404! Requirements Specification

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1. Executive Summary

1.1 Project Overview

When you first open a restaurant, usually you do not have a lot of capital and you focus to invest in the most important elements of the business and neglect the importance of having an information management system.

However after you gain a loyal customer base and create a very well known brand (image), your customer number increases and you can not manage any more the flow of information with “primitive” programs such as Excel. In order to be more efficient and effective in your service, you have to adapt with new technology and create a customized Restaurant Management Information System.

Our restaurant is located in Durres, one of the most important cities in Albania, around 33 km away from the capital, with 500-600 thousands citizens living there and always the first choice of many people to spend weekends or summer days near the beach. Durres is easily accessible for everyone living in Albania. According to our research, during summer sundays around 800000 tourists visit Durres, increasing the Durres’ population into 1.3-1.4 million which means that our customer base will increase and we have to make sure that we will offer them the best service we can and to optimize each activity.

For us to be able to optimize, to be fast in making orders and delivering these orders, to control the increase in the number of employees and also to keep track of all data in order to analyze and forecast for each process, our only solution is to build a customized Restaurant Management Information System.

1.2 Purpose and Scope of this Specification

The purpose of this system is to automate all processes of the restaurant online.The software will be used by all the parties, including owner, manager and employees. Currently the restaurant doesn't use a certain system but only MS-Excel to record the employee data and inventory. With the increase in the number of customers, suppliers, employees and cash flow, it is necessary to track in an efficient way all the operations of a business. This system will provide a working environment that will be more flexible and efficient. It will facilitate the communication between all internal actors like the owner, manager, economist, the servers, the bartenders and other employees of the restaurant. Since the restaurant is a medium size business, involvement of the suppliers in the system is outside of our scope.

In this scope:

- Product/service description (discussed in Part 2)
- Functional and non functional requirements (discussed in Part 3)
- Use case scenarios (discussed in Part 4)

2. Product/Service Description

This is a software that aims to create a communication channel between all the actors inside a restaurant that will facilitate the operation and organization of the restaurant. It is created on the basis of the client’s requirements by following the way the company operates with actors inside and outside the restaurant. What our project suggests is a way to automate all processes of the restaurant online. Each employee can checkin/out at the system and have his wage calculated automatically. They can also check their timesheets daily/weekly/monthly and also make complaints/suggestions to the owner/manager at the end of their shift. Every bill and calculation will be registered by the system, making it easier for the manager to calculate profit, sales and tips at the end of the shift. In case of any reservations due to customer demand, the manager is the only one that can book/reserve a table in the system. When the orders are placed in the system, it will automatically subtract the products ordered or

the ingredients needed to prepare the dish from the inventory. The status of the items in the menu will automatically change from available to disable in case of any shortage for these items. The managers will get alerts regarding the need for supply from the system, so they can directly place orders for the suppliers. Servers and bartenders can open and close their tables easily using the system, while every transaction is transparent to everyone. Each economic transaction, like employee's wages and/or bill payments for the suppliers will go directly to the economist account. In this way, the owner can track and handle in real time all operations occurring at the restaurant.

2.1 Product Context

Our product is a software for better management of the restaurant. There are a lot of businesses that are recently adjusted with the latest technology, so there are many similar products like ours. Of course, there is a huge difference from others, because it is especially designed only for our client. It is an independent product, which will be managed by the owner and also has its own branches for the other employees. There is no interconnection of our system with other ones, because the restaurant is still in a medium size and does not have work relationships with other businesses or previous systems used. The suppliers are not in the objective of this system, because they do not possess a product like ours and cannot interconnect with us properly.

2.2 User Characteristics

The software will include/perform the interaction between 6 users, the owner of the restaurant, the manager, the economist, the server(s), the bartender(s) and other employees (kitchen & cleaning staff).

Owner:

The owner represents the person that owns the restaurant. He/she can have access in all the documents and timesheets of his employees, check their hours and wages. Also, he/she can check the suppliers, the inventory and every bill account. The owner can open and edit/delete every account

registered in the system. He/she is the only one who can register the manager and the economist in the system. He can also double check before the wage of the manager and economist is transferred to the relevant accounts. Every employee logs in the system using a specified id.

Manager:

The manager is registered from the owner and should clock in/clock out at the beginning/ending of his/her shift. He/she can register/add/delete employees, access and change their timesheet in case of any problem. He/she is the only one that can delete/edit an order/ table after it is put in the system. (In case the server makes any mistake with the order, or the client doesn't want the item anymore). He/she is the only one that can book tables according to the customer demand. The manager can also disable any item in the menu in case the restaurant has run out of it. This happens only when the system has some kind of problems and cannot automatically subtract the items ordered by the clients from the inventory. He/she will get an alert for items that request immediate supply, so that he/she can make the orders to the suppliers.

Economist:

The economist is registered by the owner and he/she has access to every economic situation in the restaurant. After the manager puts an order for the suppliers, the bill will go directly to the economist account for him/her to make the necessary payment. Also, he/she is responsible for each employee wage transaction. Also, he will take care of all necessary documents regarding taxation.

Server:

A server is registered from the manager. He/she should clock in/clock out at the beginning/ending of his/her shift. He/she can check their timesheet to check the hours they have made during the period.

They can open tables, take orders from the clients and put them in the system. They can also close tables when the clients are gone. The server should cashout at the end of his/her shift.

Bartender:

A bartender is registered from the manager. He/she should clock in/clock out at the beginning/ending of his/her shift. He/she can check their timesheet to check the hours they have made during the period. They cannot open tables and take orders from the clients but they have some reserved seats at the bar in case any client wants to drink something there. He/she cannot take food orders. They can close their seats in the system once the clients are gone. The bartender should also send an alert to the manager if the bar is running out of any item.

Other employees:

Other employees' sectors include the kitchen staff and the cleaners. He/she should clock in/clock out at the beginning/ending of his/her shift. He/she can check their timesheet to check the hours they have made during the period.

2.3 Assumptions

- It is assumed that the manager can check the menu if any item will miss that day , if yes the manager can enter in the system and make these items disable.
- Manager might not come to work one day so one of the waiters (assigned from the manager) can take responsibility over the manager`s flow of actions.
- System might be down for a certain part of the day and the waiters have to write bills physically and then enter them into the system.
- If the customer doesn't show up within 30 minutes of the reservation time, the manager should delete the reservation.

- It is assumed that the Owner will have access rights to all other employees accounts and to all data entered by each employee and update the system through any connected device effectively and efficiently.
- It is assumed that each employee and the Owner will have access in the system through a simple connection via a computer or mobile device.
- It is assumed that the computer devices used to access the system will have either Linux, Mac OS or Windows operating systems. The mobile devices are assumed to have either IOS or Android operating systems.
- It is assumed that the Waiters must be equipped with a tablet for taking orders.
- It is assumed that if an ingredient or an item that is unavailable and it is not removed automatically from the system, the manager should do it manually.
- It is assumed that the items that are ordered from the clients are automatically subtracted from the inventory.
- It is assumed that the manager should get a warning for product shortages when the inventory of certain products reaches a certain limit amount.

2.4 Constraints

The project will have the possible following constraints:

- Scope:

Client's requirements should be completed in detail. There shouldn't be any extra function outside the scope.

- Schedule:

Project needs to be finished by the beginning of June, and no later.

- Quality:

The software's user interface should be easy to understand. Users should take no longer than 10 minutes to learn how to use it.

- Budget

The software that we are developing is web based and it needs to be maintained time by time (Bug fixes and keeping it up to date).

- Resources:

Due to the situation created by the Corona Virus every analysis and research should be made by the internet or phone.

- Risks:

The law nr 9887 on protection of personal data should be respected.

Every user must have basic knowledge on using a web application.

The users must have internet access in order to use the software.

- Other constraints can be found during the way.

2.5 Dependencies

Dependencies that the users of the system need to know in order to operate within the system.

- The owner is the only one that can register or delete the manager and the economist accounts in the system.
- The servers, bartenders and other employees can be registered also by the manager.
- The manager cannot edit the employees dashboard without the approval of the owner.
- The employees cannot be registered in the system without all the data needed for the company to hire a new employee.
- The servers and bartenders cannot delete any order/table without the approval of the manager.

- The server cannot order an item which is disabled automatically by the system or the manager.
- The bartender is obligated to contact a server for any food order.
- The bartender cannot take more than 4 clients at a time. (only 4 seats available)
- A server cannot pick/edit/change a table which is already chosen from another server.
- The employees cannot edit or change their timesheets without the approval of the manager.
- Orders for the suppliers cannot be made without the alert of the system towards the manager.
- The manager cannot add items/amount in the inventory without providing the bill as well.
- The economist cannot process his and the manager's salary with the approval of the owner.
- The manager and the economist cannot access or make any changes in the system if they are not clocked in.
- The servers and bartenders cannot serve or put orders in the system if they are not clocked in.

3. Requirements

3.1 *Functional Requirements*

Req#	Requirement	Comments	Priority	Date Rvwd
BR.1	Register restaurant name on database	Enter the restaurants details	1	20.4.20
LR.2	Handle multiple accounts	Based on user, each will have a certain interface	1	20.4.20
BR.3	There is one admin, one manager, one economist, waiters and bartenders and the kitchen staff	Every user will have certain rights	2	20.4.20
BR.4	Each account should be secured with passwords	The password should fulfill the regular expression rule	2	20.4.20
BR.5	Handle the unregistered users.	Each user should be registered.	3	20.4.20

LR.6	Manager manages servers and bartenders and the other employees.	Is responsible for their actions and functionalities.	~~2~~	20.4.20
BR.7	Handle suppliers.	Manager should be able to handle the suppliers	~~2~~	20.4.20
BR.8	Handle inventory.	Whenever there is a product missing, an alert will be shown on the manager's account so they can make the correct order and then add the amount on the database.	~~2~~	20.4.20
BR.9	Adding a new food, drink or category.	Manager is responsible for these actions.	~~2~~	20.4.20
BR.10	Able to view cash flows.	Economist, Manager and Owner	~~1~~	20.4.20
BR.11	Able to view the starting date, ending date of each cash flow , revenue, expenses and net profit.	Economist, Manager and Owner.	~~1~~	20.4.20
BR.12	Employee Payments.	Payments are handled by the economist.	~~1~~	20.4.20
BR.13	All employees can clock in and out of their shift.	The system will keep track of working hours the waiter has made in his shift	~~1~~	20.4.20
BR.14	When checking out an order the system should apply the VAT automatically.	Before printing the receipt the VAT (20%) will be calculated and displayed	~~2~~	20.4.20
BR.15	The waiter is able to check tables available to choose for the orders.	If the waiter chooses an occupied table, warnings will appear on his screen.	~~2~~	
BR.16	Able to watch the number of tables he has served.	The waiter's orders will have the date, id, number and the total price of each and it can	~~2~~	20.4.20

		be accessed by the manager and the owner.		
BR.17	Close the tab of a customer.	Waiters can close their open tabs by cash or credit card.	~~2~~	
BR.18	Cashout at the end of the shift.	The waiters and bartenders should cashout at the end of the shift so the sales and tips are shown and declared.	~~2~~	20.4.20
BR.19	Able to check hours worked during the week.	Each employee is able to check and print their working hours.	~~3~~	20.4.20
BR.20	Able to leave and receive notes.	Each employee is able to receive and leave a note from/to the manager and the owner.	~~3~~	20.4.20
BR.21	Able to change the timesheet of each employee.	Manager can edit the timesheet of employees in case of any problem.	~~3~~	20.4.20
BR.22	Check daily sales of each bartender and server.	Manager and owner can access the daily sales of each employee as they are saved in the timesheet database/interface.	~~2~~	20.4.20
BR.23	Check and upload documents of the taxation.	Only the owner can access the documents, while they are uploaded only by the economist.	~~3~~	20.4.20

BR.24	Request PDF for bills, sales and employees timesheet.	PDFs are generated upon the request of the owner.	~~4~~	20.4.20
BR.25	Able to edit all pages.	Only the owner can edit all pages.	~~2~~	20.4.20
BR.26	Able to add the new workers in system	Owner , Manager	~~2~~	20.4.20
BR.27	Able to leave notes for the Owner.	Manager , Economics, Bartender, Waiters , Other Employees	~~4~~	20.4.20
BR.28	Check the seats in the bar.	Bartender	~~3~~	20.4.20
BR.29	Print the bills in the bar.	Bartender	~~2~~	20.4.20
BR.30	Open employee dashboard.	Owner , Manager, Economist.	~~2~~	20.4.20
BR.31	Check and see the customers and suppliers bills.	Owner , Manager, Economist.	~~3~~	20.4.20
BR.32	Can attach pdf of the scanned bill of the suppliers.	Manager	~~3~~	20.4.20
BR.33	Can take the customer's reservation by the phone.	Manager	~~3~~	20.4.20

BR.34	Open the table and see their orders .	Manager, Owner Waiters	~~3~~	20.4.20
BR.35	Reserve a table for the customer's reservation.	Manager	~~2~~	20.4.20
BR.36	Delete the table reservation when the customer does not show up.	Manger	~~2~~	20.4.20
BR.37	Leave a HeadWaiter in charge when the Manager will not come at work.	Manager	~~1~~	20.4.20
BR.38	Print the Timesheet	Owner	~~4~~	20.4.20
BR.39	Check Sales	Economist , Owner	~~2~~	20.4.20
BR.40	Check and Add documents for each month.	Economist , Owner	~~2~~	20.4.20
BR.41	Make a pdf of sales of 30days grouped by Id/numbers.	Economist , Owner	~~2~~	20.4.20
BR.42	Delete orders	Only the manager can delete an order giving the reason for it.	~~1~~	20.4.20
BR.43	Payment with credit card.	Waiter, Bartender	~~1~~	20.4.20

BR.44	Choosing an occupied table/seat.	Server and Bartender get a warning message.	~~1~~	20.4.20
BR.45	Check their tables.	Waiter and Manager	~~2~~	20.4.20
BR.46	Putting an order in the system	When the waiter puts an order in the system, it will automatically print at the bartender's computer.	~~2~~	20.4.20
BR.47	Check the deleted items/orders.	The owner can check the deleted items/orders attached with the date and reasons.	~~4~~	20.4.20
BR.48	Request PDF of the deleted items/orders.	The manager can generate and print a PDF of the deleted items/orders attached with the date and reasons.	~~4~~	20.4.20
BR.49	Subtracting the amount of a product/ingredient from the inventory once an order is placed in the system.	When a product (food or beverage) is ordered , the specific product or the ingredients the dish is made of, should be subtracted automatically from the inventory. If not automatically, the manager should remove it manually.	~~3~~	21.5.20
BR.50	Removing from the menu an ingredient when it is out of stock.	When an ingredient is out of stock, it should be removed from the menu by automatically changing the item's status to "disabled".	~~3~~	21.5.20

BR.51	Sending a notification due to shortage of an item.	When an item is in its limits (due to number, size or kg), a notification is sent to the manager in order to handle the supply of that item.	~~3~~	21.5.20

3.2 Non-Functional Requirements

3.2.1 Product Requirements

3.2.1.1 User Interface Requirements

- The software will be web-based and can be accessed by any browser, such as google, mozilla, safari, and internet explorer.
- The system must be usable without printing a guide or watching an explanation video, it shouldn't take more than 10 minutes to learn how to use it. Therefore the user interfaces must be as easy as possible. There will be different system modules in order to structure and simplify the user interface.
- In order for the users to log in to their main page, they should type in their unique work number. If the number is wrong and it is not recognized by the system, an error message explaining the situation will be shown in the screen.
- If the login is successful, the system will direct the users to their main page displaying their dashboard.
- Server dashboard will visually represent all the key factors of the other modules. A side bar is provided in the left so that the user knows what functionalities he can perform.
- Bartender dashboard will visually represent all the key factors of the other modules. A side bar is provided in the left so that the user knows what functionalities he can perform.
- Employee dashboard will visually represent all the key factors of the other modules. A side bar is provided in the left so that the user knows what functionalities he can perform.

- Economist dashboard will visually represent all the key factors of the other modules. A side bar is provided in the left so that the user knows what functionalities he can perform.
- Manager Dashboard will visually represent all the key factors of the other modules. A side bar is provided in the left so that the user knows what functionalities he can perform.
- Owner Dashboard will visually represent all the key factors of the other modules. A side bar is provided in the left so that the user knows what functionalities he can perform.
- Myhours dashboard will make it possible for all users of the system to check their working hours.
- Employee Dashboard is accessed only by the manager, owner and economist and displays details regarding all users registered in the system and their characteristics.
- Timesheet dashboard is accessed only by the manager and the owner and it displays the daily activity of all employees such as time in & time out.
- Suppliers and Inventory dashboard is accessed by the manager and the owner and it displays the list of all suppliers of the business and items in inventory followed by their characteristics.
- Bills dashboard displays all the bills of the clients and also the bills of the inventory. It can be accessed by the owner, manager and economist.
- Notes dashboard can be accessed by all the users of the system. They can leave any message for the manager and/or the owner.
- Menu dashboard can be accessed from all the users besides the economist and “other” employees. It displays the menu divided into two sections, drinks and food.
- Tables dashboard can be accessed by all the users of the system besides the economist and “other” employees. It displays all the tables available in the business, followed by the open and reserved ones.

3.2.1.2 Usability

After the software will be delivered to the client, we should make sure that all the employees can navigate it efficiently.

3.2.1.2.1 Usability Testing

We will use the moderate method of usability testing, which consists in a supervisor (one of us or all of us) who introduces the way how to use it to the client, although its user interface will be very easy to manage. The client can make questions and take answers by us.

3.2.1.2.2 Accessibility & Efficiency

This information management system can be accessed only by having an internet connection, like Wi-Fi or network connection. The devices to open the software are a lot: a smartphone, tablet (any kind of touch-screen table), browser in a laptop or PC. Nowadays, all the tablets and smartphones include all the possible apps to store information, materials, documents, inventory that can be used in the software by the owner, manager, economist etc. This facilitates the management from the administrator from any possible place he can be.

3.2.1.2.3 Flexibility

Our product will be very easy and well organized to be understood. The system will have an error detection process, which will handle any possible error very quickly, so the employees will not have any worries or difficulties. The interface will be organized in that way that each action will have its own button with a description, so the client will not get confused.

3.2.1.3 Efficiency Requirements

3.2.1.3.1 Capacity and Space

Since it is a web application, minimum system requirements for the computer to run a web application are:

- Operating System should be Windows 7 or later, linux and MAC compatible.
- Processor should be Intel Pentium 4 or later.
- Memory should be 2GB min (4 GB recommended).

Taking into consideration the number of users of the software (approximately 20) and the total pages of the software (about 200-300 pages):

- Web server hard drive size - 27,5MB
- There should be up to 20 simultaneous users supported.

3.2.1.3.2 Latency

- The maximum acceptable time for a service request shouldn't be more than 8 sec.

3.2.1.4 *Dependability Requirements*

3.2.1.4.1 Manageability/Maintainability

3.2.1.4.1.1 Monitoring

This restaurant information management system will have to be monitored by us for any possible failure or error in order to be corrected as soon as we can. It will have included an error handling process.

This will be done by error reporting functions, which will report directly to us the concern or feedback of the user. These functions allow us to customize problems by their level of importance. One of these functions will be the logging ones, which allow you to send messages to an email for example.

The other part will be handled by our data collection and records of all activities including HTTP requests during the day.

3.2.1.4.1.2 Maintenance

Except the construction of the all system, we have focused our attention also in the continuous maintenance.

According to some modularities and our interface design, there will be buttons, which give the possibility to keep your employees organised. Here are included the add, delete, edit their personal information buttons in order to maintain the changes in the list.

About the complexity issues, we know that the level of innovative services is continuously growing, so there is a special team to adapt with the rapid changes of the technology by perfecting the interaction between pieces of code. Since complexity can be measured as the quality grade, our system's grade will always be high. Also, every action that has been taken is saved in our server and in our database and it can be restarted anytime if any possible disaster occurs.

3.2.1.4.2 Availability

Include specific and measurable requirements for:

- The software should work 24/7, even though it will be used 12-15 hours per day.
- The system is committed to be available from 9am to 12 am, so it requests a high availability level.
- The software is supposed to cover all geographical areas. (while they have internet access)
- Impact of downtime on users is quite high and can result in data loss and lost productivity.
- The maximum permitted number of failures per hour shouldn't exceed 3.
- MTBF should be 0,33 failure/hour.

3.2.1.5 Security

3.2.1.5.1 Protection

- When the manager or owner registers new users, a random work number is generated for that user encrypted with the b- encryption standards.
- Usage of x-xss-protection security header.
- Implement https, use the 2 golden rules (filter external input and escape output).
- For the data integrity, the software will always do validations and keep an audit trail.

3.2.1.5.2 Authorization and Authentication

- The users cannot change by themselves their work numbers, but the manager can by using the Two Factor Authentication method.
- The database is centralized and can only be accessed by the authorized users (owner and manager), who perform all CRUD functionalities.
- Session to be used for currently logged in users.

3.2.1.6 System Interface/Integration

The database will be provided to employees such as bartenders, waiters and other employees only as information. They would not have access to change anything on the menu or the structure of the database. Only the owner and the manager will have access to the DB configuration.

Credit card machinery configuration system. (to be revised later)

3.2.1.6.1 Network and Hardware Interfaces

Our system is a web application that will be stored in a web server, which means that the browser will create a TCP connection with the server. Every browser is able to support this connection, ensuring us that our system will function properly and each employee who would have access to his/her page if they provide the correct credentials.

3.2.1.6.2 Portability

- Php used as portable scripting language
- Operating system- Windows 7 or later, linux and MAC compatible.

3.2.1.7 Data Management

3.2.1.7.1 Entities:

Employee

Menu Items

Order

Inventory

Bills

Timesheet

Sales

Profit

Table

Suppliers

Notes

Employee

This table will contain all the general information about the employee .

emp_id integer PK

emp_name varchar max 15

emp_surname varchar max 15

emp_birthday DATE - format YYYY-MM-DD

emp_status (t*his option will help us to differentiate owner, manager, economist, waiters, bartenders, other employees) varchar max 20*

emp_photo

----Storing images in a database can potentially put unnecessary load on your database and the network between your database so a general practice is to store images in directories on the file system so we are going to store references to the images in the database. e.g. path to the image,the image name, etc.---

emp_email varchar 50

emp_hourly_wage int default =0

Employee Information

can be accessed upon login

uniquely represented by ID

Only the owner and the manager have the right to add, delete, update.

Timesheet

This table will be connected with the Employee table through emp_id

time_id integer PK

clock_in TIMESTAMP - format: YYYY-MM-DD HH:MI:SS

clock_out TIMESTAMP - format: YYYY-MM-DD HH:MI:SS

emp_id

*daily_wage[(clock_out - clock_in)*emp_hourly_wage from emp table which is connected by emp_id]*

Everyone will have the right to put a timesheet record which means anyone would clock in and clock out but only the owner and manager have the right to edit or delete the record.

