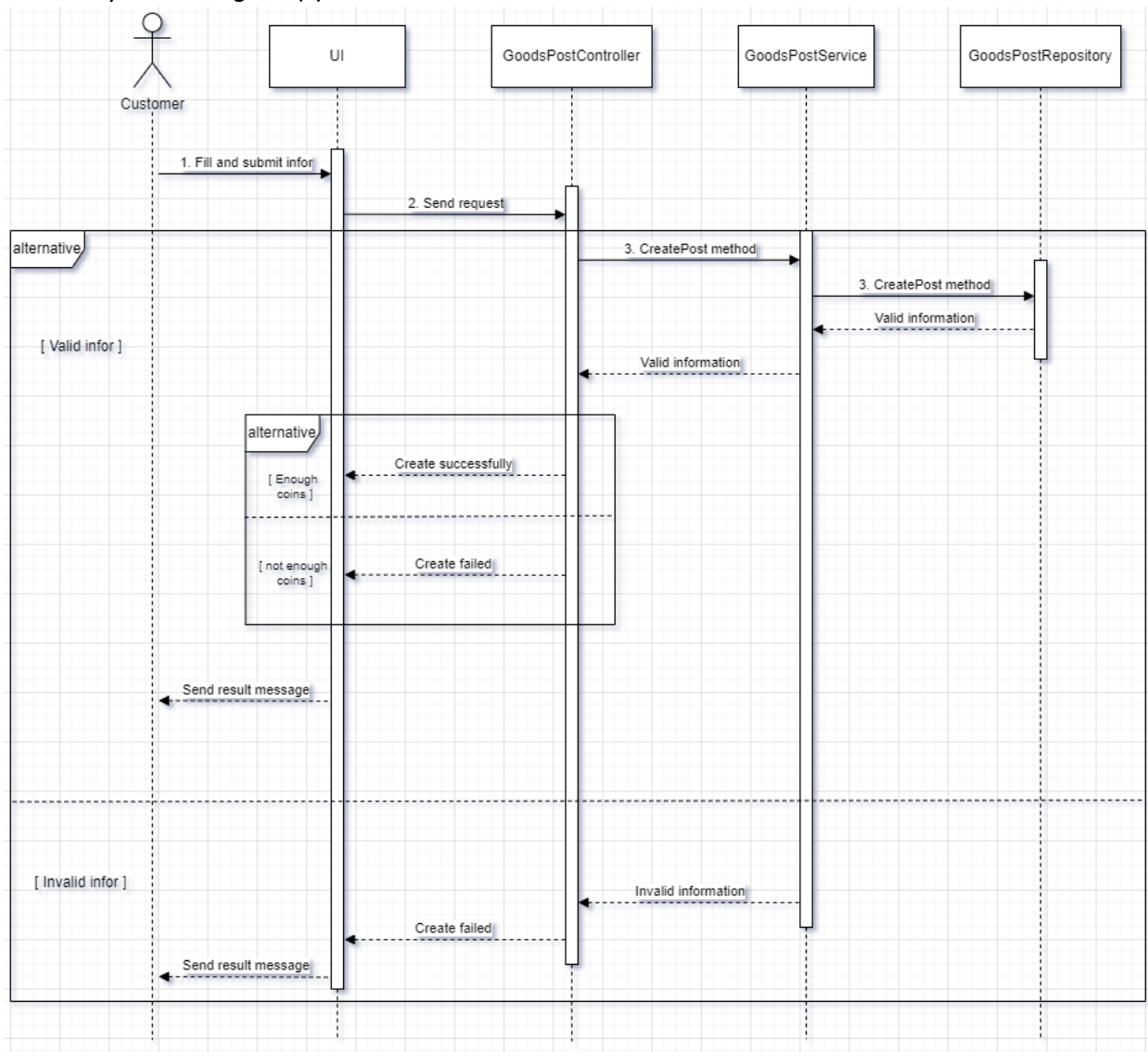
d. Database Queries

*SELECT * FROM Manager WHERE MUserName = 'admin'*
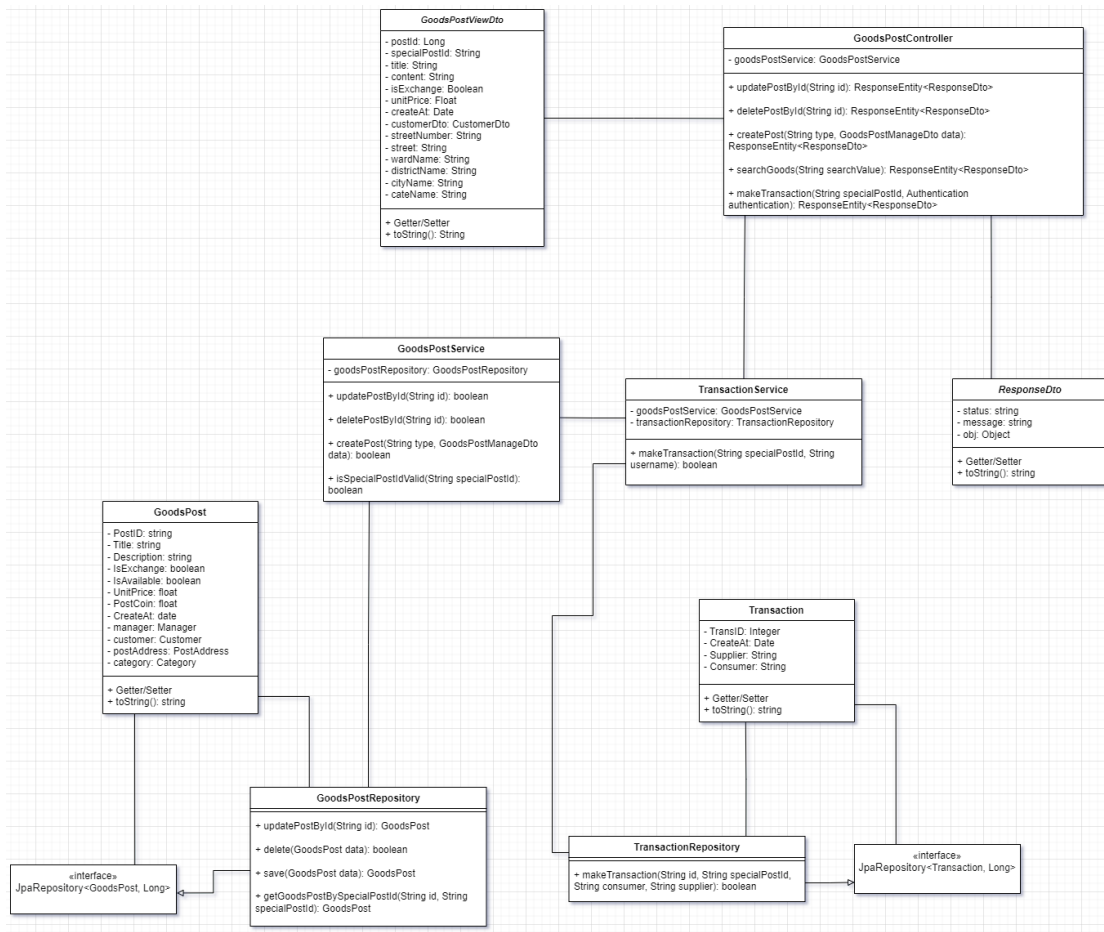*SELECT * FROM Customer WHERE CUserName = ?*
*SELECT * FROM PostAddress WHERE PostAddressID = ?*
*SELECT * FROM Category WHERE CateID = ?*
INSERT INTO GoodsPost (PostID, Tittle, Description, IsExchange, IsAvailable, UnitPrice, PostCoin,
CreateAt, MUserName, CUserName, PostAddressID, CateID) VALUES (?,?,?,?,?,?,?,'admin',?,?,?)

2. Make transaction
a. Class Diagram

b. Class Specifications

GoodsPost - GoodsPostViewDto – Transaction - ResponseDto

GoodsPost class used to interact with table in database
GoodsPostViewDto used to interact with clients
Transaction class used to interact with table in database
ResponseDto class used to send message, data to clients

No	Method	Description
01	Getters	Methods used to get data of each field
02	Setters	Methods used to set data of each field
03	toString	Methods used to print all data

