

# software engineering



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*Best vision Optometric Center :*

# Overview:

Current system functionalities:

- 1.1 Introduction.
- 1.2 Purpose of the project.
- 1.3 Resources of goods.
- 1.4 Payments system.
- 1.5 glasses/ lenses sells.
- 1.6 Problems and issue in the current system.
- 2.1 UML Diagrams
- 2.2 Graphical User Interface

## 1.1 Introduction

Best Vision optometric center that is located near Nablus Municipality, this center is specify in primary eye care, the center have 4 employees who work in two shifts, and It provides many of services :

vision test( refraction), Sells glasses (optical / sun glasses),Fit and examine contact lenses, sells (Optical / colored) lenses with it's solution, and Maintenance.

## 1.2 Purpose of the project

this project willing to attain a correct implementation and analysis for the Best vision optometric center, and apply all software engineering rules and steps, after that we will build a new application that achieve all system requirements, and fix the issues / problems in the current system.

## 1.3 Resources of goods

Categories are taken from specific company employees, these employees promote their products. In This way, a particular category is taken and inspected by the company. When approval is made for the item, they are dealt with in cash, provided that it is attached with the tax invoices.

## 1.4 Payments system

**payment methods:** Almost method of payments in this center is by cash, but some patients/clients

has Personal insurance, by this insurance, the patient must include a card that provided to the center to verify the validation of this assurance for this patient, Each patient can buy one glass/lenses per a year.

## 1.5 glasses/ lenses sells:

In this center the buy two types of glasses and lenses:

the **Optical** glasses: this glasses made with a Prescription from eyes doctor or the optometrists from the center,

the center ask the patient to choose the frame of the glass as he/she prefer,

After that the center employee prepare a suitable lens of that chosen frame,

The second type of the glasses is **sunglasses**: In this type of the glasses the clients choose the glass.

The first type of the Lenses is:

**optical contact lenses**: it require a prescription from the doctor or from the optometrists from the center. The second one, **lenses without power**(colored lenses): this type of lenses is cosmetic lenses that no powers or degrees, and the clients choose the colors.

Moreover The center support repairs and fix services for the glasses, and they sells a separates parts of the glasses.

Further more, they sells solutions for different lenses types.

## 1.6 Problems and issue in the current system

There are several issues in the system, for example the **debts** information storage, they storage it in a simple hard copy book, and this manner of storage data is out of date and make a lot of difficulty in search ,insert, and modify the contents.

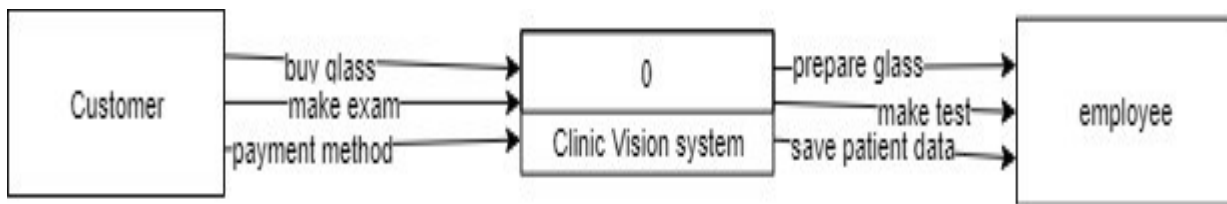
Moreover, In the current system, the storage of the data and all informations about the **sells of goods and items** for the patients or the clients, is stored in **Microsoft Excel** files, with no backup system.

because of this, the efficiency and Accuracy are not supported, no recovery tools applied, very complicated with searching and insertion processing , and we willing to get the correct informations As fast as possible in out work.