Suppliers

We decided that suppliers would not have individual access in our system but we still need a table with supplier information in order that the manager can contact the suppliers.

sup_id int PK

sup_name varchar 50

sup_email varchar 50

sup_phone_nr int

sup_products varchar 50

The supplier information will be accessible only to the owner and the manager.

MenuItems

menu_item_id int PK

dish_name varchar 50

dish_price int by default =0

type varchar 20 (Food or Beverage)

product_name varchar 20 (Ingredients)

ing_id (will connect with inventory table through inv_id)

menu_status

Owner and the manager will have access here to change meanwhile the bartender and waiter can only see the information in the database but cannot add or delete a menu item.

Order

order_id int pk

menu_item_id(menu table) FK

emp_id (employee table) FK

table_id (table_id) FK

order_total int default=0

Table

table_id int PK

open_time TIMESTAMP - format: YYYY-MM-DD HH:MI:SS

closed_time TIMESTAMP - format: YYYY-MM-DD HH:MI:SS

status int (1 or 0)

order_id (connect with order) FK

Waiter and manager can open and close a table.

Sales

sale_id int PK

daily_date DATE - format YYYY-MM-DD FK (Daily_Expense)

profit

Bill (for the bills of supplier)

Bill_id int PK

Bill_date DATETIME - format: YYYY-MM-DD HH:MI:SS

Bill_supplier FK for supp_id

Bill_description varchar 100

Bill_amount   int

Bill_pdf

Inventory

inventory_id int PK

product_name varchar FK (MenuItems)

supplier_id int FK (Supplier)

amount_available int

Notes

note_id int pk

emp_id int fk (employee)

date   datetime

Our interface main goal is to be easy and fast to use in order to be efficient. The interface will be developed using html, css , bootstrap. A majority of the menu items will be just to select them so the waiter would not have to type and spend time.

All users of our system will have their personal credential (work number) in order to login and access their page. Records will be created everyday when the employee will clock in and clock out in order to create a proper timesheet and a proper way of calculating the checks in the end.

3.2.2 Organizational Requirements

3.2.2.1 Environmental Requirements

Since our software is web based, it will be stored in a server maintained by a software house or on a server chosen by the client. It needs to be maintained in order to function and work properly. By maintaining a web application, we mean keeping it up to date and fixing bugs. The servers running your web application also require occasional review and updates, like updating the database (MySql) and the web server (Apache). Apart from this, for the software to work properly, each user that is willing to use it, should have internet access and a device with the minimum requirements as stated in the Capacity and Space Requirements.

3.2.2.2 Operational Requirements

3.2.2.2.1 Operations

Specify any normal and special operations required by the user, including:

- Periods of interactive operations

The system should be available from 9am to 12 am.

- Periods of unattended operations

Unattended operations include the time between 12 am to 9 am.

- Data processing support functions

We will use validations to ensure that each input is appropriate and not malicious.

Summarize at the end of each working day the sales and expenses in a detailed report by using a sorting algorithm to arrange the data.

Classify all the items of the menu and inventory according to their category.

- Backup and recovery operations

There is available a backup server, in case that our current server breaks down for any circumstances.

- Safety considerations and requirements

Each user has its own address with an unique ID and password and only he can log in to its page. Also, a random work number is generated for each user encrypted with the b- encryption standards, so every personal information is secret and cannot be accessed.

For every HTTP request that is being generated, there will be applied the 2 Golden Rules (filter external input and escape output).

- Disaster recovery and business resumption

We are using MySQL for the database and Apache for the server. Everything is being recorded and saved in case of any fatal crashes of the system. There is a backup server, which will be used to restart the system and it only needs some confirmations from the user or from our IT supervisor.

3.2.2.2.2 Threats

3.2.2.2.2.1 Security Threats

- ***Security misconfiguration***

A web application like the one we are developing requires frequent maintenance and configuration so it can run properly and effectively. The owners of the software should keep communication with the developers and assign penetration tests to check the software's capability of handling sensitive data. In this way, the owners and developers can find out the software's vulnerabilities and improve them.

- ***Brute Force***

Brute Force means when hackers try to guess the username of a certain user by trying different tactics and the forcelly gain access on these accounts. In our case, each user has a work number, which can be guessed if encryption is not used. Also, the company should keep an audit trail (as explained in the security and protection section), in order to register all the logins and transactions of the users within the system.

- ***Injection Attacks***

These attacks come in different injection types and try to attack data in the web applications.They usually hijack control over the website owner's database through the act of data injection into the web application. The data injected gives the website owner's database instructions that have not been

authorized by the site owner themselves. That's why it is very important to use input validation and robust programming.

3.2.2.2.2.2 Emerging Technologies

The developers should be aware of the emerging technologies and try to improve the system time by time. For example, some restaurant management systems use a button to write and access a certain table, while others have arranged the tables in the system and you can just click the table and use it for any order. The second one is easier for the employees to use, reduces time and makes the operations more effective and efficient. The system should be in a process of continuing development.

3.2.2.3 Development Requirements

3.2.2.3.1 Client-Side Programming (Front End)

- HTML (Hypertext Markup Language)
- CSS (Cascading Style Sheets)
- Bootstrap (to maintain the connection between html and css)
- JS (JavaScript)

3.2.2.3.2 Server-Side Programming (Back End)

- Programming Language - Simple PHP
- Database - mySQL
- Server - Apache

3.2.3 External Requirements

3.2.3.1 Regulatory and Legislative Requirements

Here are the functions or modularities that are created in accordance with law and regulations standards.

3.2.3.1.1 Sales & Bills & Documents & Inventory

According to Law No. 9228 dated 29 April 2004 on Accounting and Financial Statements, our client is obliged to apply the National Accounting Standards (NAS), since it consists as a medium-size enterprise. According to taxes on profit, there is a need by law to keep track of every sale that is made and declared in every bill, in order to generate legal profits. These ones are organized in sales and bills functions controlled by the economist and owner. This accounting period consists in 12 months. The currency that is used to keep track is Albanian currency (lekë) and in Albanian language. Accounting books and records should follow a double-entry basis and a chronological arrangement. Businesses should verify their assets and liabilities by declaring an organized inventory. According to taxes on profit, there is a need by law to keep track of every sale that is made and declared in every bill, in order to generate legal profits. Also, TVSH should be included in the receipt, so everything is transparent to the client.

These regulations are organized in sales, bills, documents and inventory pages controlled by the economist, the manager and the owner.

3.2.3.1.2 Employees dashboard & Timesheets

According to “Kodi i Punes” in Albania, the owner is obliged to have a detailed list of personal information of the employees, to keep track about the overall period in work of an employee, to declare the employees’ wages and to declare and pay their insurances. This is all done at the employees dashboard and timesheets functions.

3.2.3.1.3 Privacy Policy

According to Law no. 9887, dated 10.03.2008 “On personal data protection”, our system protects all the personal information of the employees.

3.2.3.2 Ethical Requirements

3.2.3.2.1 Software

The software should be developed according to the client's requirements and should deliver the optimal solution. It should be well documented and have the appropriate approvals. The software should be developed in such a proper way, that all the data and information collected and saved in its database is secure.

3.2.3.2.2 Developers

The developers should use the property of a client only in properly authorized ways, and with the client's knowledge and consent. They must keep private any confidential information gained in their professional work according to the respective laws. They should be accurate in stating the characteristics of software on which they work and avoid false claims. The developers should take responsibility for detecting, correcting, and reporting errors in software and associated documents on which they work. Developers should be aware of plagiarism, unethical and illegal actions .

3.3 Domain Requirements

This web based application will be used within the restaurant system/network and it does not need to communicate with any other system. It should be accessed only by the users that are registered in the system (all the employees).

4. Software Designs

4.1 User Scenarios

General Scenario 1 - Log in Scenario

A. Successful Login

- User writes his/her work number and clicks the login button.
- If all his credentials are correct, he/she logs in.
- The system directs the user into his/her main page.

B. Failed Login

- User writes his/her work number and clicks the login button.
- If his credentials aren't correct, he/she can't log in.
- The system keeps them on the main page.
- An error message is provided : "Check your work number and log in again".

General Scenario 2 - Clock in Scenario

A. Clock in

- After logging in, the user clicks clock in.
- Automatically the system clocks the user in and allows him/her to perform other actions.

B. Not clocked in

- After logging in, the user tries to open one of the options in his dashboard.
- An error message is provided: "Please clock in!".

General Scenario 3 - MyHours Scenario

- The user checks the "MyHours".
- A table representing date, time in and time out for the user is shown.
- The user clicks print.
- Timesheet for the last month will be printed.

General Scenario 4 -Clock out Scenario

A. Clock out

- When the shift of the employee ends, he/she needs to clock out.
- The user clicks the clock out.
- Automatically the system clocks him/her out of the system.
- The user presses exit.
- The user is logged out.

B. Not clocked out

- The user clicks exit.
- An error message is provided: “Please clock out before exit!”.
- The user stays at the same page.

1. Owner Scenarios (General Scenarios applied)

1.1 Employee Dashboard

- Owner checks the “Employee Dashboard”.
- A table representing all the information of the employees is shown.
- Owner can edit the fields of the table.
- Owner can delete an employee from the dashboard.
- The owner clicks the Add button.

A window is shown with all empty fields required for the employee to be registered.

- Owner completes the empty fields and clicks “OK”.

A. Successful

- If all fields are completed, the new employee is registered and shown on the employee dashboard.

B. Not successful

- If any of the fields is missing, an error message will be provided for the manager: "Please fill in all the missing fields".

1.2 Timesheet

- Owner checks the "Timesheet".
- A table representing all employees, their time in and out, their sales, and rate per hour is shown.
- A window is shown with all the fields of the table.

1.2.1

- The owner can print PDFs which print sales of 30 days grouped by number/id.

1.2.2

- The owner can print PDFs which print the salary of 30 days grouped by employee id.

1.3 Inventory

- Owner checks the "Inventory".
- A table representing information regarding the inventory is shown.

2.3.1 Add Button

- Owner clicks the Add button.
- A window is shown with all empty fields required for the products to be registered.
- Owner completes the empty fields and clicks "OK".

A. Successful

- If all fields are completed, the product is registered and shown on the inventory table.

B. Not successful

- If any of the fields is missing, an error message will be provided for the manager: "Please fill in all the missing fields".

1.3.2 Edit Button

- Owner clicks the Edit button.

- A window is shown with all the fields of the table.
- Owner can edit only the “available” field.
- After finishing, the owner clicks OK.
- The table is updated due to the changes.

1.4 Suppliers

- Owner checks the “Suppliers”.
- A table representing all suppliers and their information is shown.
- Owner clicks the Add button.
- A window is shown with all the empty fields of the table.
- Owner completes the empty fields and clicks “OK”.

1.5 Sales

- Owner checks the “Sales”.
- A table representing sales and its attributes like sales and expenses of the day is shown.
- The table is automatically updated at the end of each work day.
- Owner cannot make any changes to this tab.

1.5.1

- The owner can print PDFs which print sales of the last 30 days.

1.5.2

- The owner can print PDFs which print all sales saved in the database.

1.6 Bills

- Owner checks “Bills”.
- Two options are shown on the screen of the owner:

1.6.1 Suppliers

- The owner checks the “Suppliers”.

- A table representing all the transaction information regarding bills with suppliers is provided.
- Owner can press a PDF button which will print the supplier bills.

1.6.2 Customers

- The owner checks the “Customers”.
- A table representing all receipts of the customers is shown with all the other details.
- Owner can print all the receipts if he clicks PDF.

1.7 Menu

- Owner checks the “Menu”.
- Two options are shown on the screen of the owner:

1.7.1 Food

- A dashboard is shown with all the items regarding food in the menu of the restaurant.

1.7.1.1 Edit Button

- Owner checks the Edit button.
- A table representing the product and its availability is shown and the options “edit” and “delete” is shown.

A. Edit

- If the owner wants to edit the availability of the product, he can click edit.
- A window will be shown and the owner can change only the availability field.
- Owner clicks “OK” and the product’s availability is changed accordingly.

B. Delete

- If the owner wants to delete that product, he can click delete.
- The product will be automatically deleted from the menu.

1.7.1.2 Add Button

- Owner clicks the Add button.

- A table is shown with all the fields needed to register a new product (food related) in the menu (name, availability and ingredients).
- Owner completes all the fields and clicks “OK”.

A. Successful

- If all fields are completed, the new food item is added in the menu.

B. Not successful

- If any of the fields is missing, an error message will be provided for the manager: “Please fill in all the missing fields”.

1.7.2 Beverages

- A dashboard is shown with all the items regarding beverages in the menu of the restaurant.

1.7.1.1 Edit Button

- Owner clicks the Edit button.
- A table representing the product and its availability is shown and the options “edit” and “delete” is shown.

A. Edit

- If the owner wants to edit the availability of the product, he can click edit.
- A window will be shown and the owner can change only the availability field.
- Owner clicks “OK” and the product’s availability is changed accordingly.

B. Delete

- If the owner wants to delete that product, he can click delete.
- The product will be automatically deleted from the menu.

1.7.1.2 Add Button

- Owner clicks the Add button.
- A table is shown with all the fields needed to register a new product (beverage related) in the menu (name, availability and ingredients).

- Owner completes all the fields and clicks “OK”.

A. Successful

- If all fields are completed,the new beverage item is added in the menu

B. Not successful

- If any of the fields is missing, an error message will be provided for the owner: “Please fill in all the missing fields”.

1.8 Tables

- Owner checks the “Tables”.
- A list of all opened tables in the restaurant is shown.

1.9 Notes

- Owner checks the “Notes”.
- A table representing the notes, person who sent them and date is shown along with 2 empty fields for notes towards the manager or the economist.
- The Owner writes the note in the respective field and presses enter.

1.10 Deleted

- Owner checks the “Deleted”.
- A table which shows Product, Amount and reason it is deleted is shown.
- Owner can press the PDF button to print a list of deleted items.

1.11 Documents

- Owner checks the “Documents”.
- A table which shows all the documents uploaded from the economist is shown.

2. Manager Scenarios (General Scenarios applied)

2.1 Employee Dashboard

- Manager checks the “Employee Dashboard”.

- A table representing all the information of the employees is shown.
- The manager clicks the Add button.
- A window is shown with all empty fields required for the employee to be registered.
- Manager completes the empty fields and clicks “OK”.

C. Successful

- If all fields are completed, the new employee is registered and shown on the employee dashboard.

D. Not successful

- If any of the fields is missing, an error message will be provided for the manager: “Please fill in all the missing fields”.

2.2 Timesheet

- Manager checks the “Timesheet”.
- A table representing all employees, their time in and out, their sales, and rate per hour is shown.
- Manager clicks the Edit button.
- A window is shown with all the fields of the table.
- Manager can edit only the time in and time out fields.
- After finishing, the manager clicks OK.
- The table is updated due to the changes.

2.3 Inventory

- Manager checks the “Inventory”.
- A table representing information regarding the inventory is shown.

2.3.1 Add Button

- Manager clicks the Add button.
- A window is shown with all empty fields required for the products to be registered.
- Manager completes the empty fields and clicks “OK”.

C. Successful

- If all fields are completed, the product is registered and shown on the inventory table.

D. Not successful

- If any of the fields is missing, an error message will be provided for the manager:

  “Please fill in all the missing fields”.

2.3.2 Edit Button

- Manager clicks the Edit button.
- A window is shown with all the fields of the table.
- Manager can edit only the “available” field.
- After finishing, the manager clicks OK.
- The table is updated due to the changes.

2.4 Suppliers

- Manager checks the “Suppliers”.
- A table representing all suppliers and their information is shown.
- Manager clicks the Add button.
- A window is shown with all the empty fields of the table.
- Manager completes the empty fields and clicks “OK”.

2.5 Sales

- Manager checks the “Sales”.
- A table representing sales and its attributes like sales and expenses of the day is shown.
- The table is automatically updated at the end of each work day.
- Manager cannot make any changes to this tab.

2.6 Bills

- Manager clicks “Bills”.
- Two options are shown on the screen of the manager:

2.6.1 Suppliers

- The manager checks the “Suppliers”.
- A table representing all the transaction information regarding bills with suppliers is provided.
- Manager clicks the Add button.
- A window with all the empty fields for the transaction to be registered is shown.
- Manager completes all the fields and clicks “OK”.

A. Successful

- If all fields are completed, the transaction is registered and shown on the supplier bills table.

B. Not successful

- If any of the fields is missing, an error message will be provided for the manager: “Please fill in all the missing fields”.

2.6.2 Customers

- The manager checks the “Customers”.
- A table representing all receipts of the customers is shown with all the other details.
- Manager can click any of the receipts.
- A window with the respective receipt is shown.
- The manager can click “Print” if he/she wants to print the receipt opened.

2.7 Menu

- Manager checks the “Menu”.
- Two options are shown on the screen of the manager:

2.7.1 Food

- A dashboard is shown with all the items regarding food in the menu of the restaurant.

2.7.1.1 Edit Button

- Manager clicks the Edit button.

- A table representing the product and its availability is shown and the options “edit” and “delete” is shown.

C. Edit

- If the manager wants to edit the availability of the product, he can click edit.
- A window will be shown and the manager can change only the availability field.
- Manager clicks “OK” and the product’s availability is changed accordingly.

D. Delete

- If the manager wants to delete that product, he can click delete.
- The product will be automatically deleted from the menu.

2.7.1.2 Add Button

- Manager clicks the Add button.
- A table is shown with all the fields needed to register a new product (food related) in the menu (name, availability and ingredients).
- Manager completes all the fields and clicks “OK”.

C. Successful

- If all fields are completed, the new food item is added in the menu.

D. Not successful

- If any of the fields is missing, an error message will be provided for the manager: “Please fill in all the missing fields”.

2.7.2 Beverages

- A dashboard is shown with all the items regarding beverages in the menu of the restaurant.

2.7.1.1 Edit Button

- Manager clicks the Edit button.
- A table representing the product and its availability is shown and the options “edit” and “delete” is shown.

C. Edit

- If the manager wants to edit the availability of the product, he can click edit.
- A window will be shown and the manager can change only the availability field.
- Manager clicks “OK” and the product’s availability is changed accordingly.

D. Delete

- If the manager wants to delete that product, he can click delete.
- The product will be automatically deleted from the menu.

2.7.1.2 Add Button

- Manager clicks the Add button.
- A table is shown with all the fields needed to register a new product (beverage related) in the menu (name, availability and ingredients).
- Manager completes all the fields and clicks “OK”.

C. Successful

- If all fields are completed,the new beverage item is added in the menu

D. Not successful

- If any of the fields is missing, an error message will be provided for the manager: “Please fill in all the missing fields”.

2.8 Tables

- Manager checks the “Tables”.
- A list of all opened tables in the restaurant is shown.

2.8.1 Click one table

- Manager checks one of the tables.
- A window showing details regarding that table like the server, items ordered and total is shown.

A. Delete order

- Manager clicks the Delete Order button.

- A window requesting the reason for the delete is shown.
- Manager writes dhe reason and clicks “OK”.
- The order is deleted from the system, the table is now available.

B. Delete item

- Manager clicks the Delete Item button.
- This button is available for every item in the order.
- A window requesting the reason for the delete is shown.
- Manager writes the reason and clicks “OK”.
- The item is deleted from that order.

2.8.2 Reserve Button

- Manager clicks the Reserve button.
- A window requesting the table, name of the client and the time is shown.
- Manager completes all the fields and clicks “Add”.

A. Successful

- If all fields are completed,the reserved table is added in the reserved tables section.

B. Not successful

- If any of the fields is missing, an error message will be provided for the manager: “Please fill in all the missing fields”.

2.8.3 Reserved Tables

- Manager checks the Reserved Tables.
- A table representing the reserved tables with the table number, name of the client and time is shown.
- Each row representing a reserved table, has a delete button.
- The manager clicks the Delete button.
- The table is deleted from the Reserved Tables section and it is now available.

2.9 Notes

- Manager checks the “Notes”.
- A table representing the notes, person who sent them and date is shown along with 2 empty fields for notes towards the owner or the economist.
- The manager writes the note in the respective field and presses enter.

3. Economist Scenarios (General Scenarios applied)

3.1 Sales

- Economist checks “Sales”.
- A table for Sales opens and shows attributes like: date, sale id, amount of sale, expenses and profit from each sale made.
- This table is automatically updated when the work day ends.
- The economist only checks without making changes to this page for further documents needed.

3.1.1 PDF (optional)

- Economist clicks “PDF”.
- A report of the sales made in the last 30 days is provided.
- The economist clicks the “Save” button to get the full report.

3.2 Bills

- The economist checks “Bills”.
- A table with information regarding all transactions made with suppliers is provided.
- Informations consist in: bill number, supplier name, product, amount.
- The economist cannot make changes to this tab. He can only check it to gather his needed data.

3.2.1 PDF (optional)

- Economist clicks “PDF”.

- A report of the bills recorded in the last 30 days is provided.
- The economist clicks the “Save” button to get the full report.

3.3 Employees Dashboard

- Economist checks “Employees Dashboard”.
- A table which shows the salaries made by each employee with their IDs and all the other personal work information is provided.
- The economist cannot make any changes in this tab.

3.3.1 PDF (optional)

- Economist clicks “PDF”.
- A report of the total salaries made in the last 30 days grouped by their IDs is provided.
- The economist clicks the “Save” button to get the full report.

3.4 Documents

- Economist checks “Documents”.
- A table with the documents that he/she has already added is provided associated with each necessary attribute: year, month.
- Economist clicks the “Add” button if he has a new document to add.

3.4.1 Add button (optional)

- Another page with the required fields for the document to be added is shown.
- The economist completes all the fields and clicks “OK”.

A. Successful

- If all fields are completed, the new add is registered and shown on the documents table.

B. Not Successful

- If any of the fields is missing, an error will be provided for the economist: “Please fill in all the missing fields”.

3.5 Notes

- The economist checks “Notes”.
- A small table is shown including the notes and its attributes: the date and person who sent them. Also, 2 empty fields for notes towards the owner and manager are provided.
- The economist only writes the note in the required fields and presses Enter.

4. Server Scenarios (General Scenarios applied)

4.1 Tables

- Server checks “Tables”.
- A window that includes all the tables, their number and their position is shown.
- Server opens one of the tables.

A. Not occupied

- If the table is not occupied it will direct the server to the “Menu”.

B. Occupied

- If the server chooses a table that is already occupied, a window that shows a warning that the table is being used is shown.