GoodsPostController – GoodsPostService – GoodsPostReporitory – TransactionService - TransactionRepository
GoodsPostController class used to interact with client and GoodsPostService
GoodsPostService class used to interact with GoodsPostController and GoodsPostRepository
GoodsPostRepository class used to interact with GoodsPostService, GoodsPost and database
TransactionService class used to interact with controller classes and TransactionRepository
TransactionRepository class used to interact with database, service and entity class
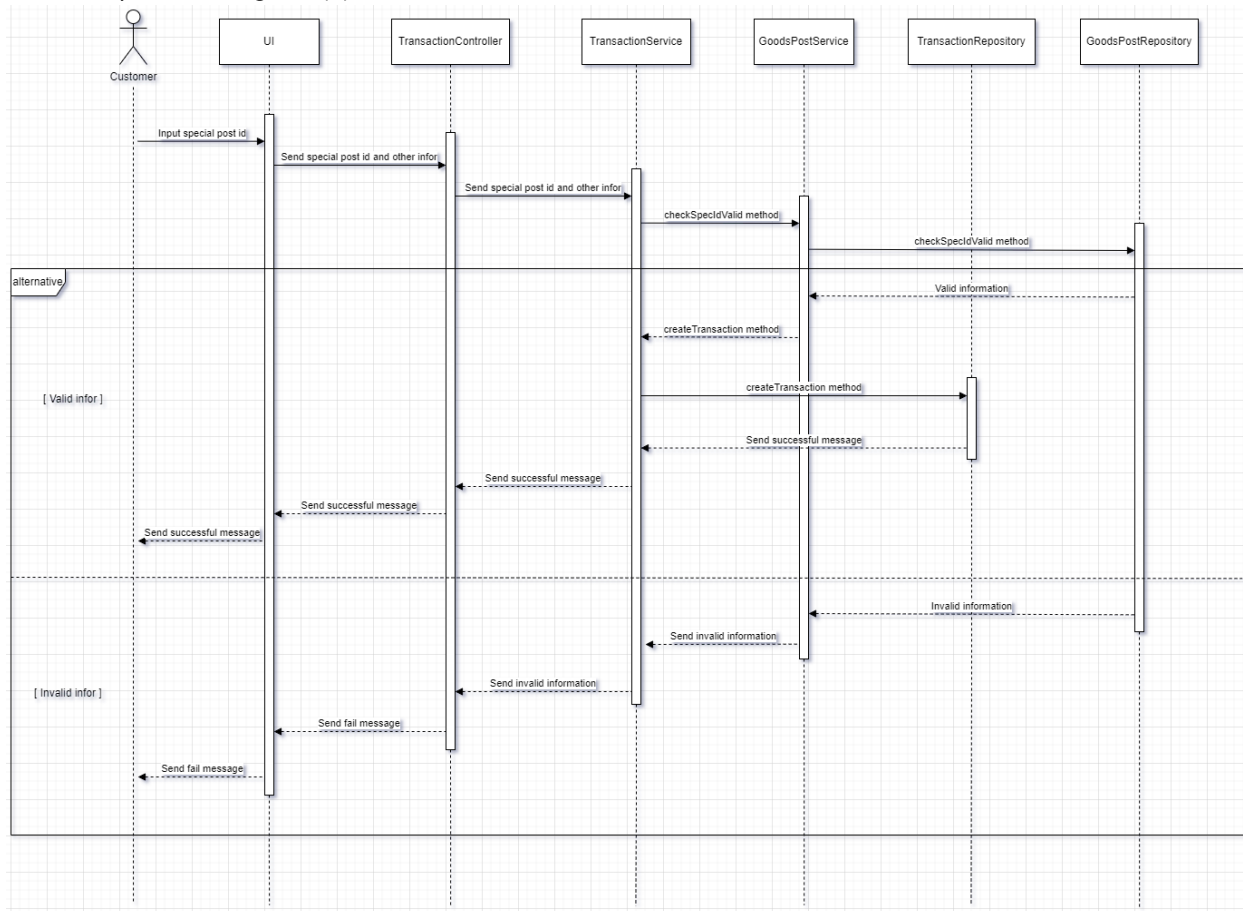
No	Method	Description

01	searchGoods	Methods used to search goods by keyword
02	makeTransaction	Methods used to receive special post id and personal information to perform creating new transaction

JpaRepository
This is an interface that class GoodsPostRepository inherits

c. Sequence Diagram(s)

d. Database Queries

SELECT * FROM Manager WHERE CUserName = ?
SELECT * FROM GoodsPost WHERE PostID = ? AND SpecialPostID = ?
INSERT INTO Transaction VALUES (?, ?, ?, …)