## 2.1 UML Diagrams :

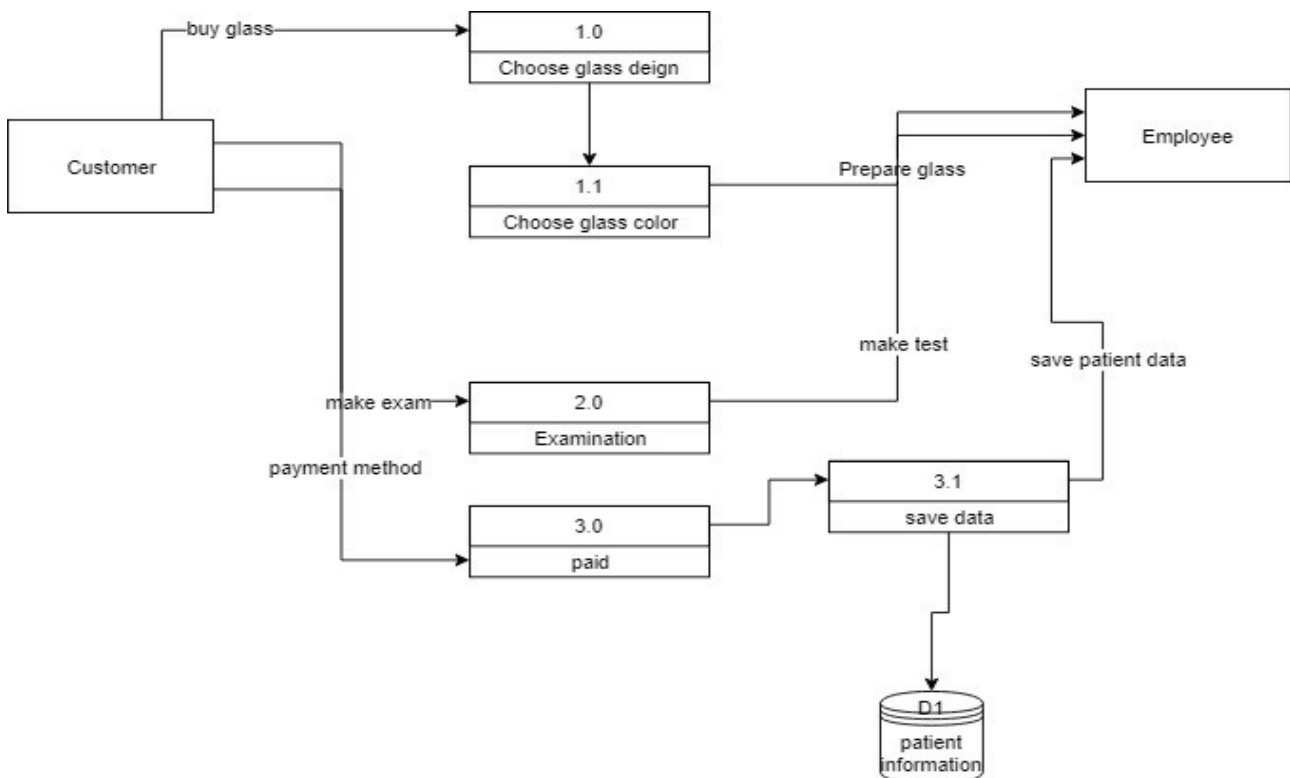
- Context Diagram:
- Data Flow Diagram
- Use case Diagram
- Activity Diagram
- Sequence Diagram
- Class Diagram

## Context Diagram:



## Data Flow Diagram(DFD):

Choose glass design  
Employee  
Choose glass color  
make test  
save patient data