4.2 Menu

- Server checks on the “Menu”.
- He can choose between 2 options: Food and Beverages.
- After checking the client’s order, the server chooses the items.
- A window that includes all the items selected, their amount, the tvsh, the total price and the server name is shown. (the bill)
- Server clicks on “Print” to print the bill.

- Server clicks on “Pay” and two options are provided:

A. Pay in cash

- The payment is done directly in cash.

B. Pay with a credit card

- If the client chooses to pay with a credit card , the server can:

A. Swipe the card

B. Add the information manually

- If the information is added manually, a table that shows the “Code” is provided, it allows the user to write in the empty field.
- The server prints the bill again with the card transaction.
- The server comes back with the tip.
- The server enters the tip and clicks “Done”.

4.3 My Tables

- Server opens “My tables”
- A window that shows his tables is presented.

4.4 Cashout

- When the server clicks “Cashout”, it will print his cashout statement which involves sales, tips, profit and type of payments.

4.5 Notes

- Server checks “Notes”.
- A table that shows the note, date and the person that leaves the note is presented.
- There are provided two empty fields where the server can leave a note for the manager or the owner.
- The server writes the note in the respective field and presses enter.

5. Bartender Scenarios (General Scenarios applied)

5.1 Seats

- Bartender checks “Seats”.
- Bartender checks the seats.

A. Seat is occupied

- If the seat is occupied, a warning will be shown that the seat is not available and the system will direct the bartender again to the seat choosing page and the bartender can choose a different seat.

B. All seats are occupied

- If all seats are occupied, a warning will be shown that there are no seats available **.**

C. Seats are not occupied

- The bartender can go to the menu page and can choose the drink for the customer.

5.2 Menu

- Bartender checks on the menu.
- He has only one option: Beverages.
- After checking the client’s order, the bartender chooses the items.
- A window that includes all the items selected, their amount, the tvsh, the total price and the bartender’s name is shown. (the bill)
- Bartender clicks on “Print” to print the bill.
- Bartender clicks on “Pay” and two options are provided:

C. Pay in cash

- The payment is done directly in cash.

D. Pay with a credit card

- If the client chooses to pay with a credit card , the server can:

A. Swipe the card

B. Add the information manually

- If the information is added manually, a table that shows the “Code” is provided, it allows the user to write in the empty field.
- The bartender prints the bill again with the card transaction.
- The bartender comes back with the tip.
- The bartender enters the tip and clicks “Done”.
- Bartender does the cashout the same as the waiter.

5.2 Cashout

- When the bartender clicks “Cashout”, it will print his cashout statement which involves sales, tips, profit and type of payments.

5.3 Notes

- The bartender checks “Notes”.
- A small table is shown including the notes and its attributes: the date and person who sent them. Also, 2 empty fields for notes towards the owner and manager are provided.
- The bartender only writes the note in the required fields and presses Enter.

6. Other Employee Scenarios (General Scenarios applied)

6.1 Notes

- The user checks “Notes”.
- A small table is shown including the notes and its attributes: the date and person who sent them. Also, 2 empty fields for notes towards the owner and manager are provided.
- The user from other employees only writes the note in the required fields and presses Enter.

7. Automatization

7.1 Orders

- When a product is ordered, this product is automatically removed from the inventory.

7.2 Disable

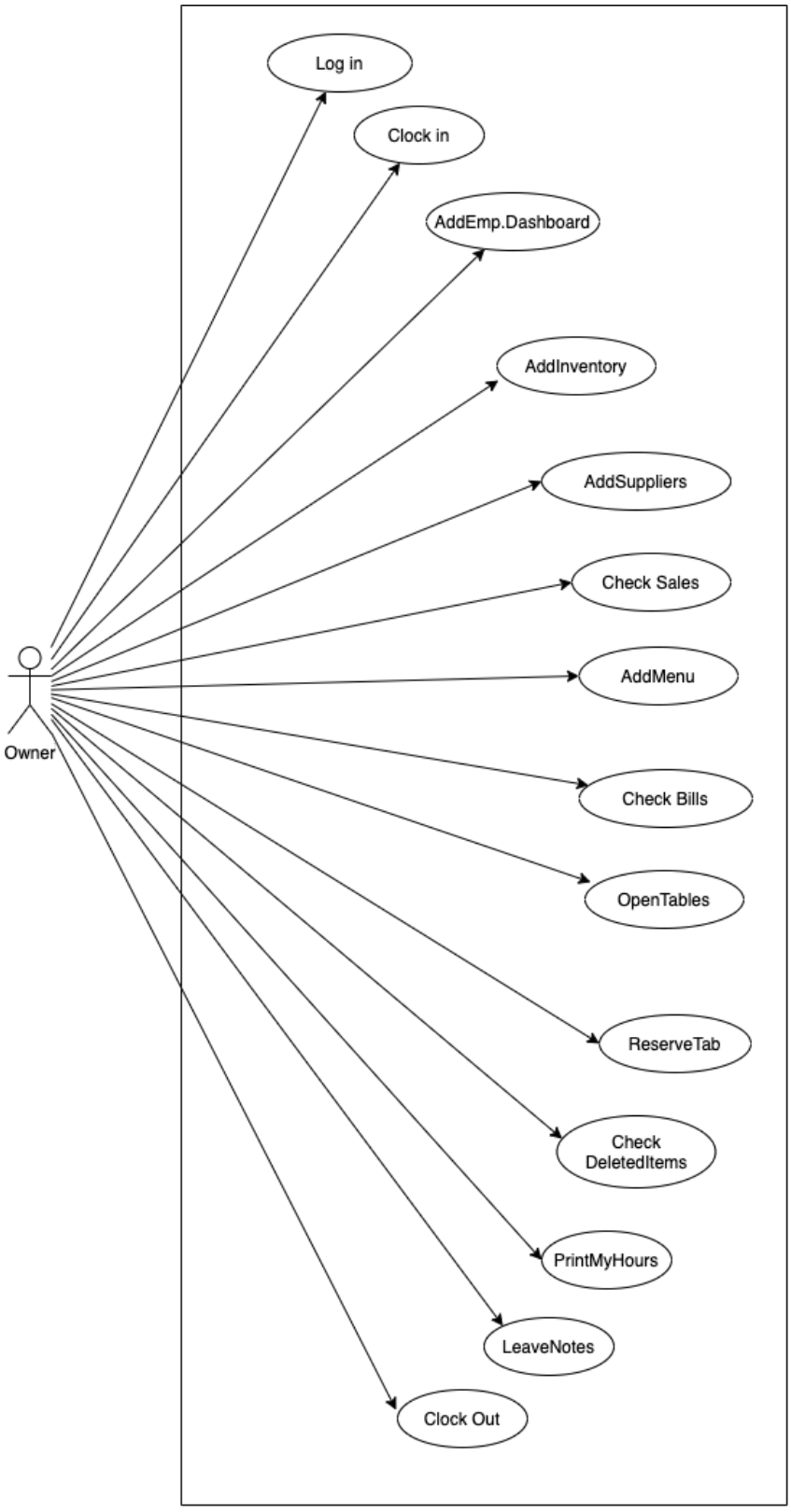
- When the inventory reaches a specified limit and there is no sufficient product, the product is automatically disabled in the Menu.
- The product can not be used for further orders.

7.3 Notification

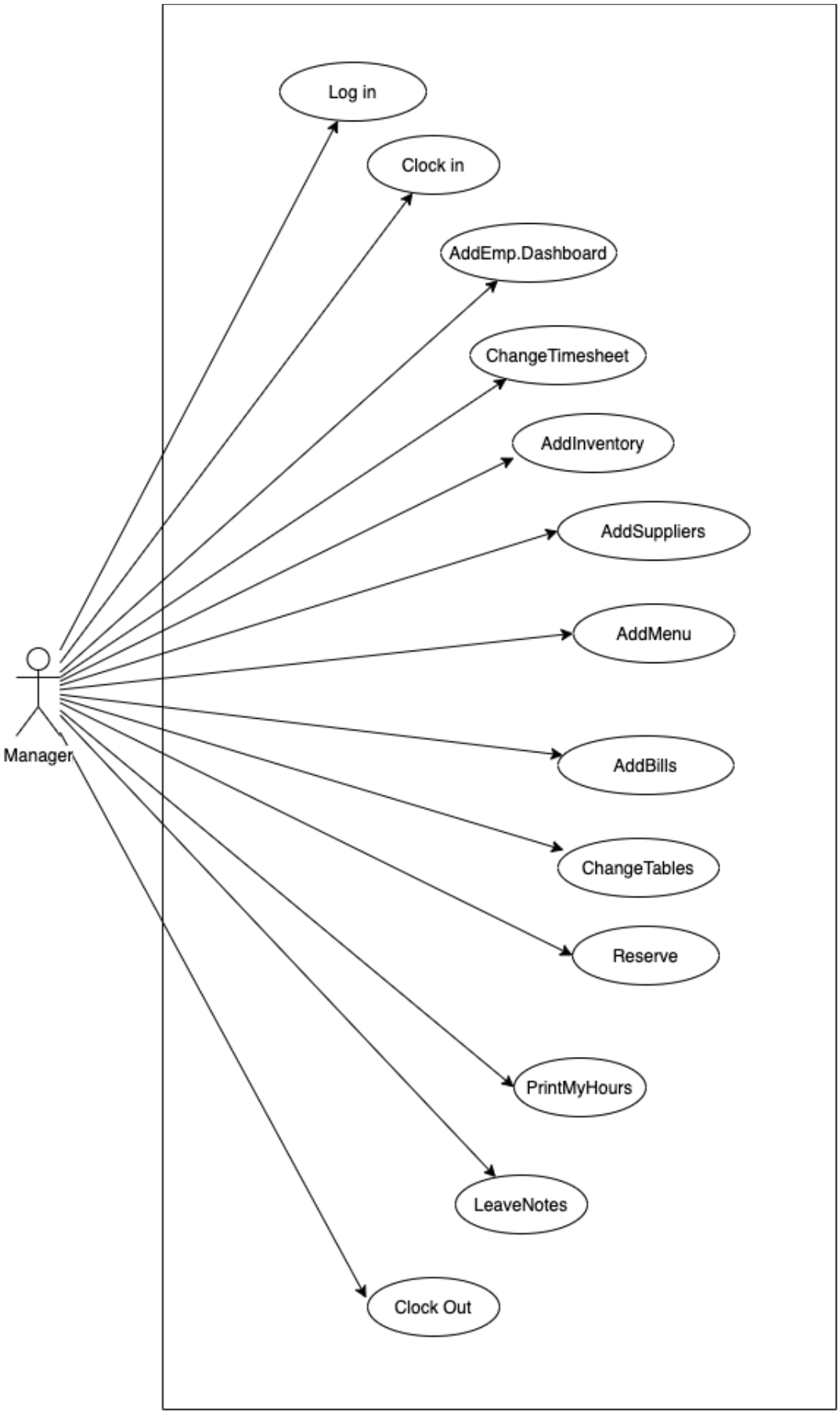
- When there are not sufficient products in the inventory, a notification is sent to the manager.
- The notification warns the manager that the product is on its limits, so he can do the necessary orders.

4.2 Use cases

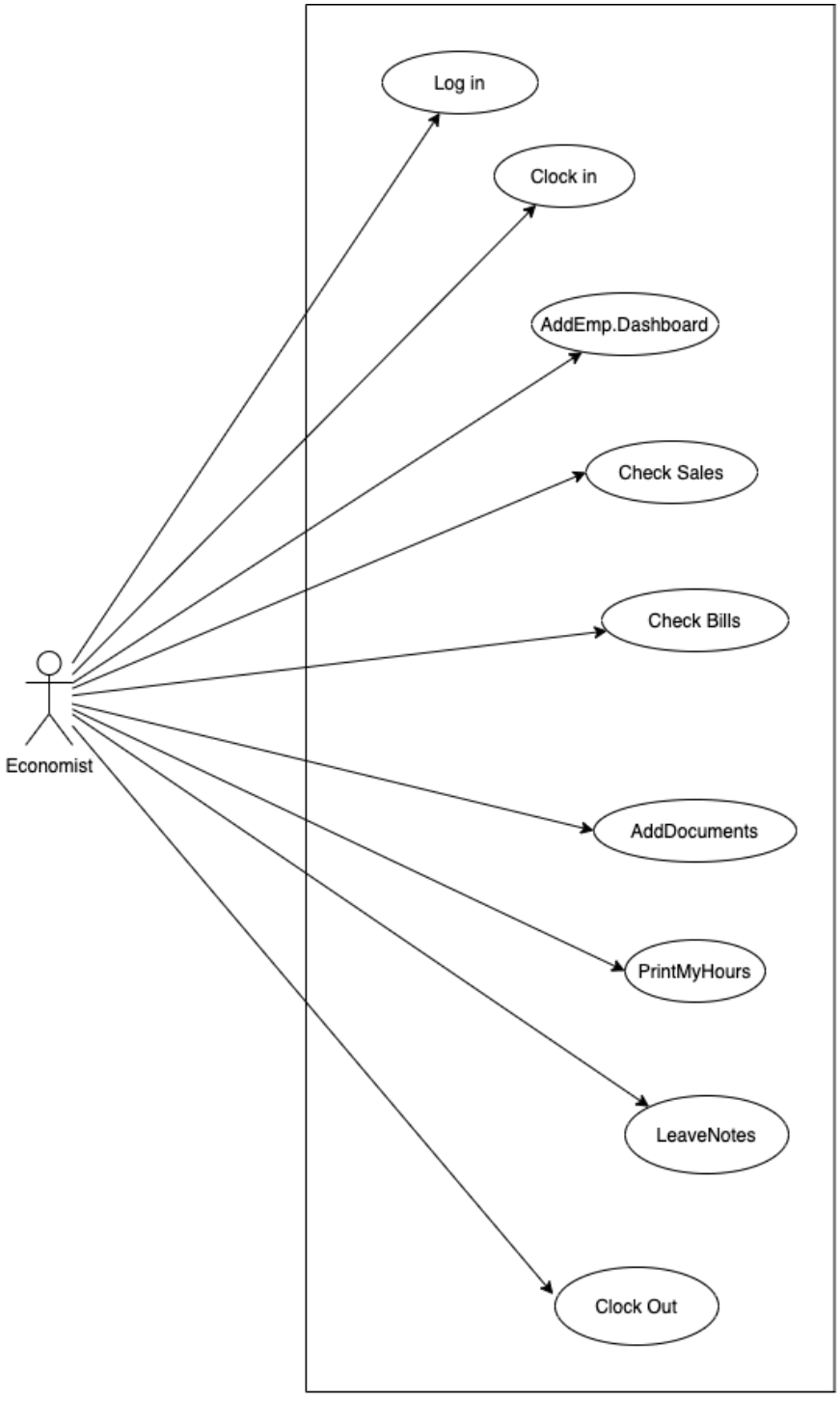
4.2.1 Use case 1: Owner



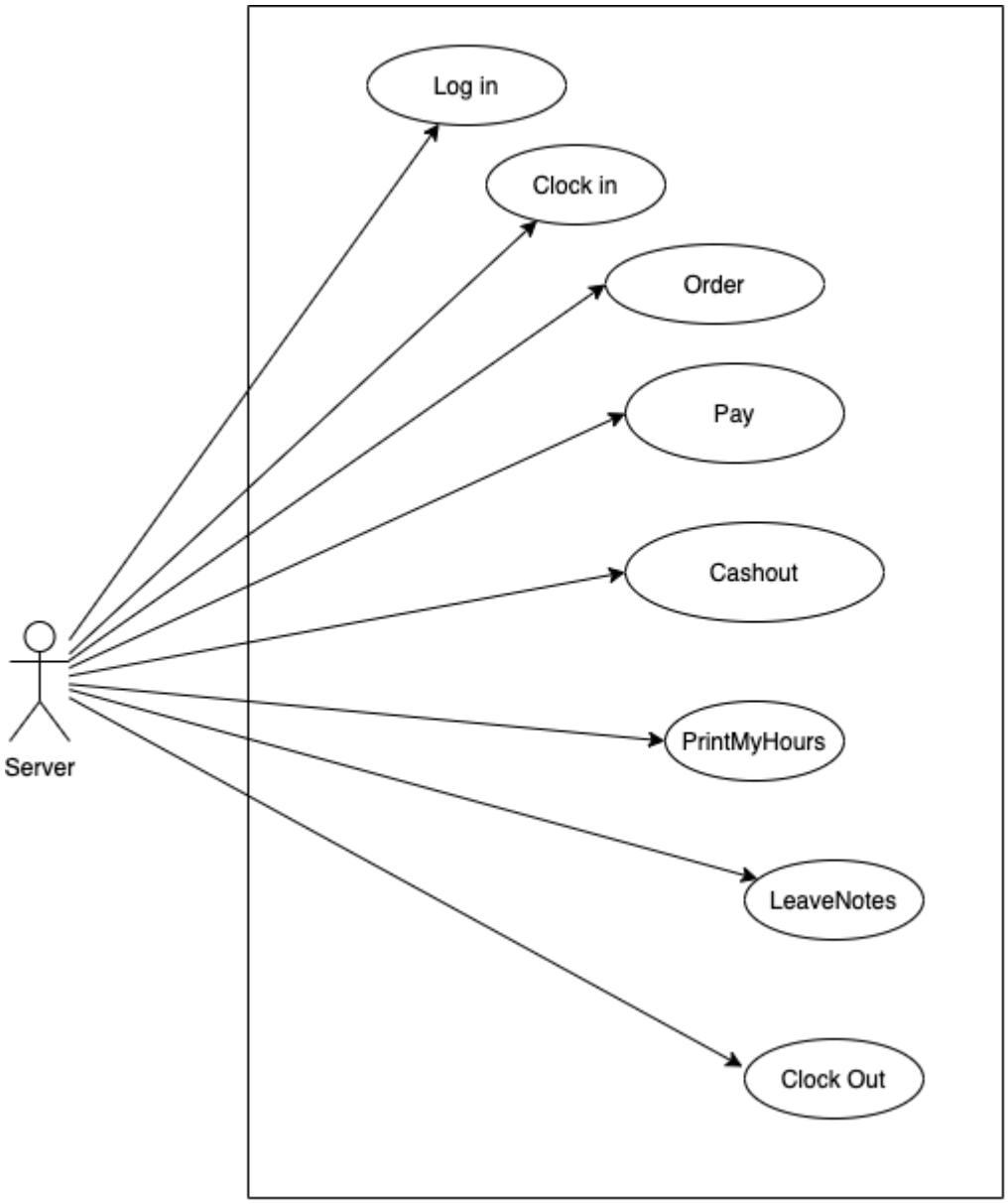
4.2.2 Use case 2: Manager


Log in
Clock in
AddEmp.Dashboard
ChangeTimesheet
AddInventory
AddSuppliers
AddMenu
AddBills
ChangeTables
Reserve
PrintMyHours
LeaveNotes
Clock Out
Manager

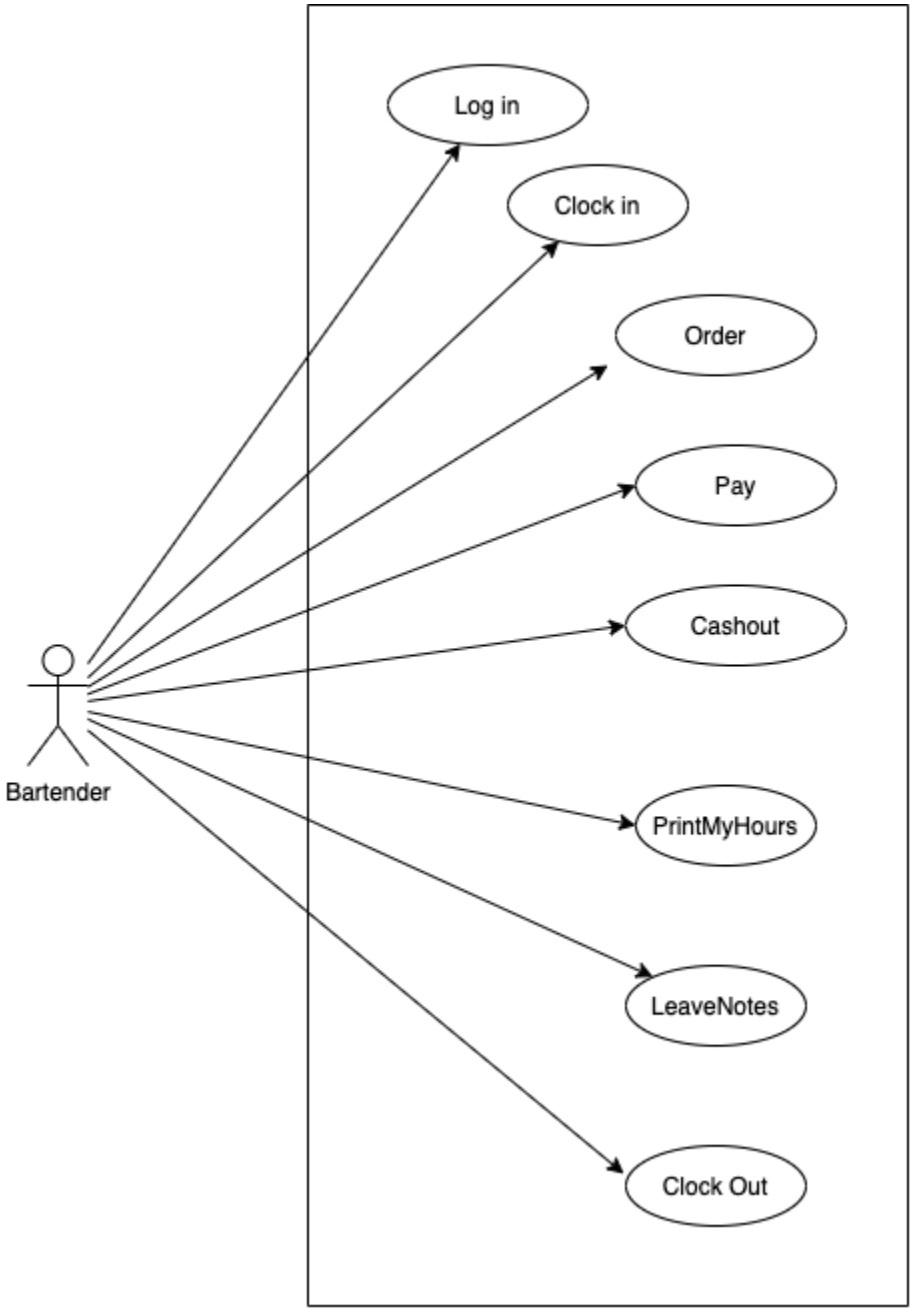
4.2.3 Use case 3: Economist



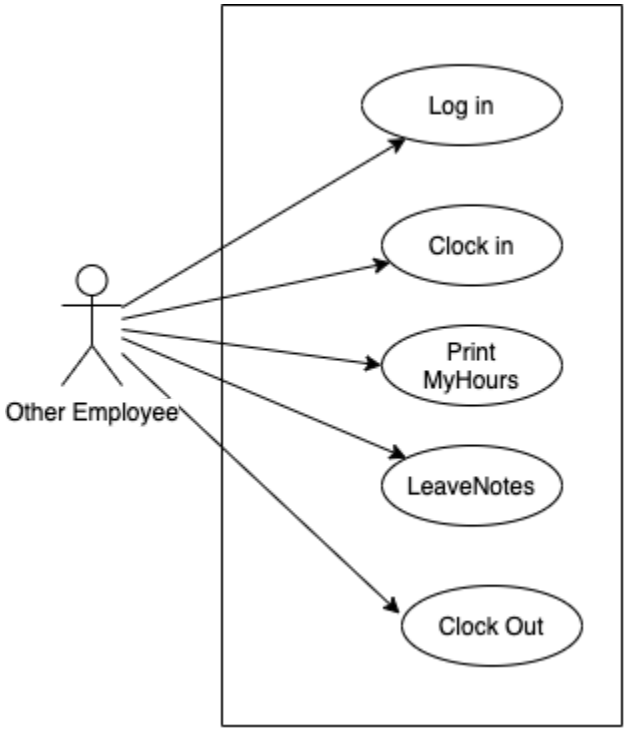
4.2.4 Use case 4: Server



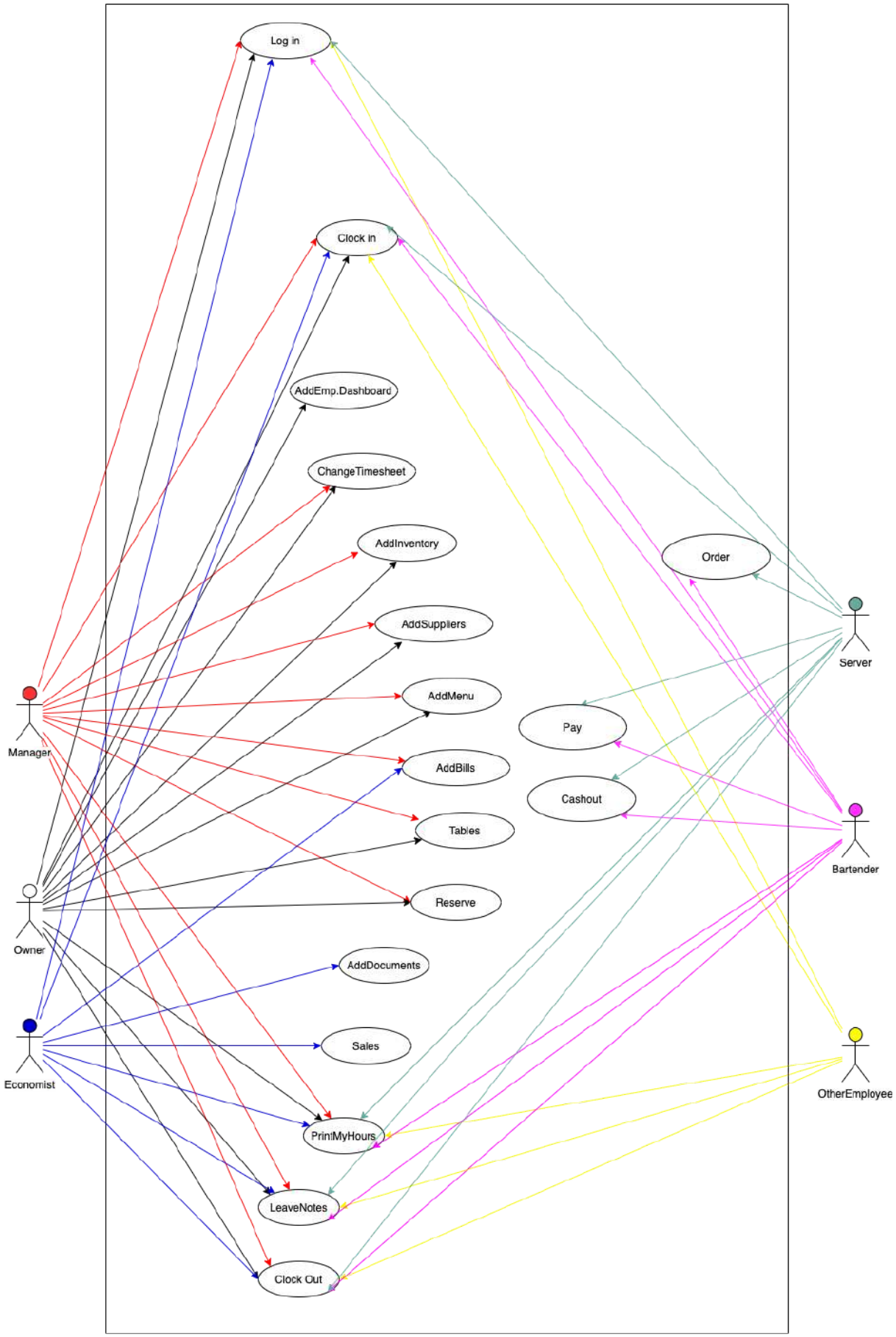
4.2.5 Use case 5: Bartender



4.2.6 Use case 6: Other Employee



4.2.7 Use Case 7: General


Log in
Clock in
AddEmp.Dashboard
ChangeTimesheet
AddInventory
AddSuppliers
AddMenu
AddBills
Tables
Reserve
AddDocuments
Sales
PrintMyHours
LeaveNotes
Clock Out
Order
Pay
Cashout
Manager
Owner
Economist
Server
Bartender
OtherEmployee

4.3 Use case extended

4.3.1 Owner

Use Case (UC_1.1.1):	***Edit the Employee Dashboard***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner should edit or delete the dashboard of the employees in case of any problem.
Minimum Guarantees:	The system displays the “Edit the dashboard” filling form.
Success Guarantees:	The changes are made, saved and automatically updated in the system.
Primary Actor	Owner
Stakeholders interest	To be able to change or delete the fields of the table.
Precondition	The owner should be logged in, clocked in the system and positioned in the employee dashboard interface.

Use Case (UC_1.1.2):	***Add a new employee***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner should register/add in the system and database new employees in order for them to access the restaurant system.
Minimum Guarantees:	The system displays the “Add a new employee” filling form.
Success Guarantees:	The new employee is successfully registered in the database and can login the system with the work number assigned by the owner..
Primary Actor	Owner
Stakeholders interest	To register users with the correct and appropriate information in the system.
Precondition	The owner should be logged in and positioned in the employee dashboard interface.

Use Case (UC_1.2.1):	***Generate a PDF-S***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner can print PDFs of sales of 30 days grouped by number/id.
Minimum Guarantees:	The system displays the “PDF” option.
Success Guarantees:	The PDF is generated.
Primary Actor	Owner
Stakeholders interest	To print the PDF containing all the sales of 30 days to be able to analyze them.
Precondition	The owner should be logged in, clocked in the system and positioned in the Timesheet interface.

Use Case (UC_1.2.2):	***Generate a PDF-Salary***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner can print PDFs of salary of 30 days grouped by employee_id.
Minimum Guarantees:	The system displays the “PDF” option.
Success Guarantees:	The PDF is generated.
Primary Actor	Owner
Stakeholders interest	To print the PDF containing all the salaries of 30 days to be able to analyze them.
Precondition	The owner should be logged in, clocked in the system and positioned in the Timesheet interface.

Use Case (UC_1.3.1):	***Add a new item in the inventory***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner should add new items in the inventory.
Minimum Guarantees:	The system displays the “Add a new item” filling form.
Success Guarantees:	The new item is successfully added in the database and is shown in the inventory table in the system.
Primary Actor	Owner
Stakeholders interest	To add new items with the correct and appropriate information in the system.
Precondition	The owner should be logged in, clocked in the system and positioned in the Inventory interface.

Use Case (UC_1.3.2):	***Edit items in the inventory***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner should edit the items’ information or delete the items in case the company no longer purchases them.
Minimum Guarantees:	The system displays the “Edit the item” filling form.
Success Guarantees:	The item is successfully edited or deleted and changes are automatically updated in the database and in the inventory table.
Primary Actor	Owner
Stakeholders interest	To edit or delete items in the inventory based on appropriate reasons.
Precondition	The owner should be logged in, clocked in the system and positioned in the Inventory interface.

Use Case (UC_1.4.1):	***Add a new supplier***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner should add in the system and database new suppliers.
Minimum Guarantees:	The system displays the “Add a new supplier” filling form.
Success Guarantees:	The new supplier is added in the database and it is automatically shown in the suppliers table in the system.
Primary Actor	Owner
Stakeholders interest	To add new suppliers and their information in the system.
Precondition	The owner should be logged in, clocked in the system and positioned in the Suppliers interface.

Use Case (UC_1.5.1):	***Generate a PDF-Sales***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner can print PDFs which print sales of the last 30 days.
Minimum Guarantees:	The system displays the “PDF” option.
Success Guarantees:	The PDF is generated.
Primary Actor	Owner
Stakeholders interest	To print the PDF containing all the sales of the last 30 days.
Precondition	The owner should be logged in, clocked in the system and positioned in the Sales interface.

Use Case (UC_1.6.1):	***Generate a PDF-AllExpenses***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner can print PDFs which print all expenses saved in the database.
Minimum Guarantees:	The system displays the “PDF” option.
Success Guarantees:	The PDF is generated.
Primary Actor	Owner
Stakeholders interest	To print the PDF containing all the expenses.
Precondition	The owner should be logged in, clocked in the system and positioned in the Bills interface.

Use Case (UC_1.6.2):	***Generate a PDF_Customers_Bills***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner can print PDFs which print customer bills.
Minimum Guarantees:	The system displays the “PDF” option.
Success Guarantees:	The PDF is generated.
Primary Actor	Owner
Stakeholders interest	To print the PDFs and use them for further analyses.
Precondition	The owner should be logged in, clocked in the system and positioned in the Bills interface.

Use Case (UC_1.7.1):	***Edit the Menu***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner should edit the menu item if necessary.
Minimum Guarantees:	The system displays the “Edit the Food” filling form.
Success Guarantees:	The changes are made, saved and automatically updated in the system.
Primary Actor	Owner
Stakeholders interest	To be able to update menu items.
Precondition	The owner should be logged in, clocked in the system and positioned in the Food interface.

Use Case (UC_1.7.2):	***Delete the Menu Item***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner should delete the menu item if necessary.
Minimum Guarantees:	The system should delete the item.
Success Guarantees:	The changes are made, saved and automatically updated in the system.
Primary Actor	Owner
Stakeholders interest	To be able to delete menu items.
Precondition	The owner should be logged in, clocked in the system and positioned in the Menu interface.

Use Case (UC_1.7.3):	***Add in the Menu***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner should add a menu item if necessary.
Minimum Guarantees:	The system displays the “Add the Food” filling form.
Success Guarantees:	The changes are made, saved and automatically updated in the system.
Primary Actor	Owner
Stakeholders interest	To be able to add new menu items.
Precondition	The owner should be logged in, clocked in the system and positioned in the Food interface.

Use Case (UC_1.8.1):	***Generate a list with Deleted Items***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner can print a list which shows Products, Amounts and the reason why they are deleted.
Minimum Guarantees:	The system displays the “PDF” option.
Success Guarantees:	The PDF is generated.
Primary Actor	Owner
Stakeholders interest	To print the desired PDF due to appropriate reasons.
Precondition	The owner should be logged in, clocked in the system and positioned in the Deleted interface.

Use Case (UC_1.8.2):	***View documents***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner can view and access alll documents uploaded by the economist.
Minimum Guarantees:	The system displays the “Documents” interface.
Success Guarantees:	The documents are opened and can be accesed by the owner.
Primary Actor	Owner
Stakeholders interest	To check the documents of the economist.
Precondition	The owner should be logged in and clocked in the system.

4.3.2 Manager

Use Case (UC_2.1):	***Add a new employee***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager should register/add in the system and database new employees in order for them to access the restaurant system.
Minimum Guarantees:	The system displays the “Add a new employee” filling form.
Success Guarantees:	The new employee is successfully registered in the database and can login the system with the work number assigned by the manager.
Primary Actor	Manager
Stakeholders interest	To register users with the correct and appropriate information in the system.
Precondition	Manager should be logged in & clocked in the system and positioned in the employee dashboard interface.

Use Case (UC_2.2):	***Edit the timesheet***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager should edit the timesheet of the employees in case of any problem.
Minimum Guarantees:	The system displays the “Edit the timesheet” filling form.
Success Guarantees:	The changes are made, saved and automatically updated in the system.
Primary Actor	Manager
Stakeholders interest	To be able to change time in or time out of the employees.
Precondition	Manager should be logged in and clocked in the system and positioned in the timesheet interface.

Use Case (UC_2.3.1):	***Add a new item in the inventory***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager should add new items in the inventory.
Minimum Guarantees:	The system displays the “Add a new item” filling form.
Success Guarantees:	The new item is successfully added in the database and is shown in the inventory table in the system.
Primary Actor	Manager
Stakeholders interest	To add new items with the correct and appropriate information in the system.
Precondition	Manager should be logged in & clocked in the system and positioned in the Inventory interface.

Use Case (UC_2.3.2):	***Edit items in the inventory***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager should edit the items' information or delete the items in case the company no longer purchases them.
Minimum Guarantees:	The system displays the "Edit the item" filling form.
Success Guarantees:	The item is successfully edited or deleted and changes are automatically updated in the database and in the inventory table.
Primary Actor	Manager
Stakeholders interest	To edit or delete items in the inventory based on appropriate reasons.
Precondition	Manager should be logged in & clocked in the system and positioned in the Inventory interface.

Use Case (UC_2.4.1):	***Add a new supplier***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager should add in the system and database new suppliers.
Minimum Guarantees:	The system displays the "Add a new supplier" filling form.
Success Guarantees:	The new supplier is added in the database and it is automatically shown in the suppliers table in the system.
Primary Actor	Manager
Stakeholders interest	To add new suppliers and their information in the system.
Precondition	Manager should be logged in & clocked in the system and positioned in the Suppliers interface.

Use Case (UC_2.4.2):	***Edit suppliers***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager should edit information regarding suppliers and/or delete suppliers the company has no longer collaboration with.
Minimum Guarantees:	The system displays the “Edit Suppliers” filling form.
Success Guarantees:	The changes that are made are saved and updated in the system.
Primary Actor	Manager
Stakeholders interest	To edit or delete suppliers due to appropriate reasons.
Precondition	Manager should be logged in & clocked in the system and positioned in the Suppliers interface.

Use Case (UC_2.5.1):	***Add a new bill***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager should add the bills regarding the purchase with the suppliers..
Minimum Guarantees:	The system accepts the information provided but doesn’t upload the pdf of the bill.
Success Guarantees:	The new transaction is successfully registered and the bill in pdf format is successfully uploaded.
Primary Actor	Manager
Stakeholders interest	To add daily/monthly bills that prove the transaction between the company and the suppliers.
Precondition	Manager should be logged in & clocked in the system and positioned in the Bills/suppliers interface.

Use Case (UC_2.5.2):	***Print a receipt***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager can print any receipt from the daily receipts with the customers.
Minimum Guarantees:	The system displays the “Print” option.
Success Guarantees:	The receipt is printed.
Primary Actor	Manager
Stakeholders interest	To print the desired receipt due to appropriate reasons.
Precondition	Manager should be logged in & clocked in the system and positioned in the Bills/receipts interface.

Use Case (UC_2.6.1):	***Add a new item in the menu***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager can add a new item in the menu.
Minimum Guarantees:	The system displays the “Add a new item in the menu” filling form.
Success Guarantees:	The item is saved in the database and automatically shown in the menu interface.
Primary Actor	Manager
Stakeholders interest	To add new items in the menu due to changes in the menu.
Precondition	Manager should be logged in & clocked in the system and positioned in the Menu interface.

Use Case (UC_2.6.2):	***Edit items in the menu***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager can edit the items in the menu or delete them when the restaurant no longer offers them.
Minimum Guarantees:	The system displays the “Edit the item” filling form.
Success Guarantees:	The changes that are made are saved and updated in the system.
Primary Actor	Manager
Stakeholders interest	To edit or delete items in the menu due to appropriate reasons.
Precondition	Manager should be logged in & clocked in the system and positioned in the Menu interface.

Use Case (UC_2.7.1):	***Delete order***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager can delete an order from the system upon the server/bartender request if the reason is appropriate.
Minimum Guarantees:	The system displays the “Delete Order” option.
Success Guarantees:	The changes that are made are saved and updated in the system. The order no longer exists.
Primary Actor	Manager
Stakeholders interest	To delete an order by providing the appropriate reason.
Precondition	Manager should be logged in & clocked in the system and positioned in the Tables/OpenTab interface.

Use Case (UC_2.7.2):	***Delete a item on the order***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager can delete an item from an order in the system upon the server/bartender request if the reason is appropriate.
Minimum Guarantees:	The system displays the “Delete item” option.
Success Guarantees:	The changes that are made are saved and updated in the system. The item no longer exists in the respective order.
Primary Actor	Manager
Stakeholders interest	To delete an item in the order by providing the appropriate reason.
Precondition	Manager should be logged in & clocked in the system and positioned in the Tables/OpenTab interface.

Use Case (UC_2.8.1):	***Reserve a table***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager can reserve a table in the system upon the customer’s request.
Minimum Guarantees:	The system displays the “Reserve a table” filling form.
Success Guarantees:	The reservation is made, saved in the system and shown in the ReservedTab table.
Primary Actor	Manager
Stakeholders interest	To reserve a table for a certain time due to appropriate reasons.
Precondition	Manager should be logged in & clocked in the system and positioned in the Tables/Reserve interface.

Use Case (UC_2.8.2):	***Delete reservation***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The manager can delete a reservation if the customers do not show up to a certain period of time.
Minimum Guarantees:	The system displays the “Delete reservation” option in the ReservedTab interface.
Success Guarantees:	The changes that are made are saved and updated in the system, the table is no longer occupied.
Primary Actor	Manager
Stakeholders interest	To delete reservations when customers don’t show up, so it can be used for other customers.
Precondition	Manager should be logged in & clocked in the system and positioned in the Tables/ReservedTab interface.

4.3.3 Economist

Use Case (UC_3.1.1):	***Generate a PDF of sales***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The economist can generate a PDF report of the sales made in the last 30 days.
Minimum Guarantees:	The system displays the “PDF” option in the bottom right side of the Sales interface.
Success Guarantees:	The report is displayed in a PDF type and can be saved.
Primary Actor	Economist
Stakeholders interest	To generate a PDF report due to the usage of it in any further documentation or declaration.
Precondition	The economist should be logged in & clocked in the system and positioned in the Sales interface.

Use Case (UC_3.2.1):	***Generate a PDF of bills of suppliers***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The economist can generate a PDF report of the bills recorded in the last 30 days.
Minimum Guarantees:	The system displays the “PDF” option in the bottom right side of the Bills interface.
Success Guarantees:	The report is displayed in a PDF type and can be saved.
Primary Actor	Economist
Stakeholders interest	To generate a PDF report due to the usage of it in any further documentation or declaration.
Precondition	The economist should be logged in & clocked in the system and positioned in the Bills interface.

Use Case (UC_3.3.1):	***Generate a PDF of employees***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The economist can generate a PDF report of the total salaries made in the last 30 days grouped by employees’ IDs.
Minimum Guarantees:	The system displays the “PDF” option in the bottom right side of the Employees Dashboard interface.
Success Guarantees:	The report is displayed in a PDF type and can be saved.
Primary Actor	Economist
Stakeholders interest	To generate a PDF report due to the usage of it in any further documentation or declaration.
Precondition	The economist should be logged in & clocked in the system and positioned in the Employees Dashboard interface.

Use Case (UC_3.4.1):	***Add/upload a document***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The economist can add/upload a new document.
Minimum Guarantees:	The system displays the “Add a document” filling form.
Success Guarantees:	The new document is saved in the database and is automatically shown in the Documents interface.
Primary Actor	Economist
Stakeholders interest	To add a new document needed to be declared or for any further information.
Precondition	The economist should be logged in & clocked in the system and positioned in the Documents interface.

4.3.4 Server

Use Case (UC_4.1):	***Open a table***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The server should open a table to put a new order.
Minimum Guarantees:	All the available tables are shown.
Success Guarantees:	The table is selected and it can be used for the orders.
Primary Actor	Server
Stakeholders interest	To be able to take an order from the clients and put the order in the system.
Precondition	Server should be logged in and clocked in the system and positioned in the Tables interface.

Use Case (UC_4.2):	***Select items from the Menu***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The server can select the items from the Menu and put them at the respective table.
Minimum Guarantees:	All food and beverages included in the Menu are shown.
Success Guarantees:	The desired items are selected and shown in the order.
Primary Actor	Server
Stakeholders interest	To be able to serve to the clients the desired items.
Precondition	Server should be logged in and clocked in the system and positioned in the Menu interface.

Use Case (UC_4.3):	***Print the bill***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The server should print the bill with the order.
Minimum Guarantees:	The system displays the “Print” option.
Success Guarantees:	The bill is successfully printed.
Primary Actor	Server
Stakeholders interest	To print the bill for the selected items.
Precondition	Server should be logged in and clocked in the system and positioned in the Menu interface.

Use Case (UC_4.4):	***Closing a table***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The server should close the table upon client's request.
Minimum Guarantees:	The total bill is shown in the system and is printed.
Success Guarantees:	The server closes the table using credit card or cash payment methods.
Primary Actor	Server
Stakeholders interest	To close the table and pay the bill.
Precondition	Server should be logged in and clocked in the system and positioned in the Tables interface.

Use Case (UC_4.5):	***Print the cashout statement***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The server can print his cashout statement which involves sales, tips, profit and type of payments at the end of his shift.
Minimum Guarantees:	The server will display the “Cashout” option.
Success Guarantees:	The cashout statement will be printed.
Primary Actor	Server
Stakeholders interest	To be able to print the cashout statement.
Precondition	Server should be logged in and clocked in the system and positioned in the Cashout interface.

4.3.5 Bartender

Use Case (UC_5.1):	***Open Seats***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The bartender can open a seat for the customer who wants to take a drink in the bar .
Minimum Guarantees:	The system must show all available seats.
Success Guarantees:	The seat is selected and the bartender can put orders.
Primary Actor	Bartender
Stakeholders interest	To open a seat in the system.
Precondition	The Bartender should be logged in & clocked in the system and positioned in the Seats interface.