# USE CASE DIAGRAM:

Best vision Optometric Center System

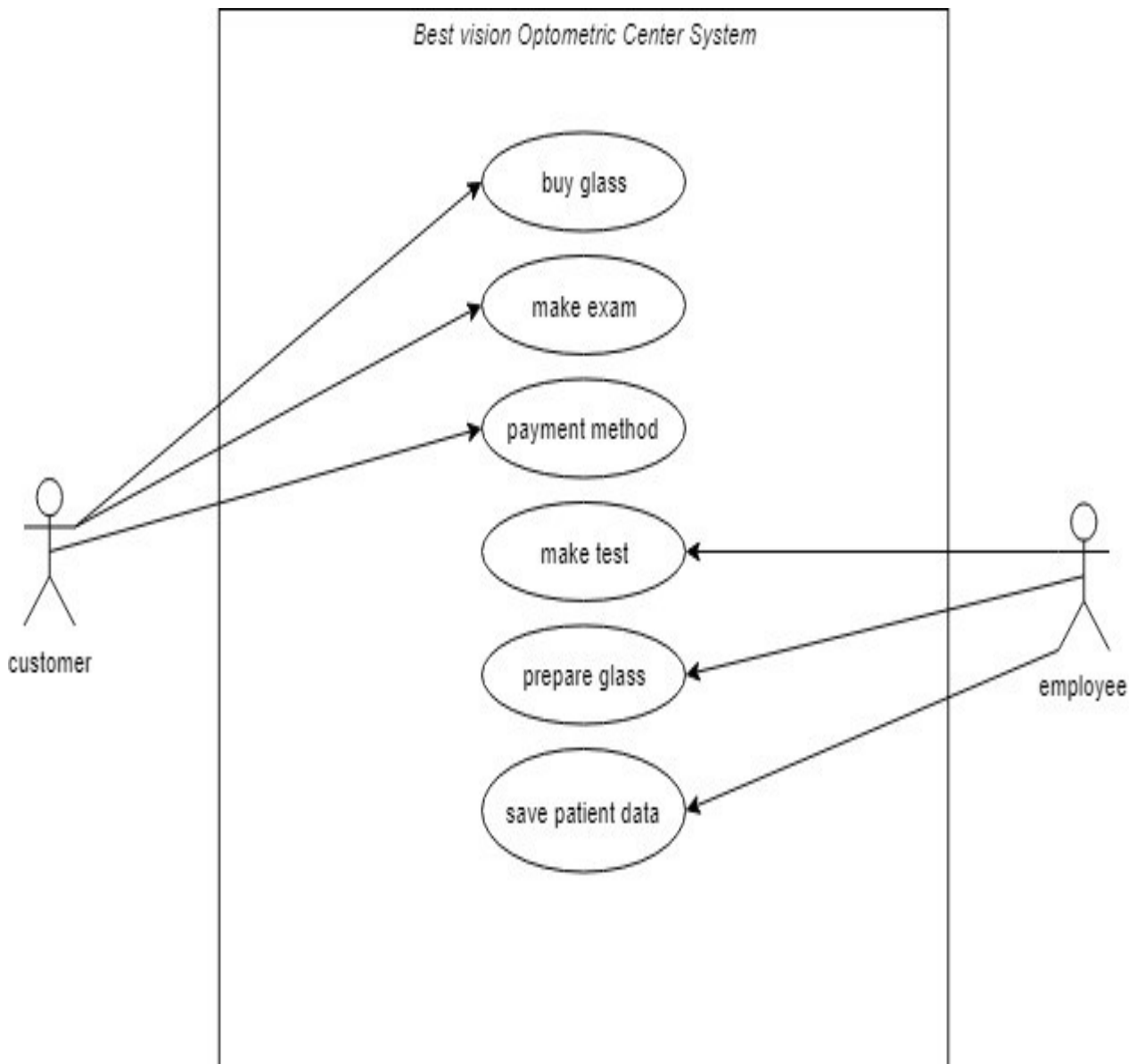
buy glass

payment method

make test

customer prepare glass - employee

save patient data



## Sequence Diagram:

customer employee Exam Frame/lenses Database

take customer information