Use Case (UC_5.2):	***Select items from the Menu***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The bartender can select the items from the Menu/Beverages and put them at the respective seat.
Minimum Guarantees:	All beverages included in the Menu are shown.
Success Guarantees:	The desired items are selected and shown in the order.
Primary Actor	Bartender
Stakeholders interest	To be able to serve to the clients the desired items.
Precondition	Server should be logged in and clocked in the system and positioned in the Menu/Beverages interface.

Use Case (UC_5.3):	***Print the Bill***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The bartender can and should register the beverages that are sold under his name, on his shift or in the counter.
Minimum Guarantees:	The bill is shown in the system.
Success Guarantees:	The system should print the bill in the final form, with bartender name, TVSH and the total amount written.
Primary Actor	Bartender
Stakeholders interest	To print the bill of the respective order.
Precondition	The Bartender should be logged in & clocked in the system and positioned in the Seats interface.

Use Case (UC_5.4):	***Close Seats***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The bartender can close the seat when the customer leaves the bar.
Minimum Guarantees:	The total bill is shown in the system and is printed.
Success Guarantees:	The system should close the seat by using a credit card/cash payment method.
Primary Actor	Bartender
Stakeholders interest	To close a seat in the system.
Precondition	The Bartender should be logged in & clocked in the system and positioned in the Seats interface.

Use Case (UC_5.5):	***Print the cashout statement***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The bartender can print his cashout statement which involves sales, tips, profit and type of payments at the end of his shift.
Minimum Guarantees:	The server will display the “Cashout” option.
Success Guarantees:	The cashout statement will be printed.
Primary Actor	Bartender
Stakeholders interest	To be able to print the cashout statement.
Precondition	The bartender should be logged in and clocked in the system and positioned in the Cashout interface.

4.3.6 General

Use Case (UC_6.1):	***Leave a note***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The users can write a note to the manager or to the owner.
Minimum Guarantees:	The system displays two filling fields for manager and owner.
Success Guarantees:	The note that he wrote, is sent to the manager or owner note’s interface after pressing Enter.
Primary Actor	Server, Bartender, Economist, Other employee.
Stakeholders interest	To facilitate the job communication between users inside the system.
Precondition	The users should be logged in & clocked in the system and positioned in the Notes interface.

Use Case (UC_6.2):	***Print the timesheet***
Scope:	Online Restaurant Management System
Level:	User level
Intention Context:	The users can print the timesheet and check their working hours.
Minimum Guarantees:	Timesheet is displayed in the system.
Success Guarantees:	The timesheet is displayed and printed.
Primary Actor	All users of the system.
Stakeholders interest	To check and print their working hours.
Precondition	The users should be logged in & clocked in the system and positioned in the Timesheet interface.

Use Case (UC_6.3):	***Log In***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The owner should log in the system in order to use its functionalities.
Minimum Guarantees:	The system displays the “Login form” filling form.
Success Guarantees:	The user is logged in and can now clock in.
Primary Actor	All the users
Stakeholders interest	To be able to access the system.
Precondition	The users should have internet connection and be registered in the system.

Use Case (UC_6.4):	***Clock In***
Scope:	Online Restaurant Management System
Level:	User Level
Intention Context:	The users should clock in the system in order to use its functionalities and for the system to count his/her working hour.
Minimum Guarantees:	The system displays the “Clock In” button.
Success Guarantees:	The user is clocked in and allowed to use all the functionalities.
Primary Actor	All the users
Stakeholders interest	To be able to access the system.
Precondition	The users should be logged in the system.

8. **Automatization**

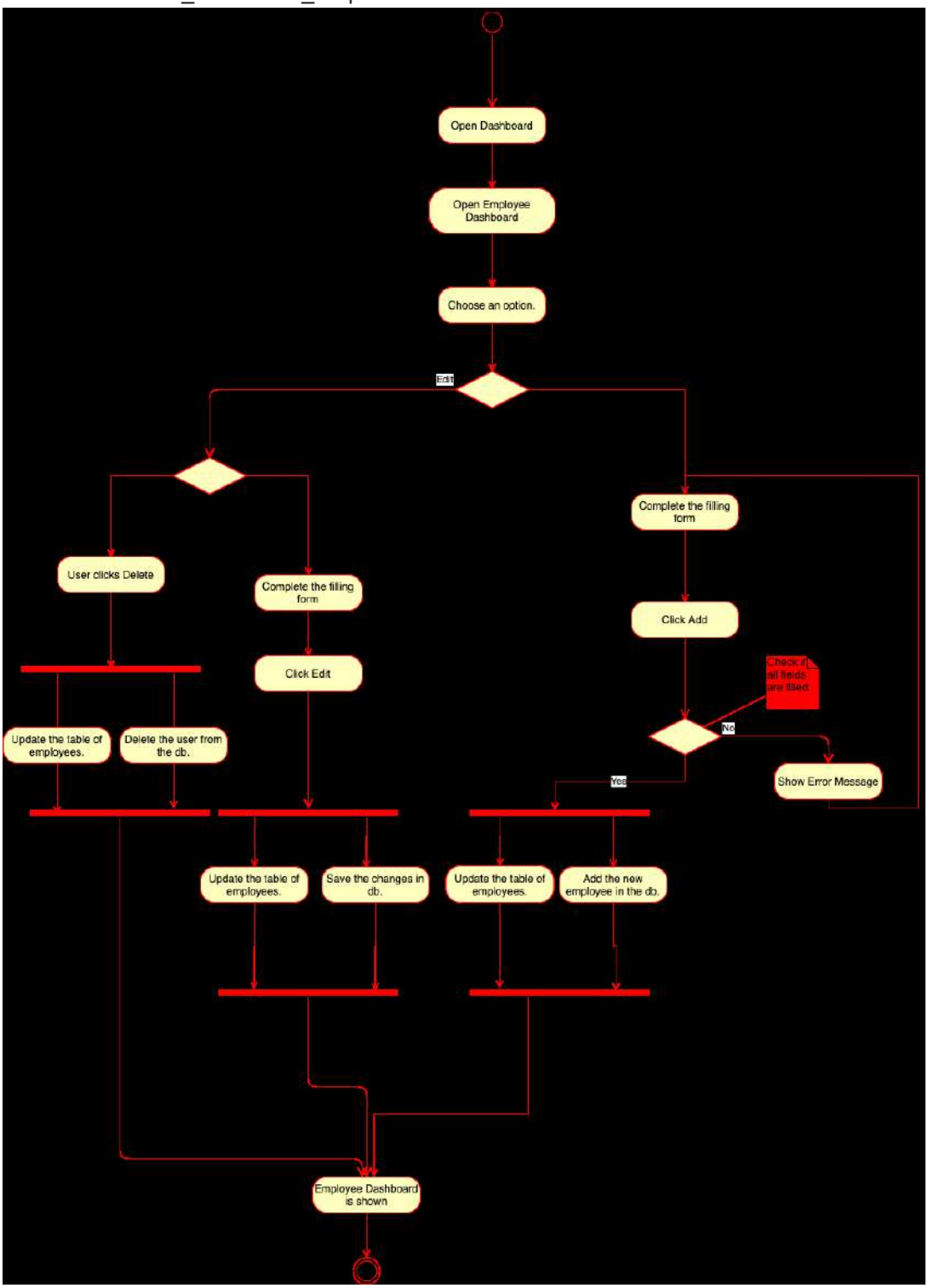
Use Case (UC_7.1):	***Orders***
Scope:	Online Restaurant Management System
Level:	System Level
Intention Context:	To remove the product from the inventory, once the order is placed.
Minimum Guarantees:	The system must be functional.
Success Guarantees:	The product is successfully removed from the inventory.
Primary Actor	System
Stakeholders interest	To be able to manage the inventory, so missing items will be replaced.
Precondition	The order should be placed.

Use Case (UC_7.2):	***Disable***
Scope:	Online Restaurant Management System
Level:	System Level
Intention Context:	To disable the product in the Menu, once the specified limit is reached.
Minimum Guarantees:	The system must be functional.
Success Guarantees:	The product is successfully disabled in the Menu.
Primary Actor	System
Stakeholders interest	To know when the product can not be used for further orders.
Precondition	The specified limit should be reached.

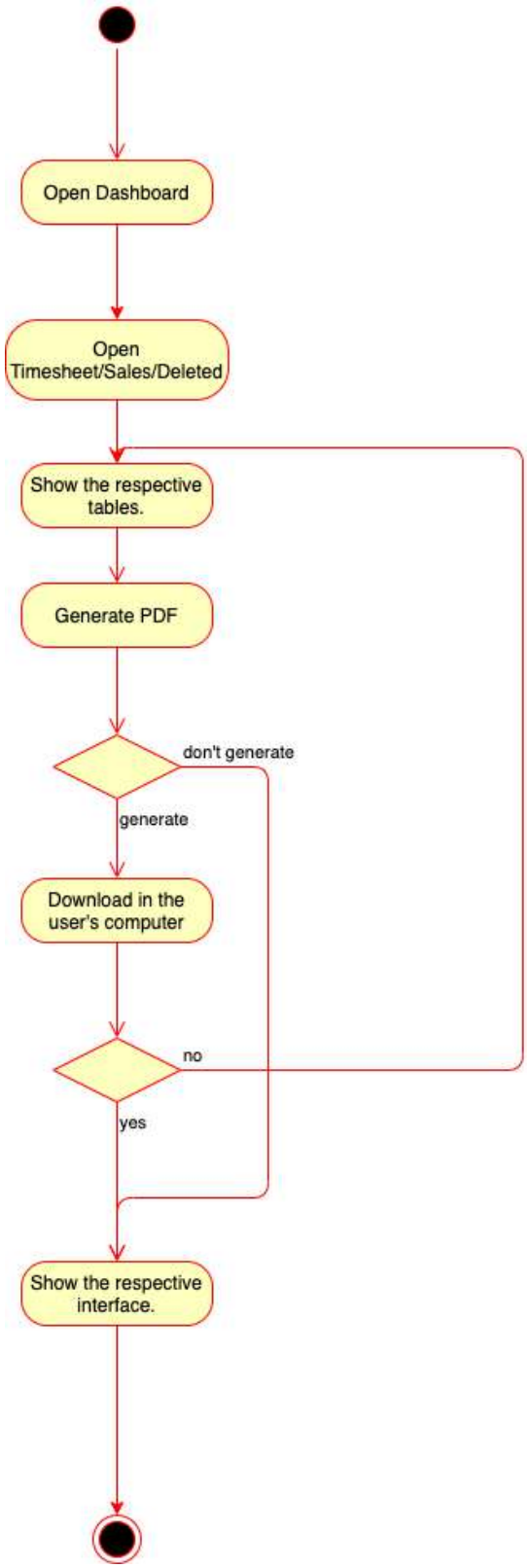
Use Case (UC_7.3):	***Notification***
Scope:	Online Restaurant Management System
Level:	System Level
Intention Context:	To send a notification to the manager, once there are no sufficient products.
Minimum Guarantees:	The system must be functional.
Success Guarantees:	The notification is successfully sent to the manager.
Primary Actor	System
Stakeholders interest	To be notified when there are no sufficient products, so he can do the necessary orders.
Precondition	There should be no sufficient products in the inventory.

4.4 Activity Diagrams

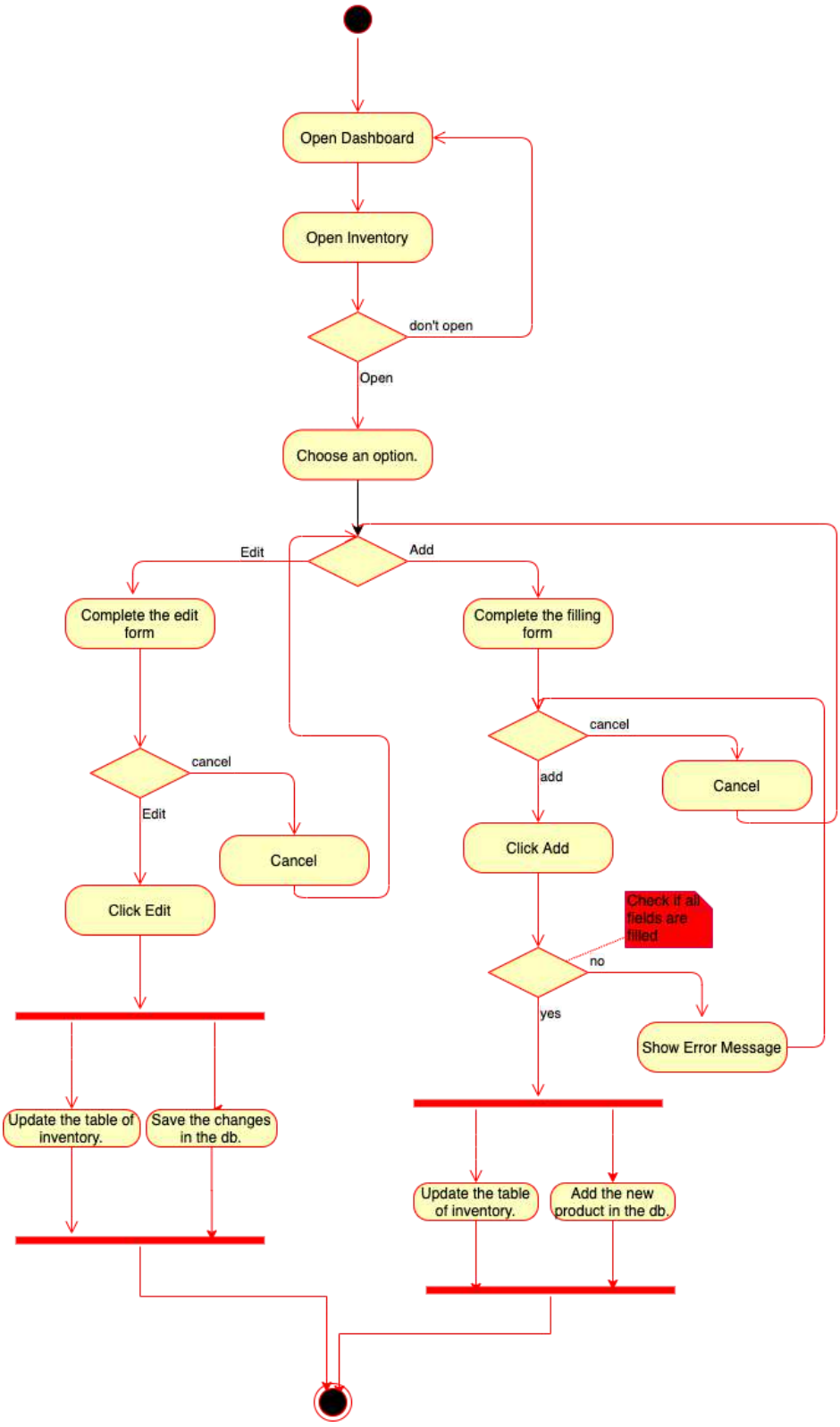
4.4.1 AC_1.1.1:1.1.2_EmpDashO



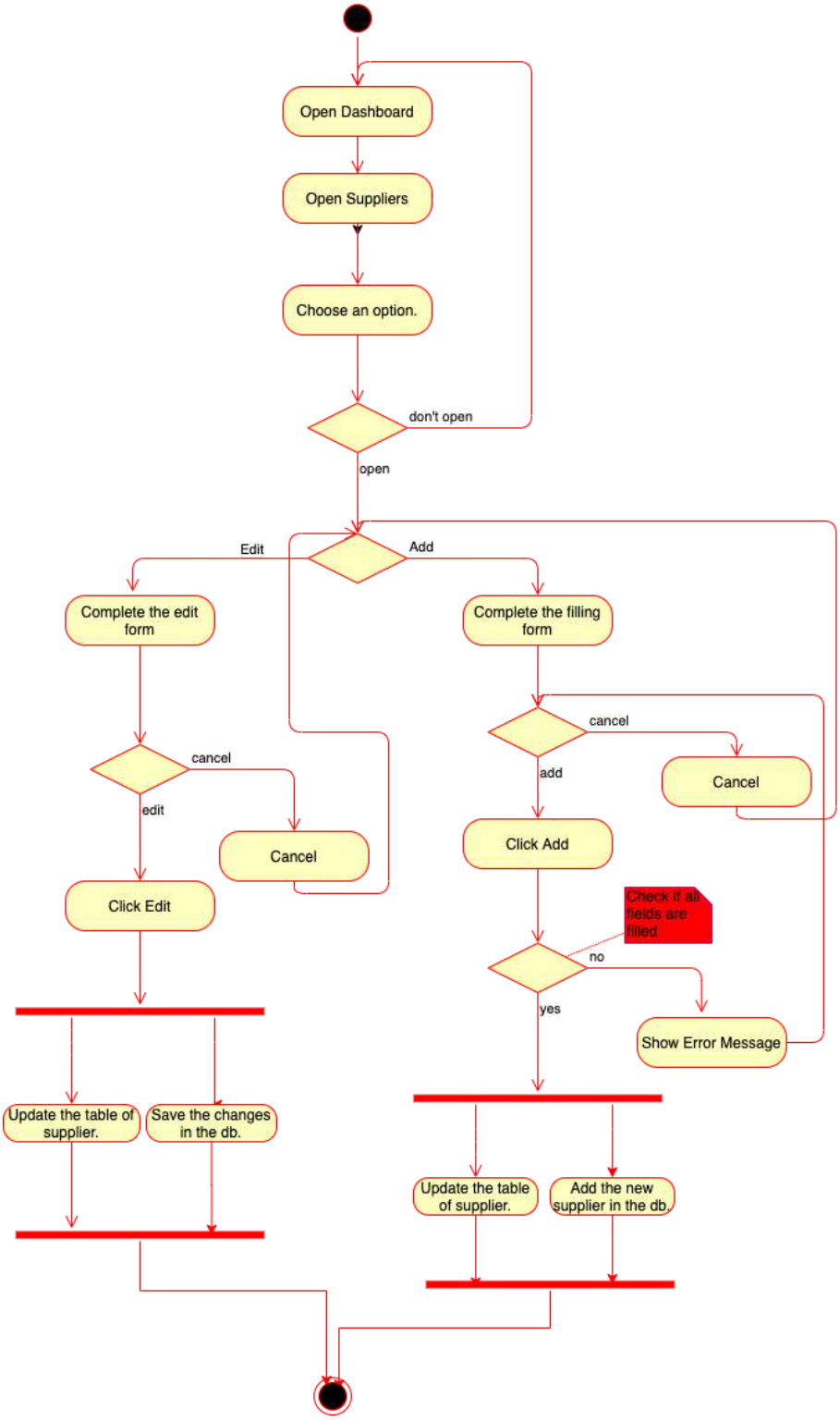
4.4.2 AC_1.2.1:1.2.2:1.5:1.8_Timesheet:Sales:Del



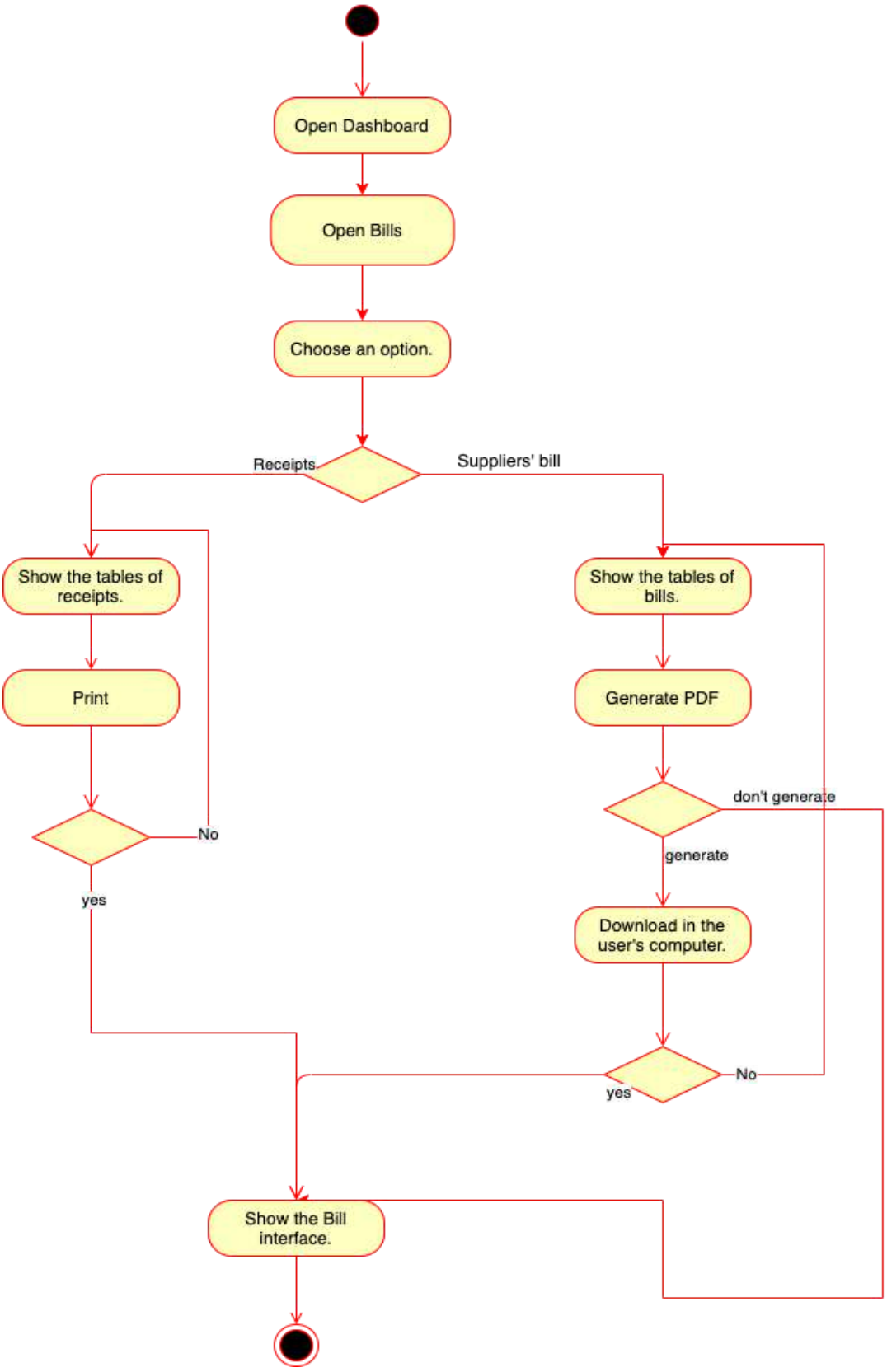
4.4.3 AC_1.3.1:1.3.2:2.3.1:2.3.2_Inventory



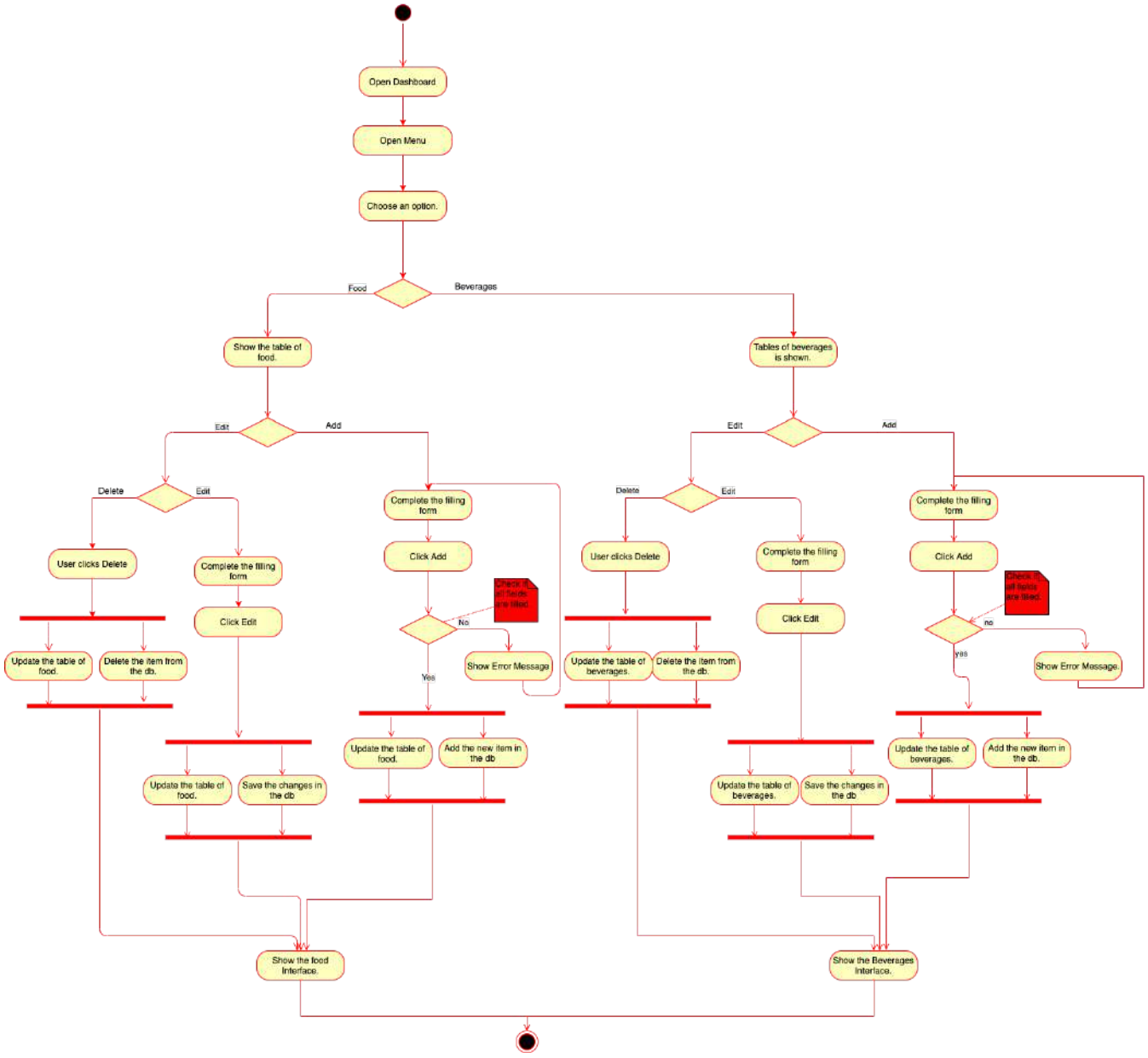
4.4.4 AC_1.4.1:1.4.2:2.4.1:2.4.2_Supplier



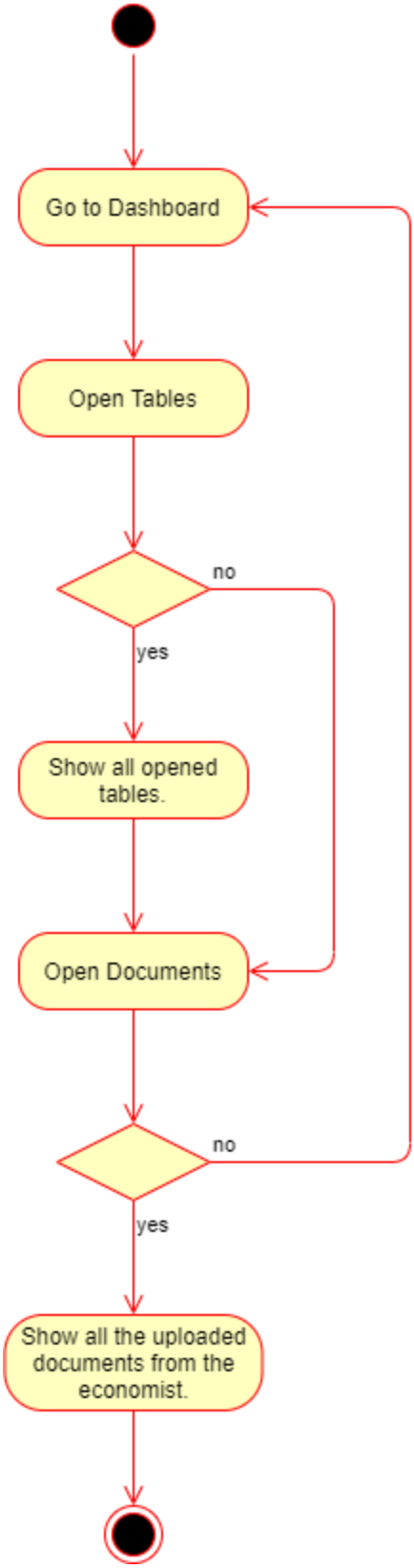
4.4.5 AC_1.6.1:1.6.2_BillsO



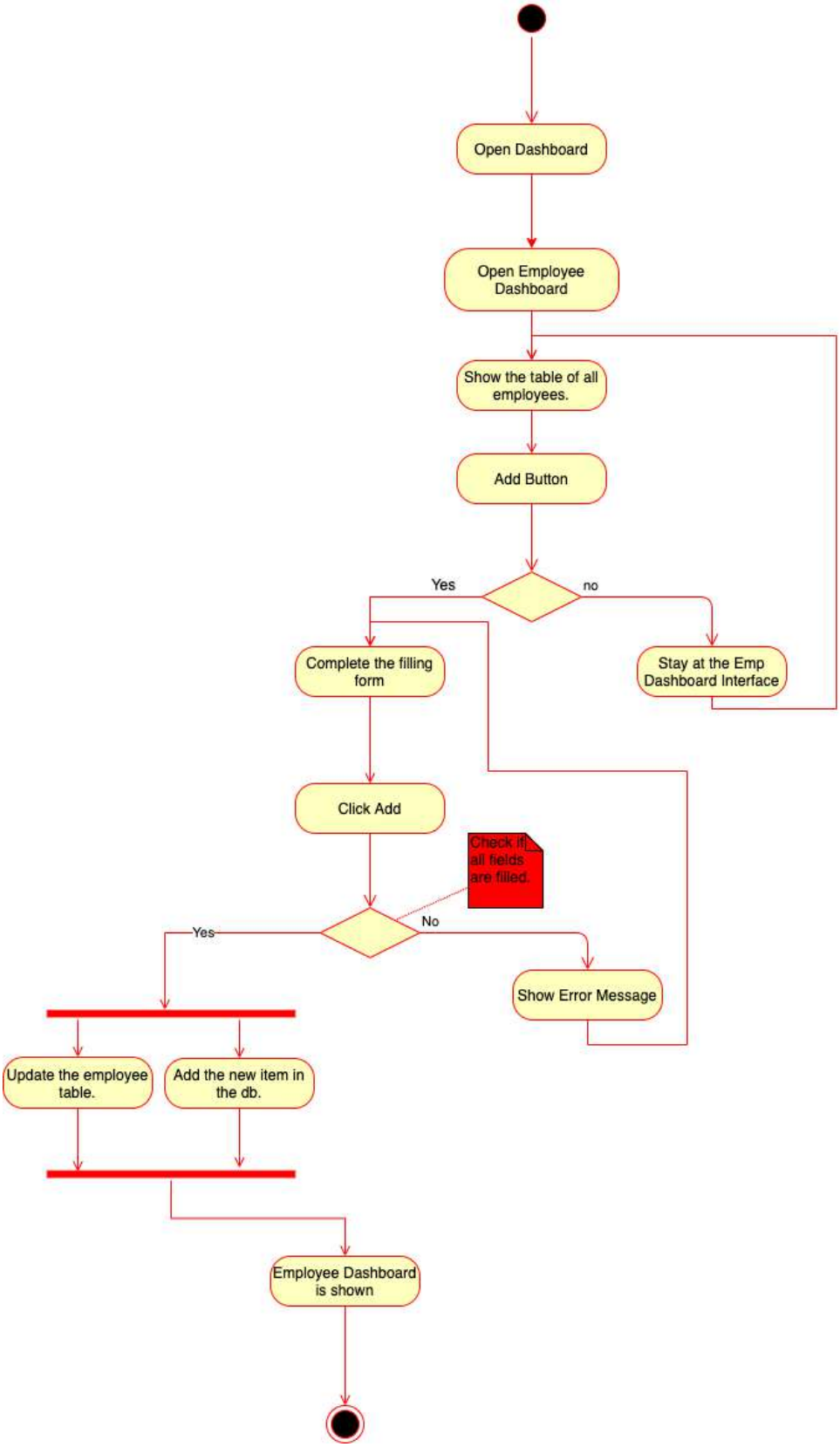
4.4.6 AC_1.7.1:1.7.2:1.7.3:2.6.1:2.6.2_Menu