Store information

Ask for Exam

Make Exam

Store exam result

Choose Lenses/Frame

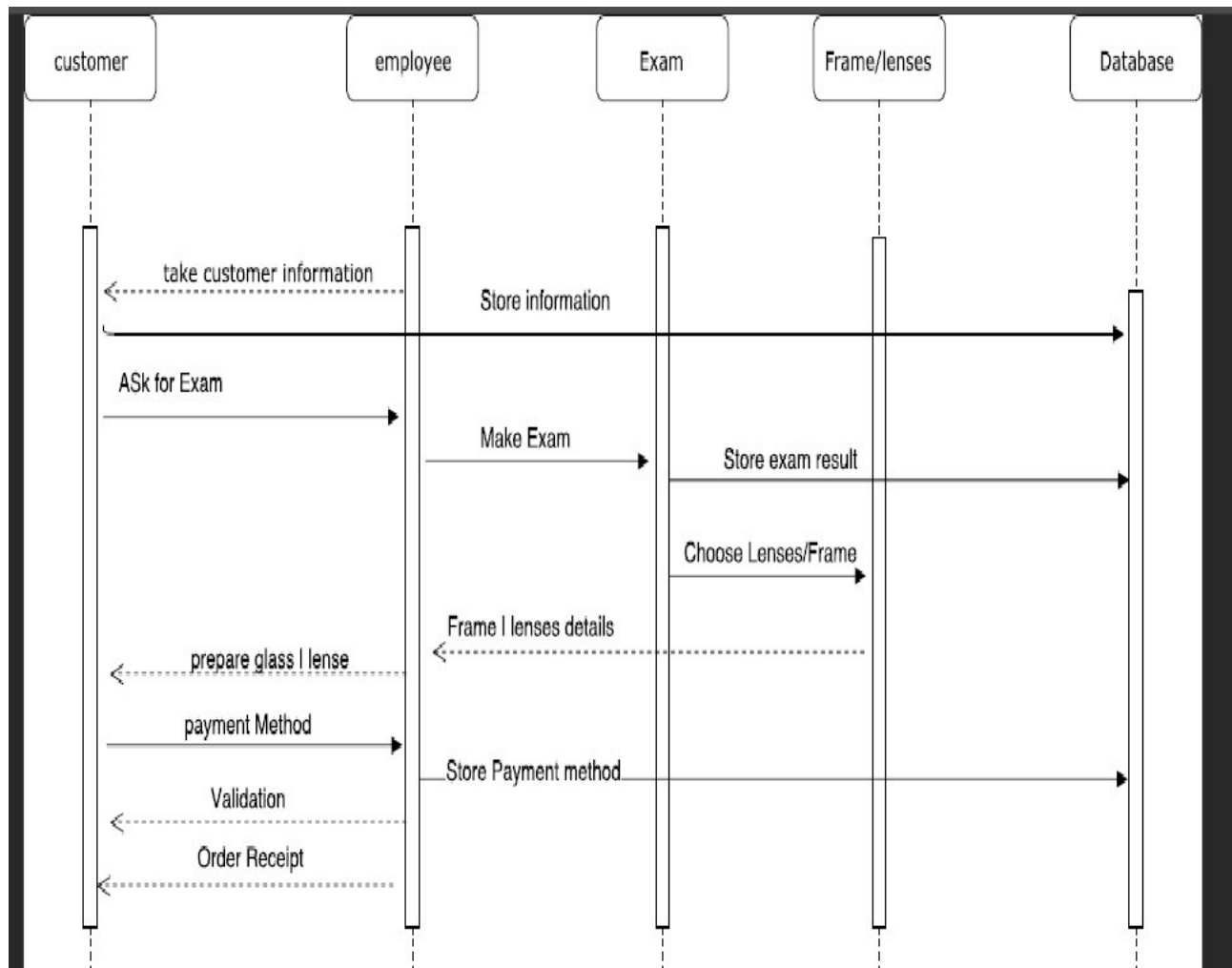
Frame lenses details

payment Method

Store Payment method

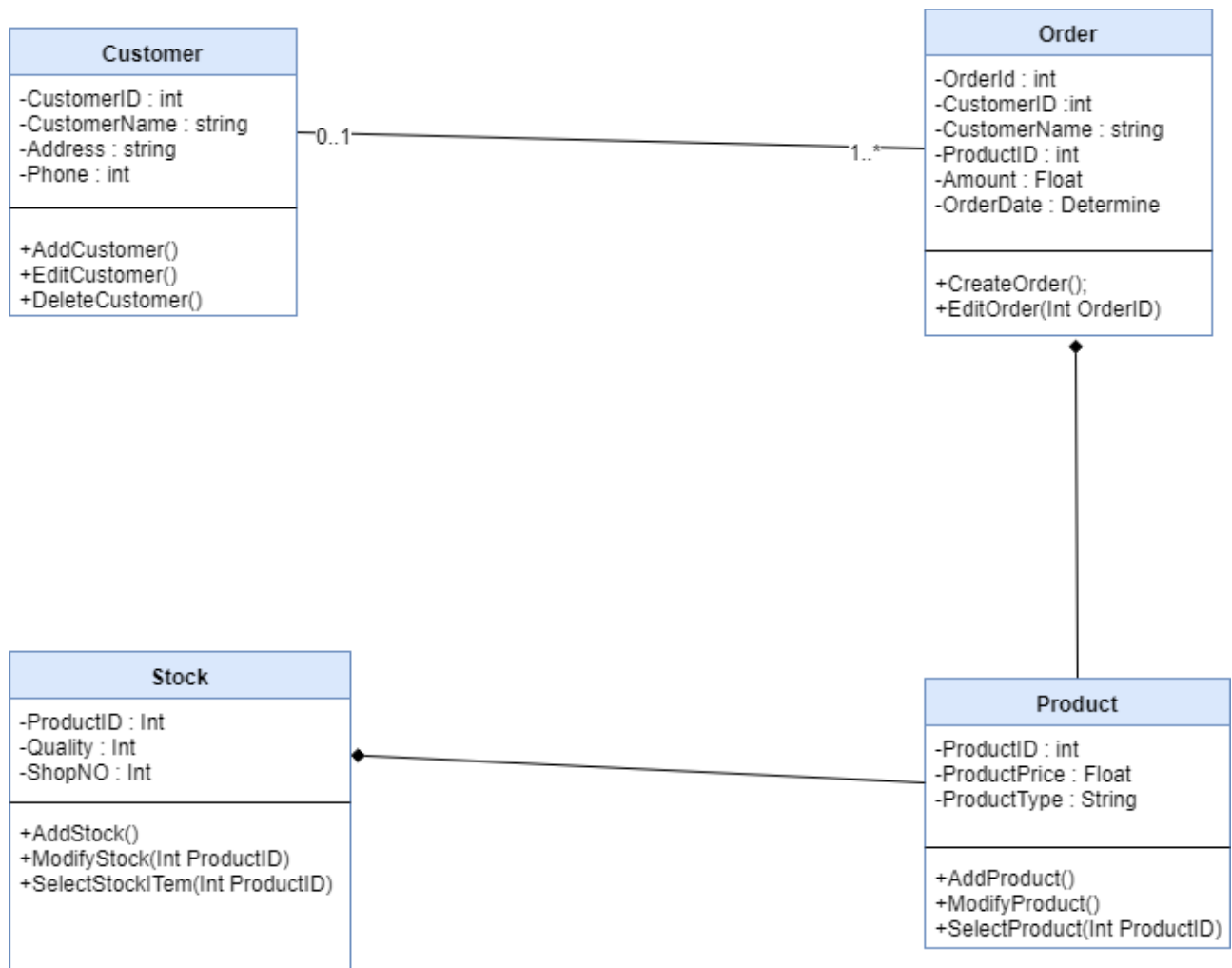
Validation

Order Receipt