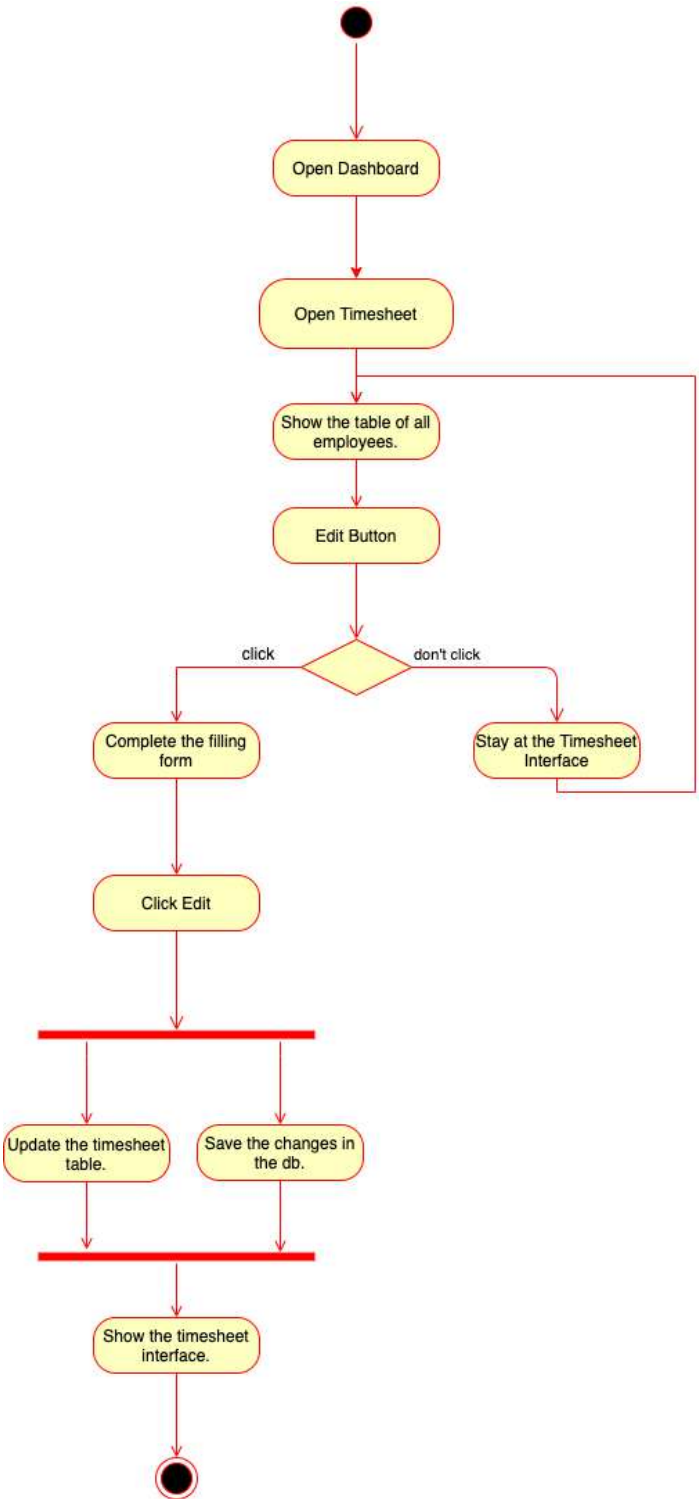
4.4.7 AC_1.9:1.10_Tables_Doc



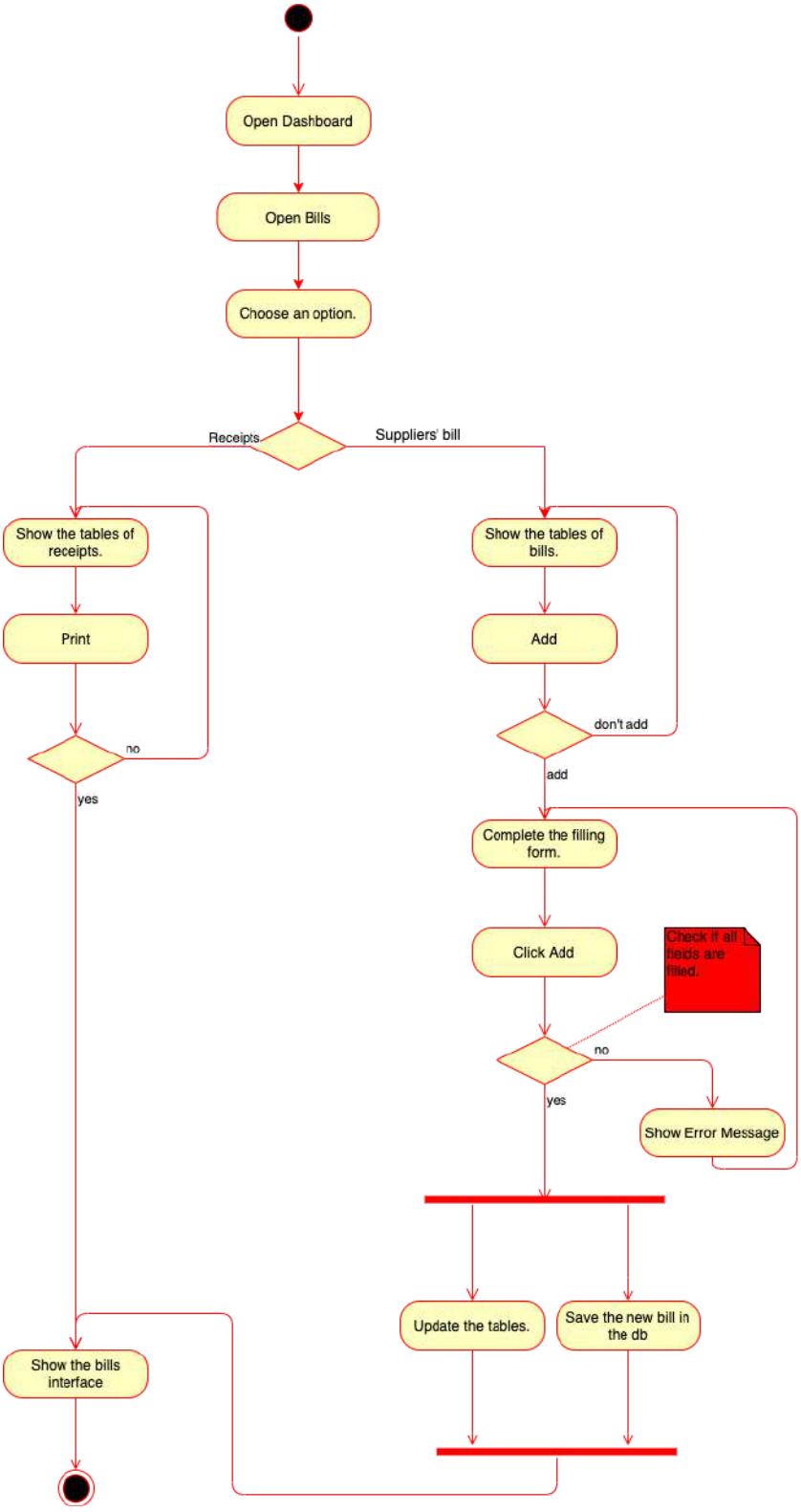
4.4.8 AC_2.1_EmpDashM



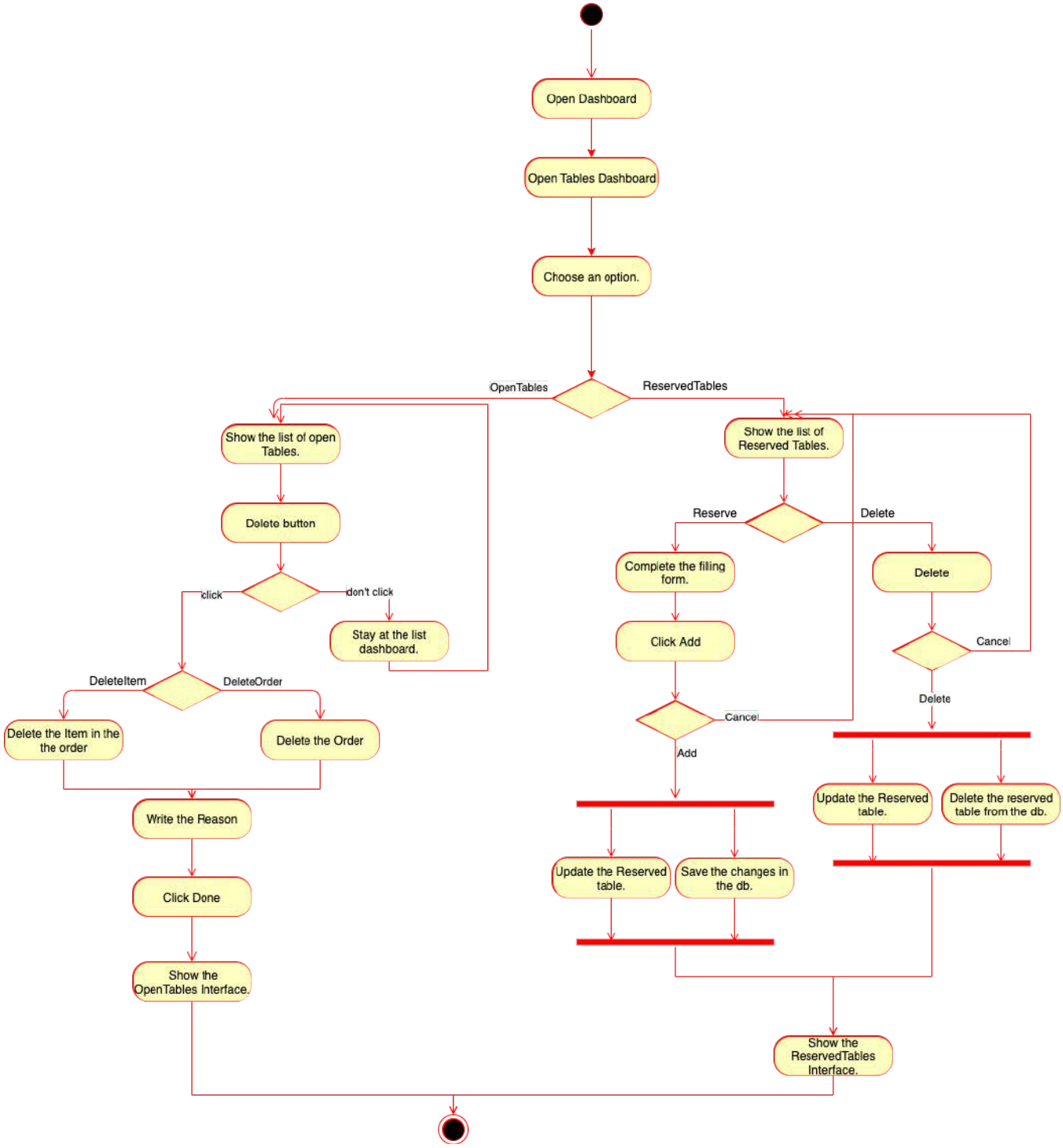
4.4.9 AC_2.2_Timesheet



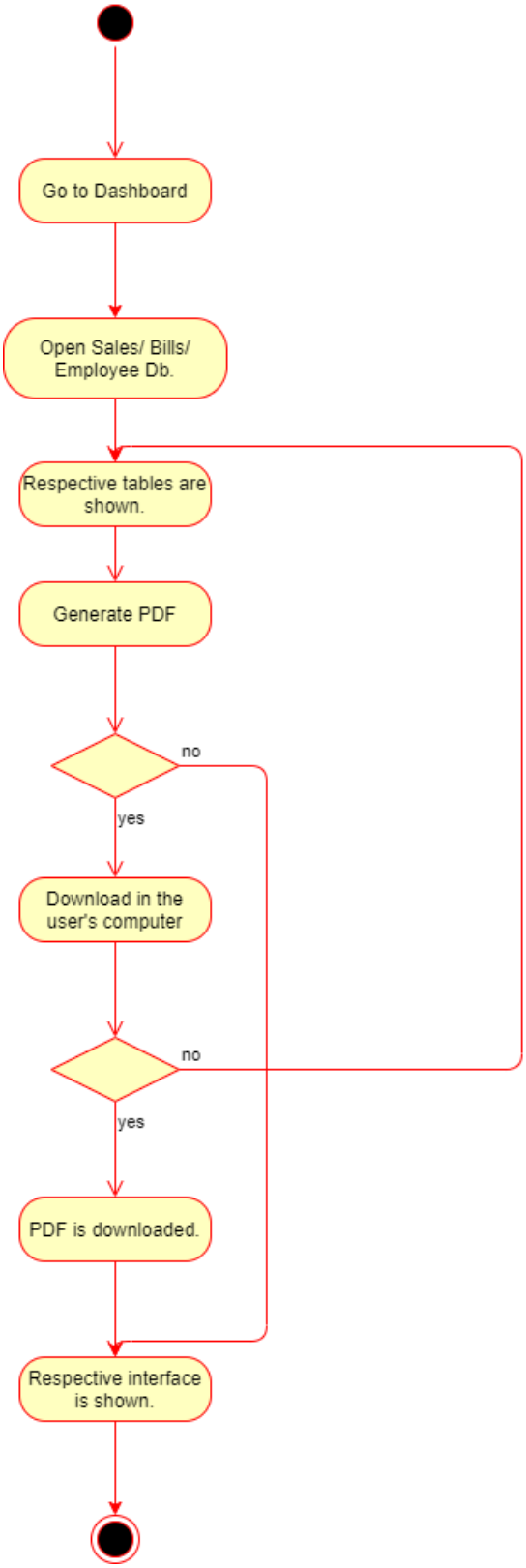
4.4.10 AC_2.5.1:2.5.2_BillsM



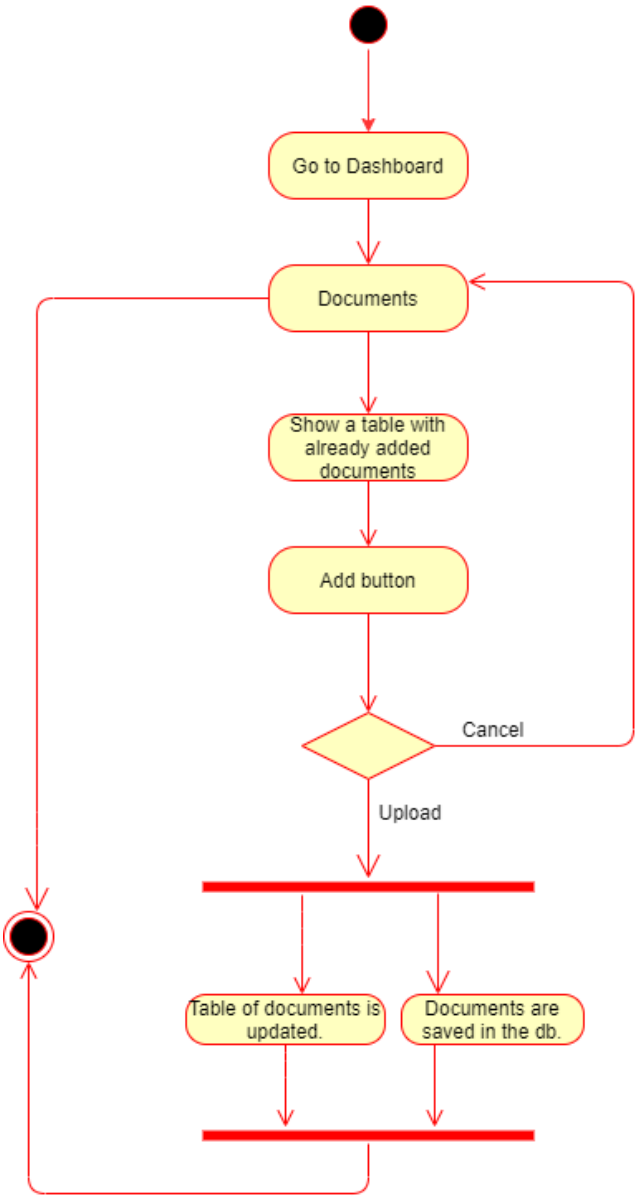
4.4.11 AC_2.6.1:2.6.2:2.7.1:2.7.2:2.8.1:2.8.2_TablesM



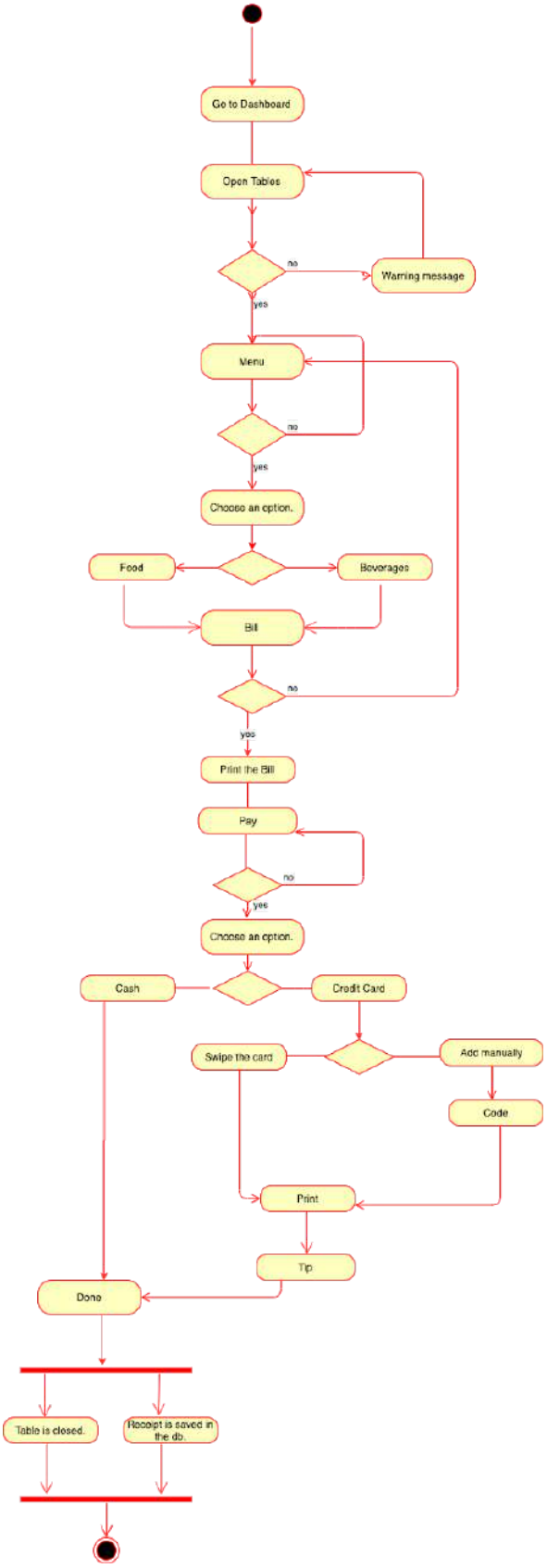
4.4.12 AC_3.1:3.2:3.3_Economist_Sales_Bills_Emp