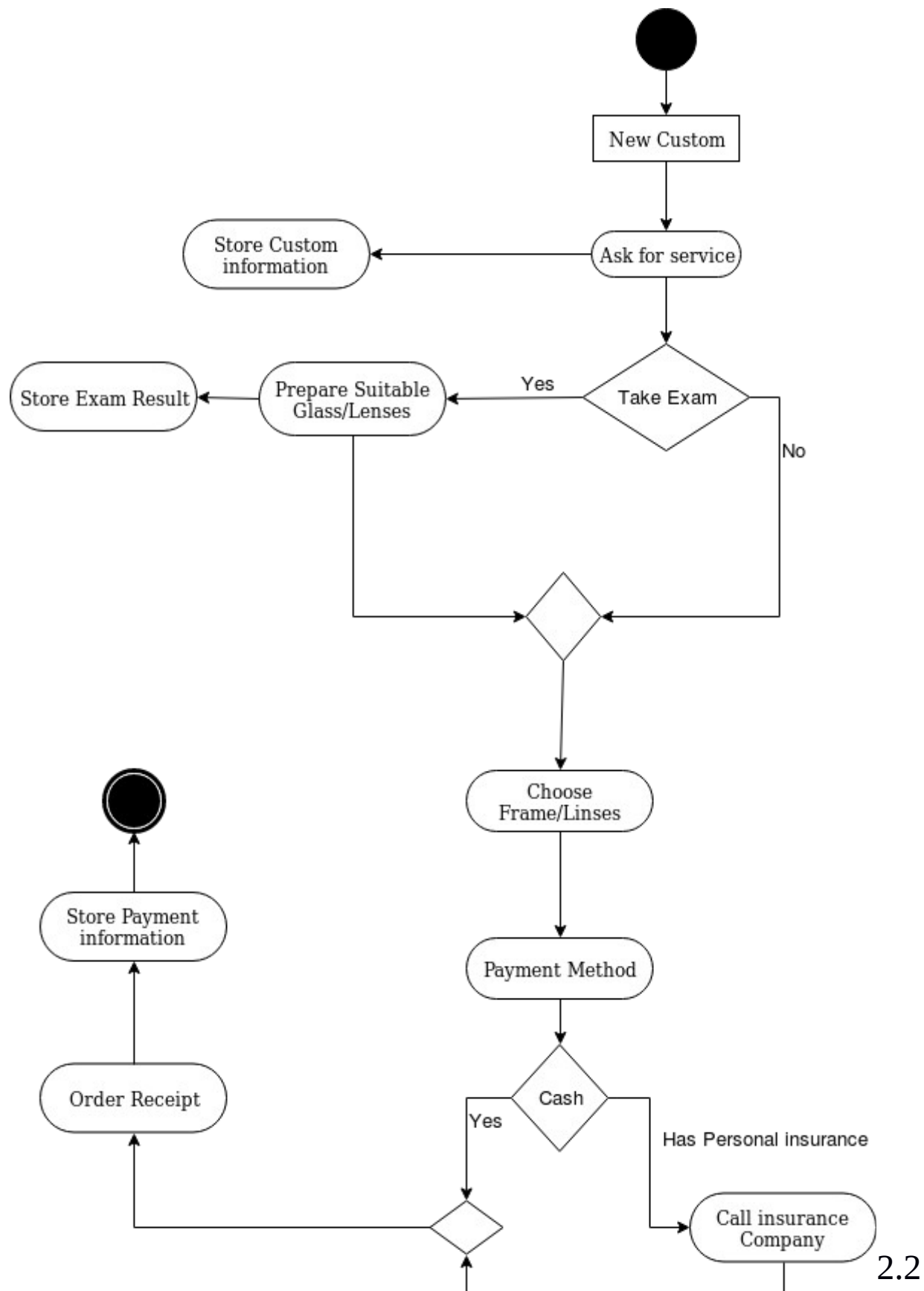


## Class Diagram:

-OrderID : int  
 -CustomerID : int, ' -CustomerID zint  
 -CustomerName  
 -CustomerName : string  
 -ProductID : int  
 -Amount : Float  
 -orderDate :  
 +AddCustomer()  
 +Editorder(Int OrderID)  
 -Quality : Int -ProductID : int  
 -ShopNo : Int -ProductPrice: Float  
 -ProductType : String  
 +AddStocko  
 +ModifyStock(Int ProductID)  
 +SelectStocleem(Int Produc'tID) tAddeodUCtO  
 +ModifyProducto  
 +SelectProduct(Int ProductID)



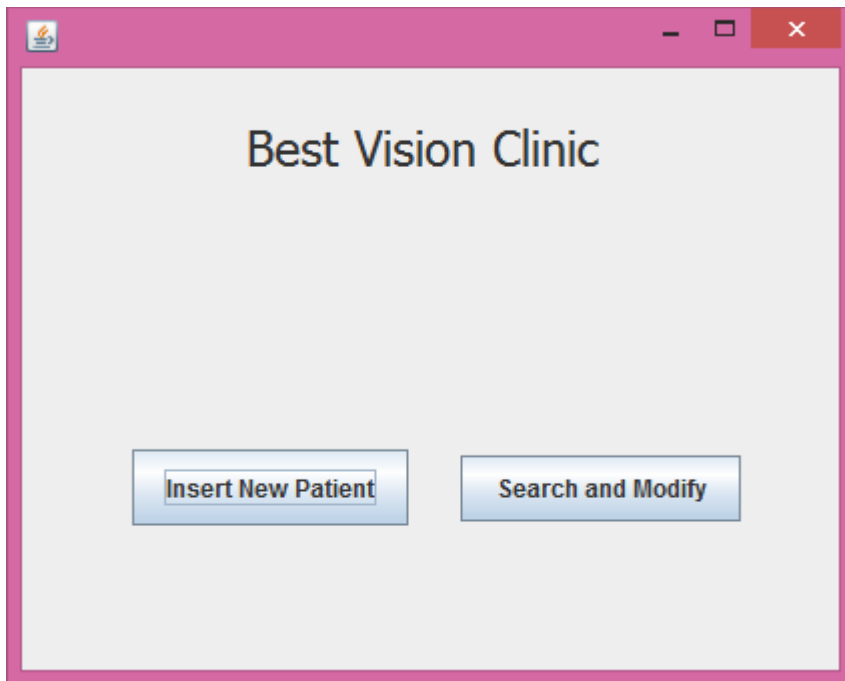
## -Activity Diagram :



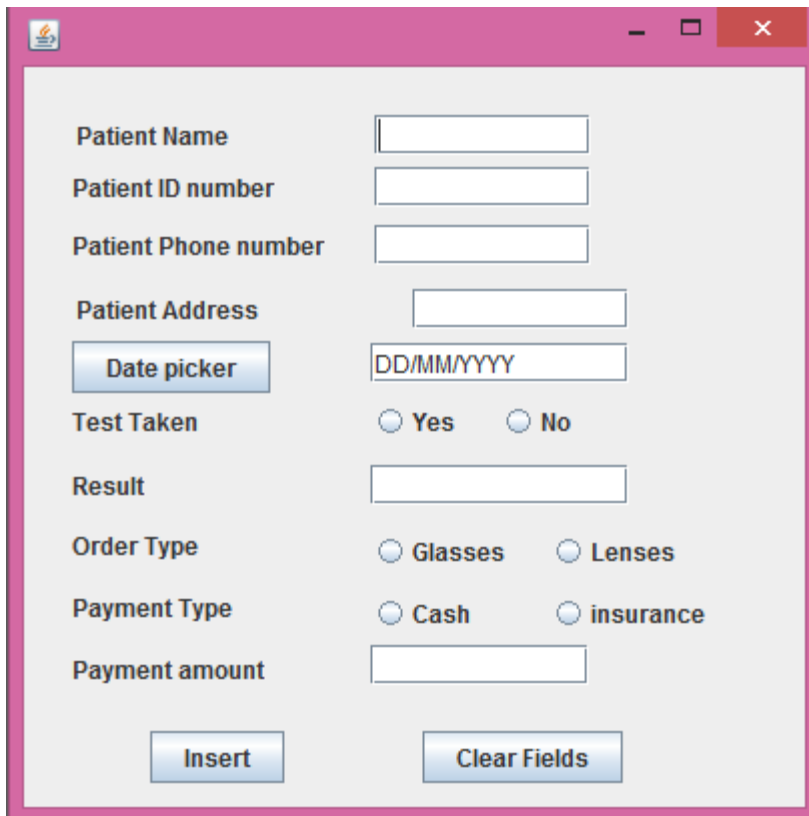


## graphical User Interface (GUI)

Main :



Insert :

A screenshot of the "Insert" form within the GUI. The form is contained within a pink-bordered window with standard controls. It features several input fields and radio buttons. The fields are: "Patient Name", "Patient ID number", "Patient Phone number", "Patient Address", a "Date picker" button next to a "DD/MM/YYYY" field, "Test Taken" (with "Yes" and "No" radio buttons), "Result", "Order Type" (with "Glasses" and "Lenses" radio buttons), "Payment Type" (with "Cash" and "insurance" radio buttons), and "Payment amount". At the bottom are two buttons: "Insert" and "Clear Fields".

Search :

A screenshot of a software window with a pink title bar. The window contains a search interface. At the top, there is a 'Search by' section with two radio buttons: 'Patient Name' and 'Patient ID'. Below this is an 'Enter' label followed by a text input field and a 'Search' button. Underneath is a 'Results' label followed by a large, empty rectangular box. At the bottom of the window, there are two buttons: 'Modify selected' and 'Delete selected'.

Search by ☐ Patient Name ☐ Patient ID

Enter

Results

Modify :

A screenshot of a software window with a pink title bar, used for modifying patient information. It features several labeled text input fields: 'Patient Name', 'Patient ID number', 'Patient Phone number', 'Patient Address', and 'Test Result'. Below these fields is the 'Order Type' section with two radio buttons: 'Glasses' and 'Lenses'. At the bottom, there are two buttons: 'Save changes' and 'Discard changes'.

Patient Name

Patient ID number

Patient Phone number

Patient Address

Test Result

Order Type ☐ Glasses ☐ Lenses