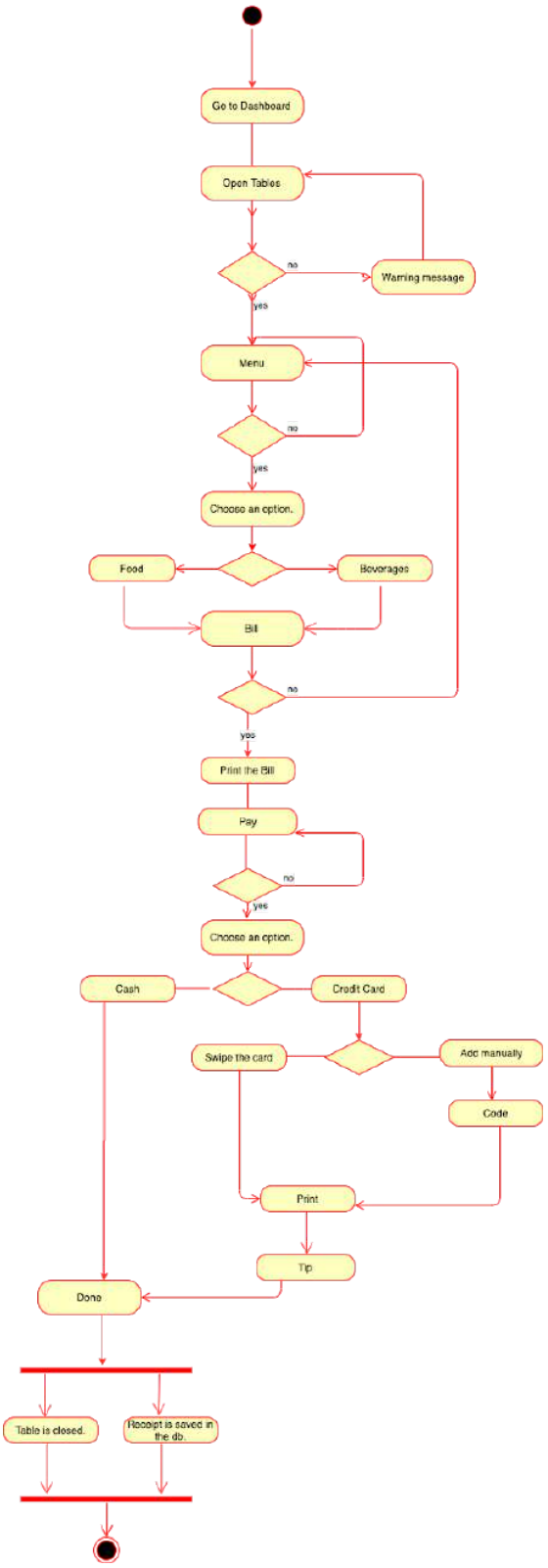
4.4.13 AC_3.4_Doc



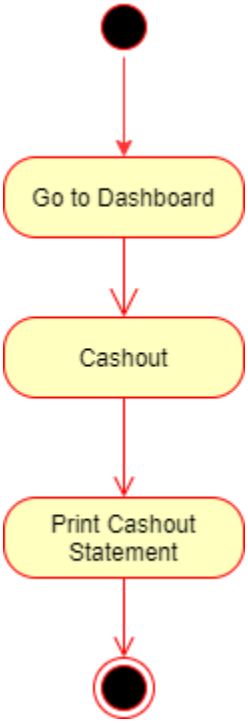
4.4.14 AC_4.1:4.2:4.3:4.4_TablesServer



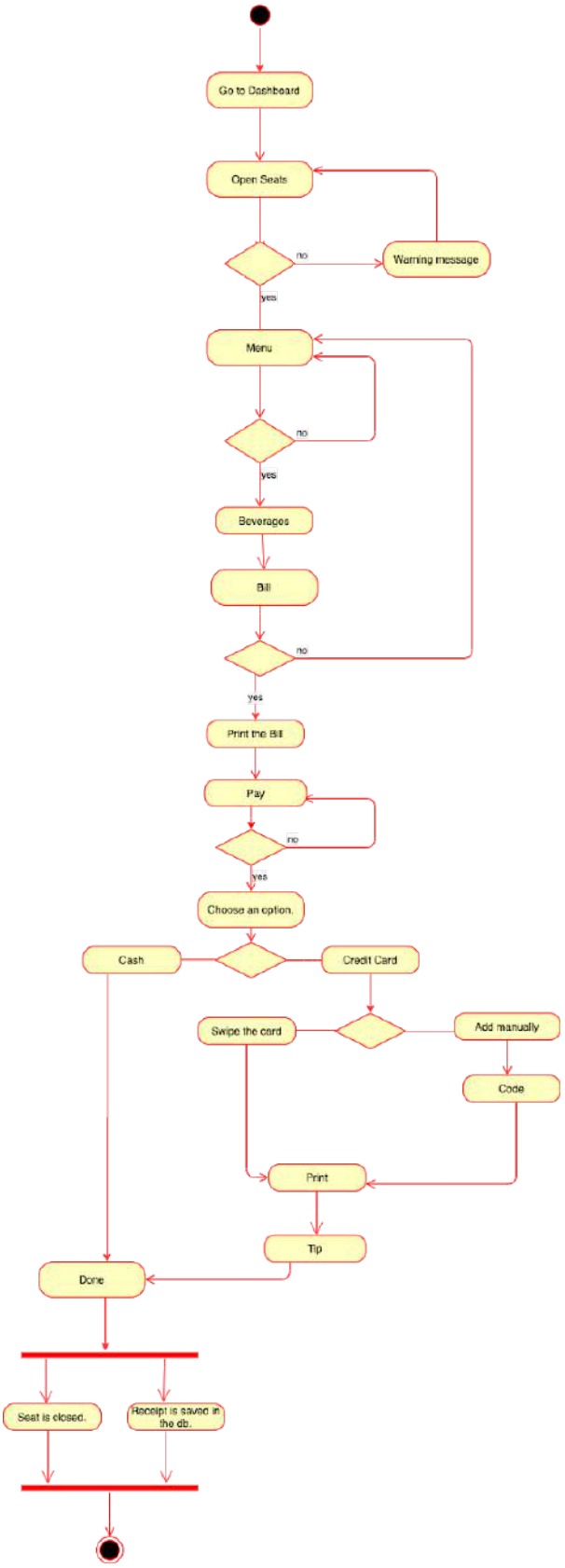
4.4.15 AC_4.1:4.2:4.3:4.4_TablesServer



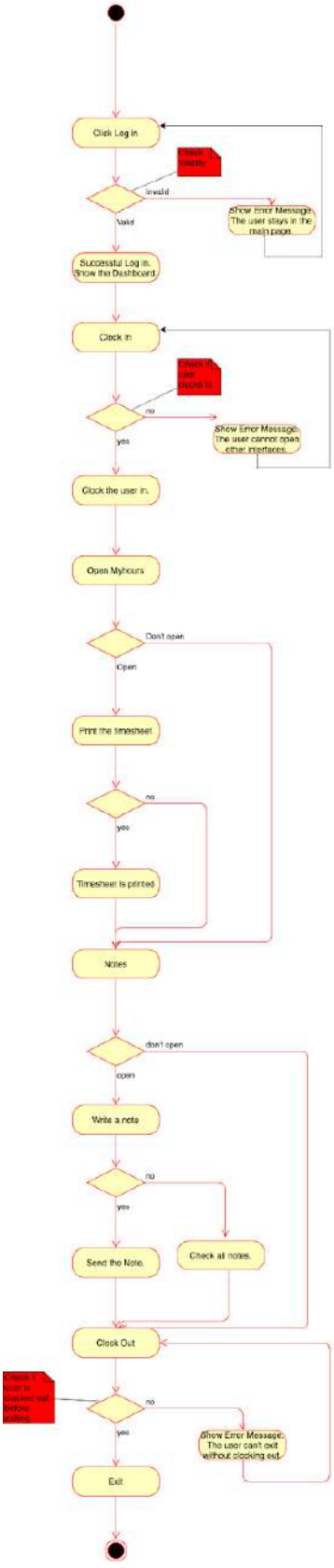
4.4.16 AC_4.5:5.5_Cashout



4.4.17 AC_5.1:5.2:5.3:5.4_Seats

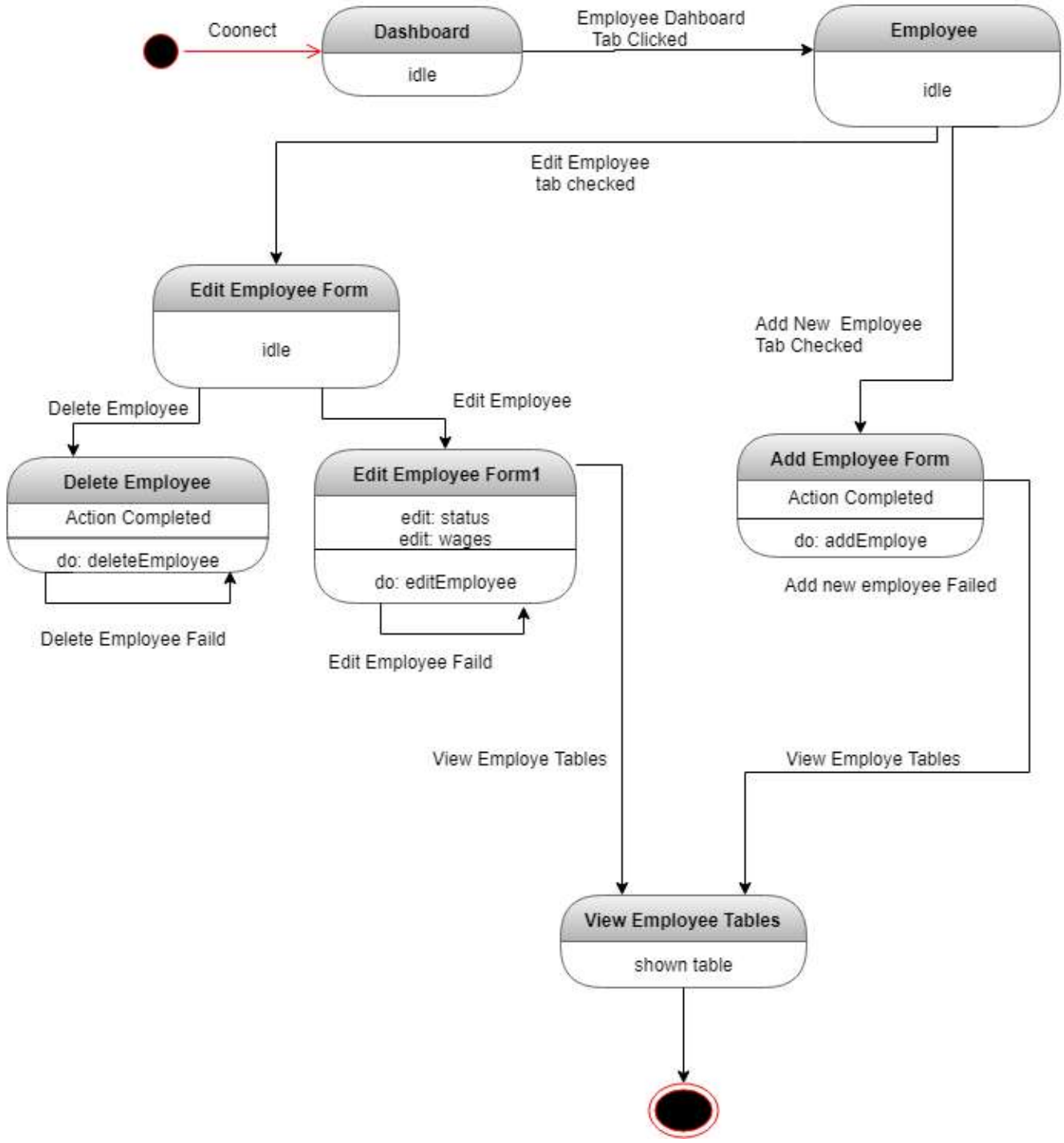


4.4.18 AC_6.1:6.2:6.3:6.4_General

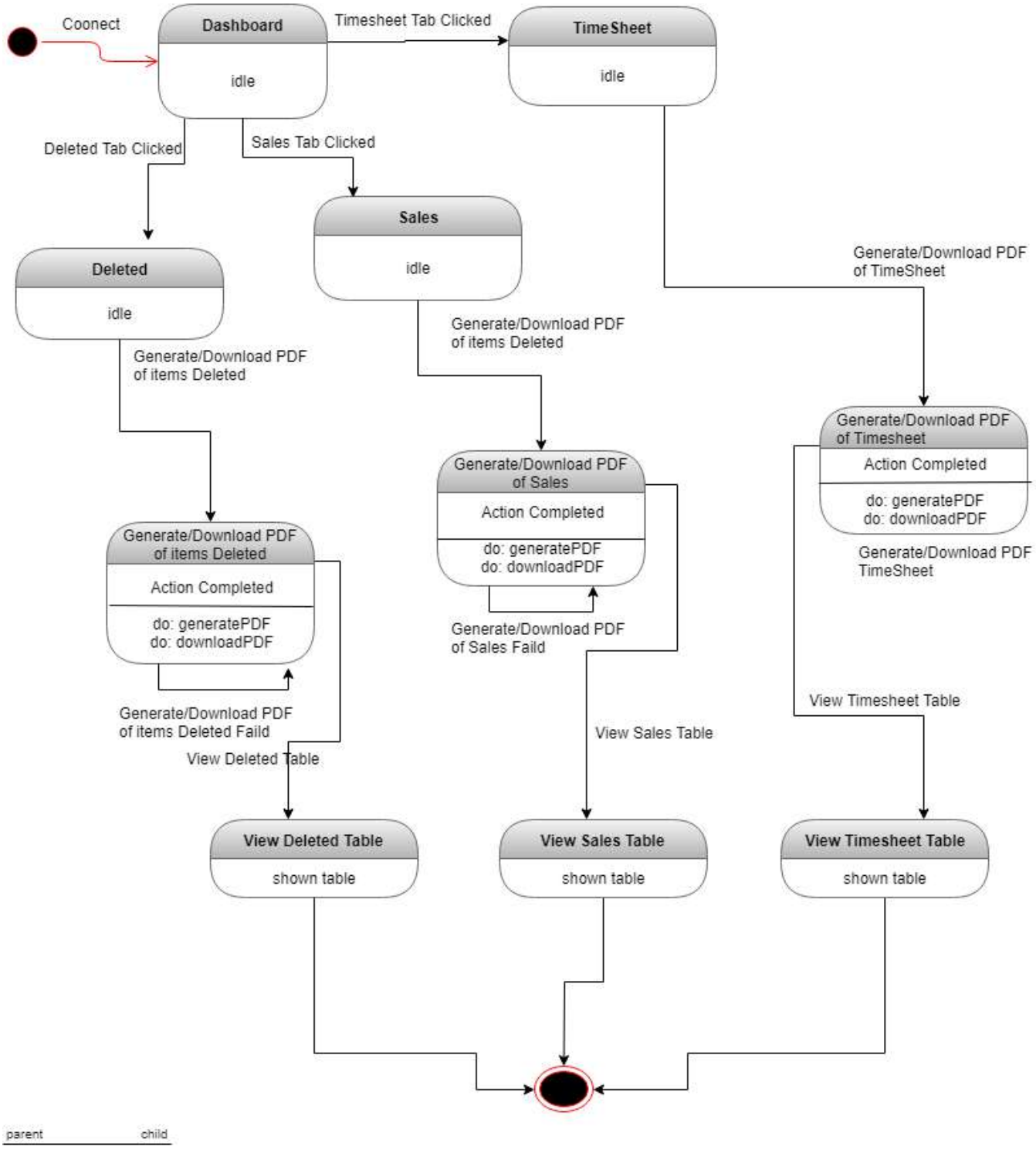


4.5 State Charts

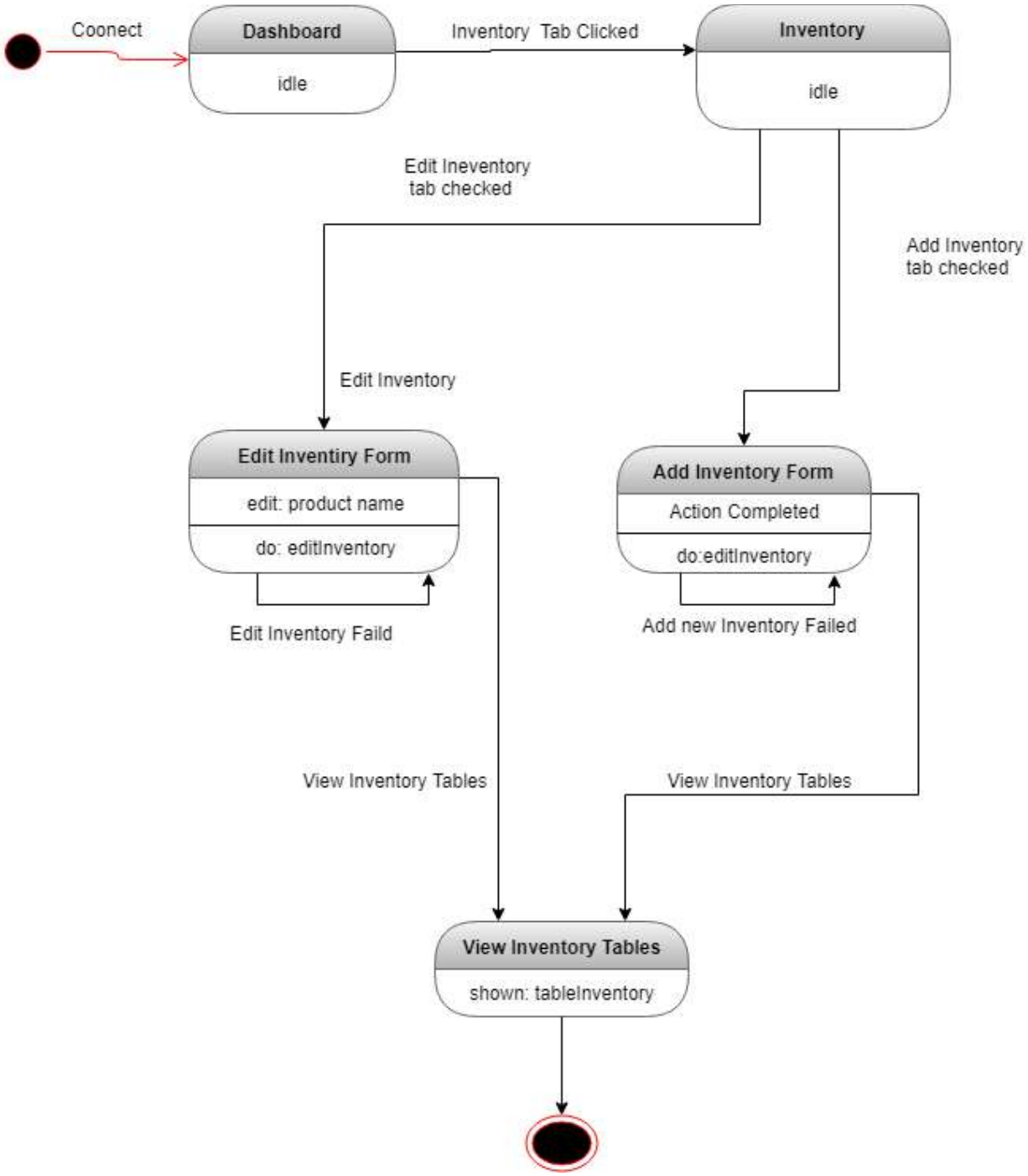
4.5.1 SC_1.1.1_1.1.2_EmpDashO



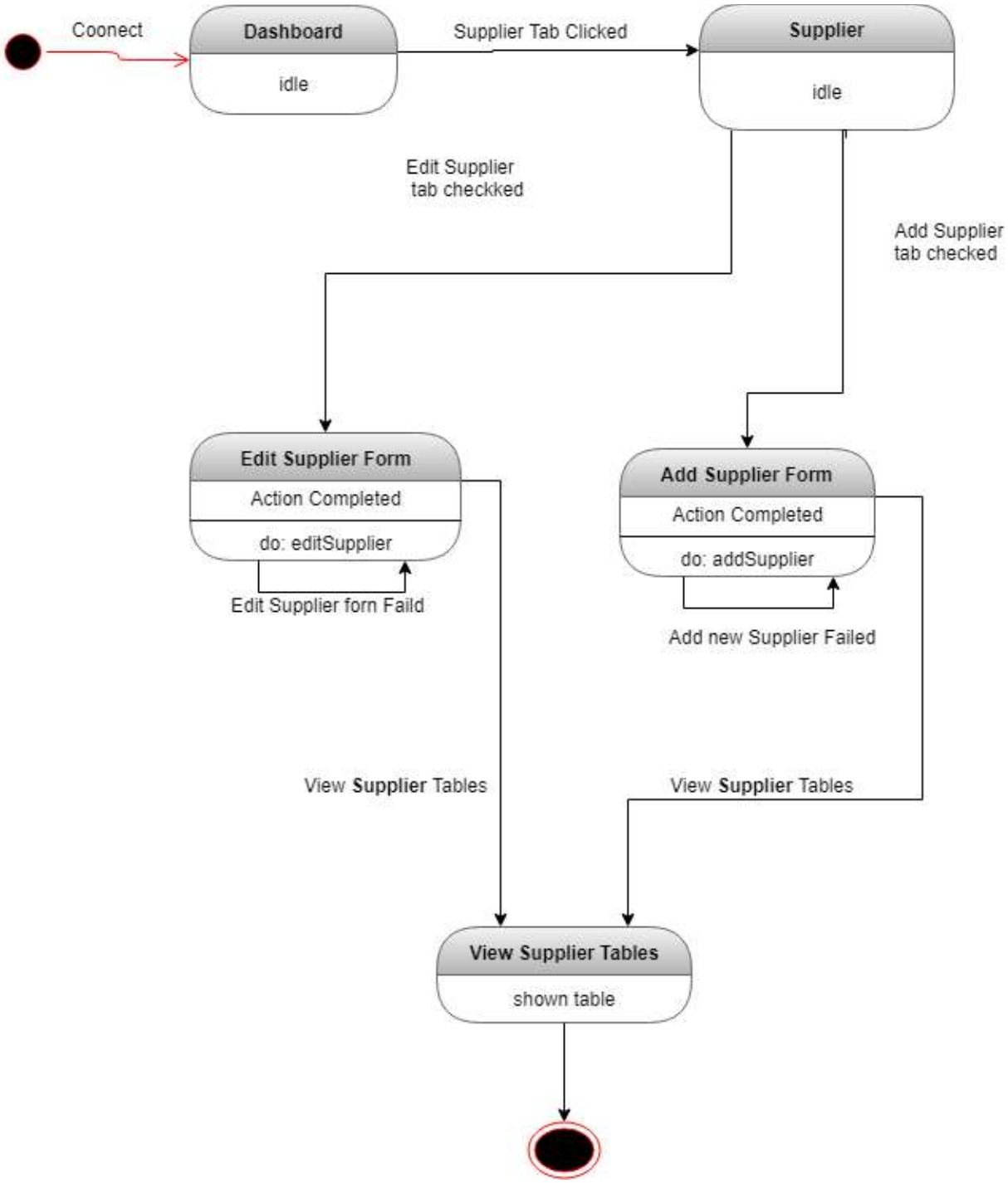
4.5.2 SC_1.2.1_1.2.2_1.5_1.8_TimesheetSalesDel



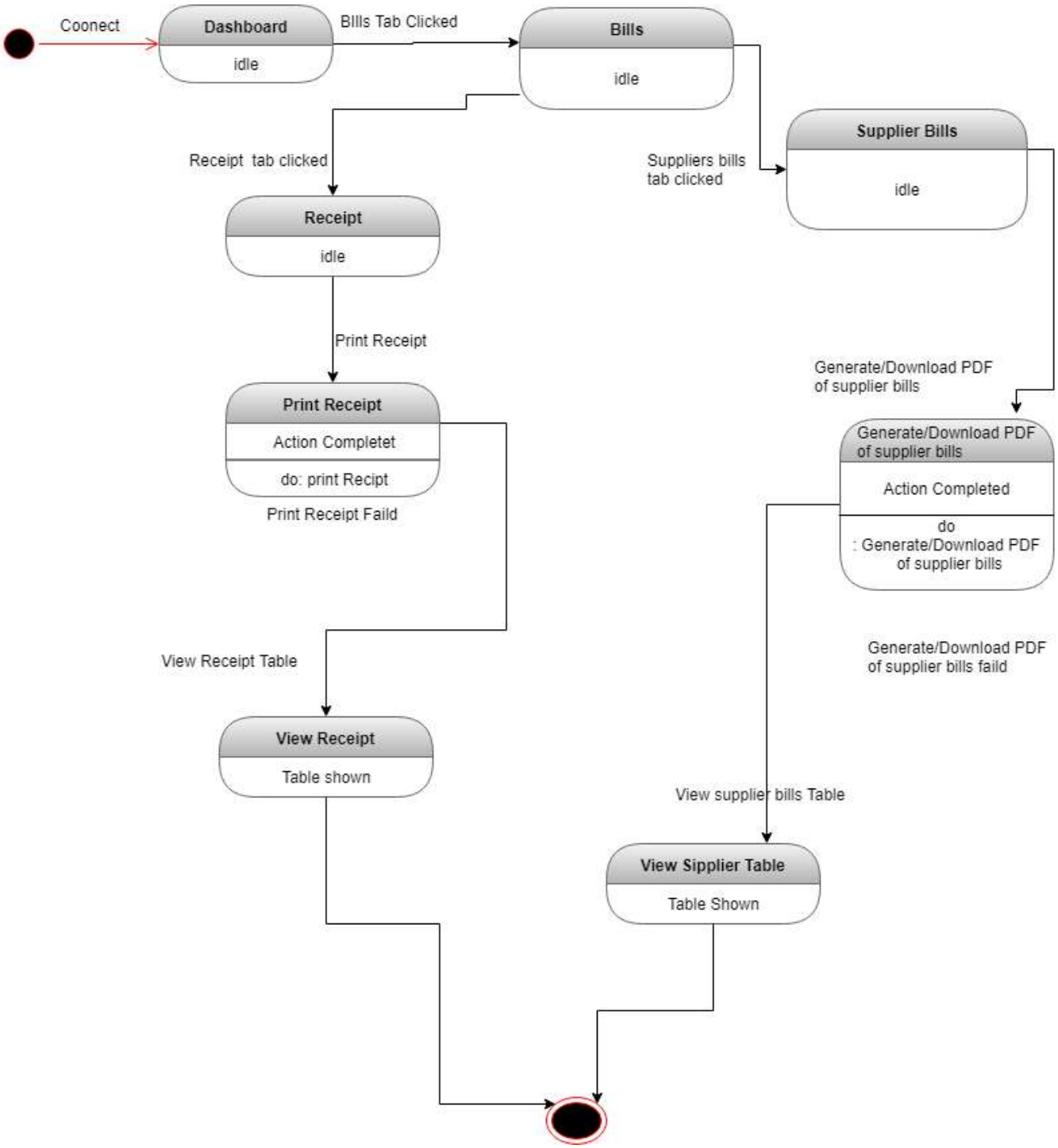
4.5.3 SC_1.3.1_1.3.2_2.3.1_2.3.2_Inventory



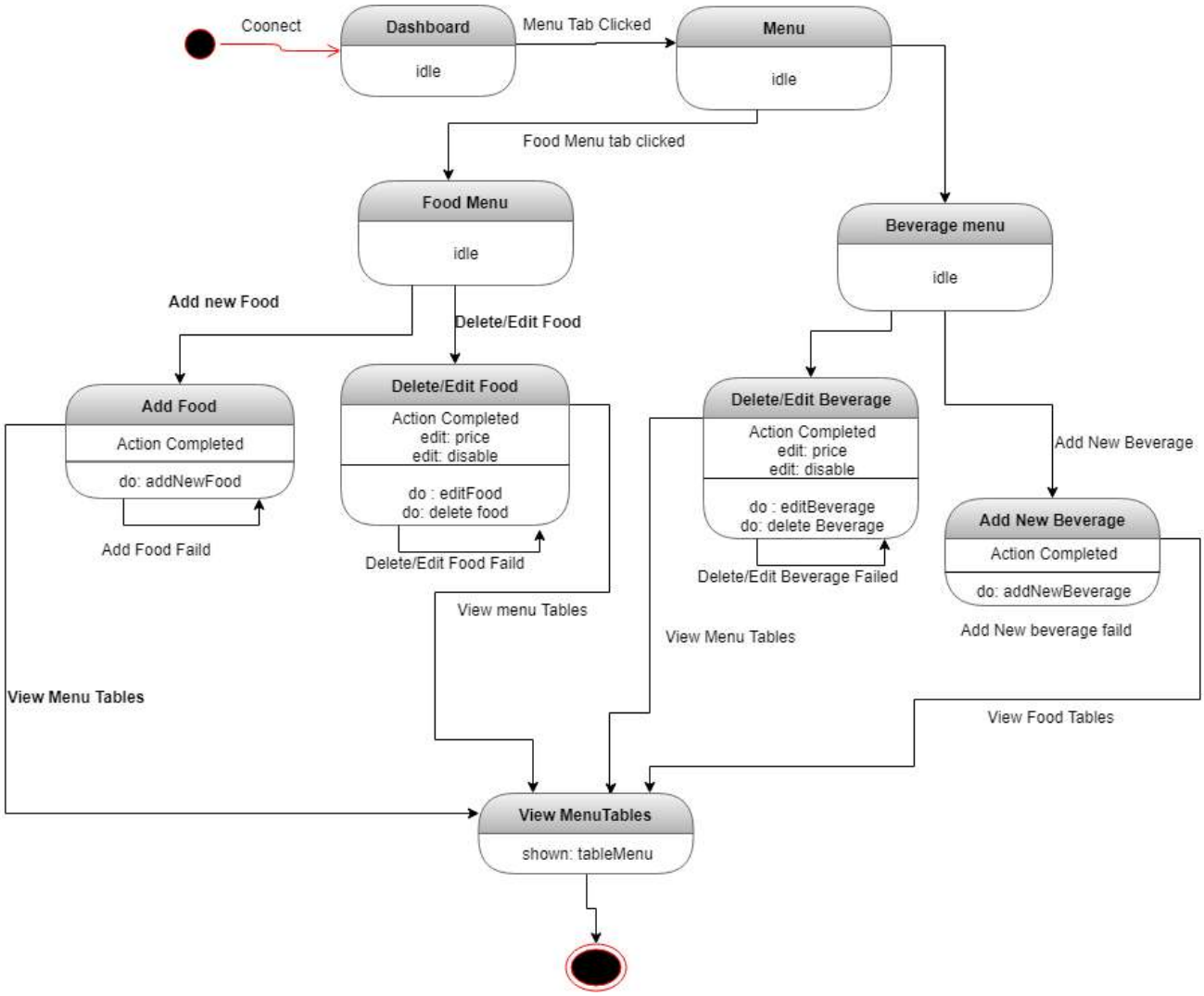
4.5.4 SC_1.4.1_1.4.2_2.4.1_2.4.2_Supplier



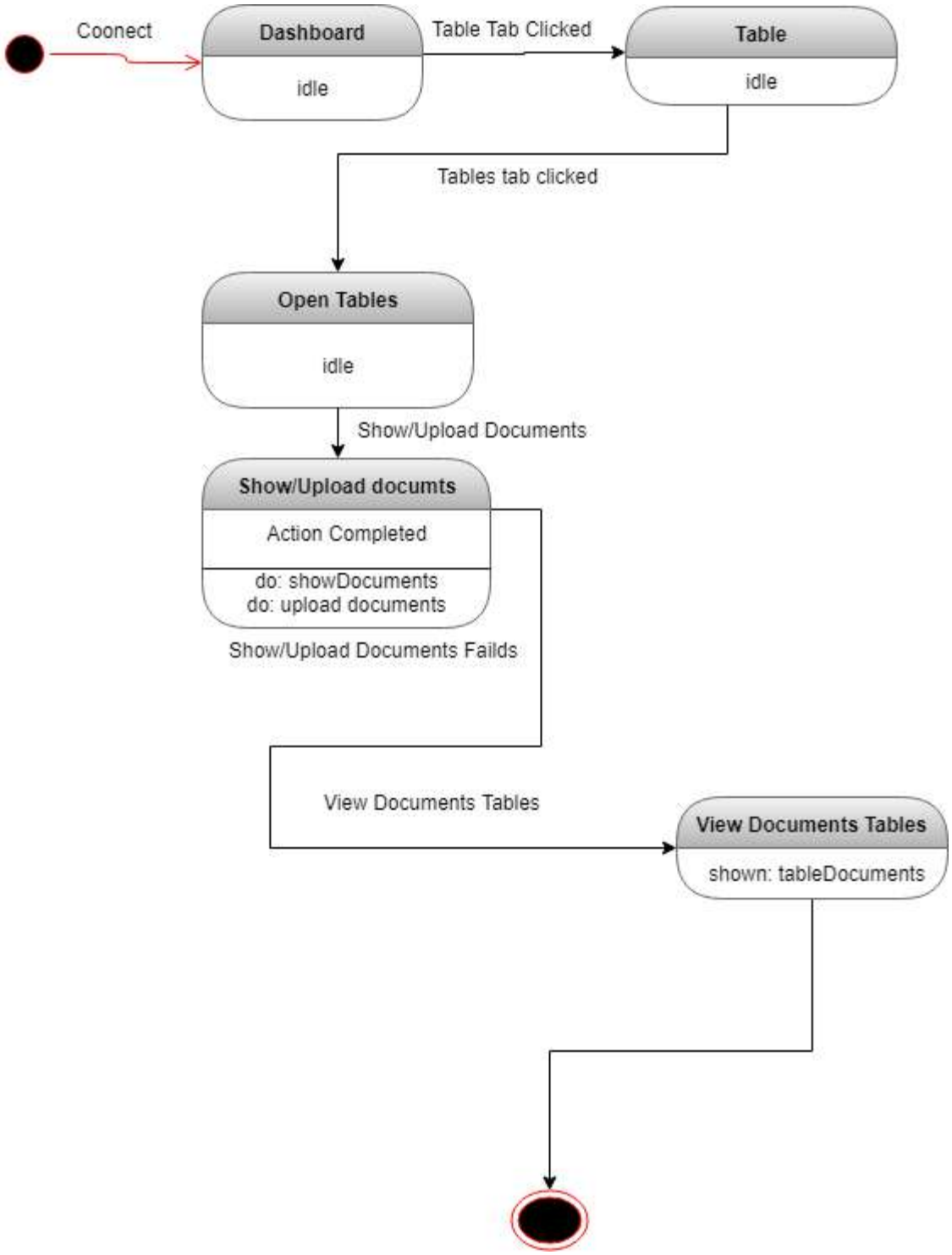
4.5.5 SC_1.6.1_1.6.2_BillsO



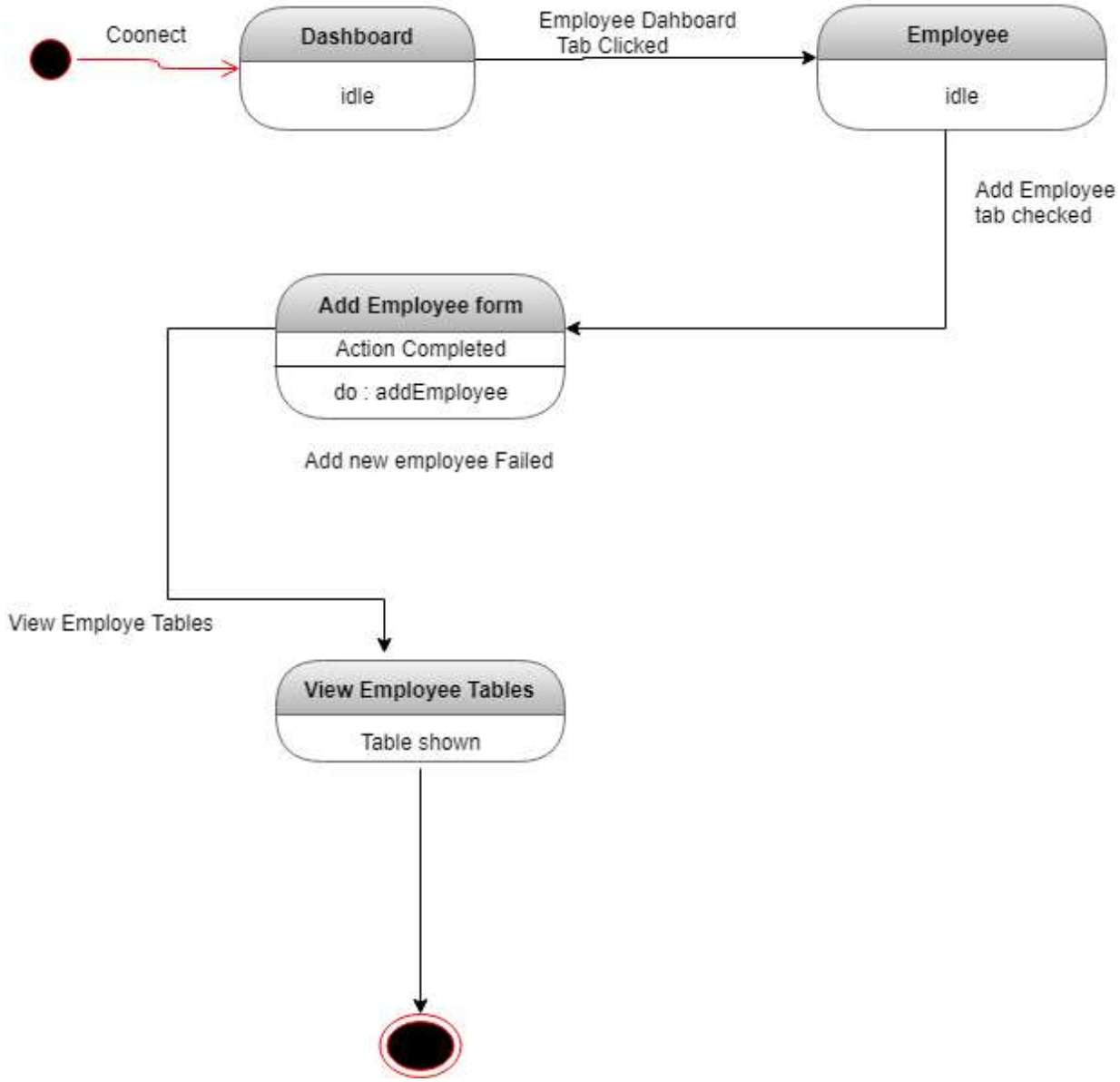
4.5.6 SC_1.7.1_1.7.2_1.7.3_2.6.1_2.6.2_Menu



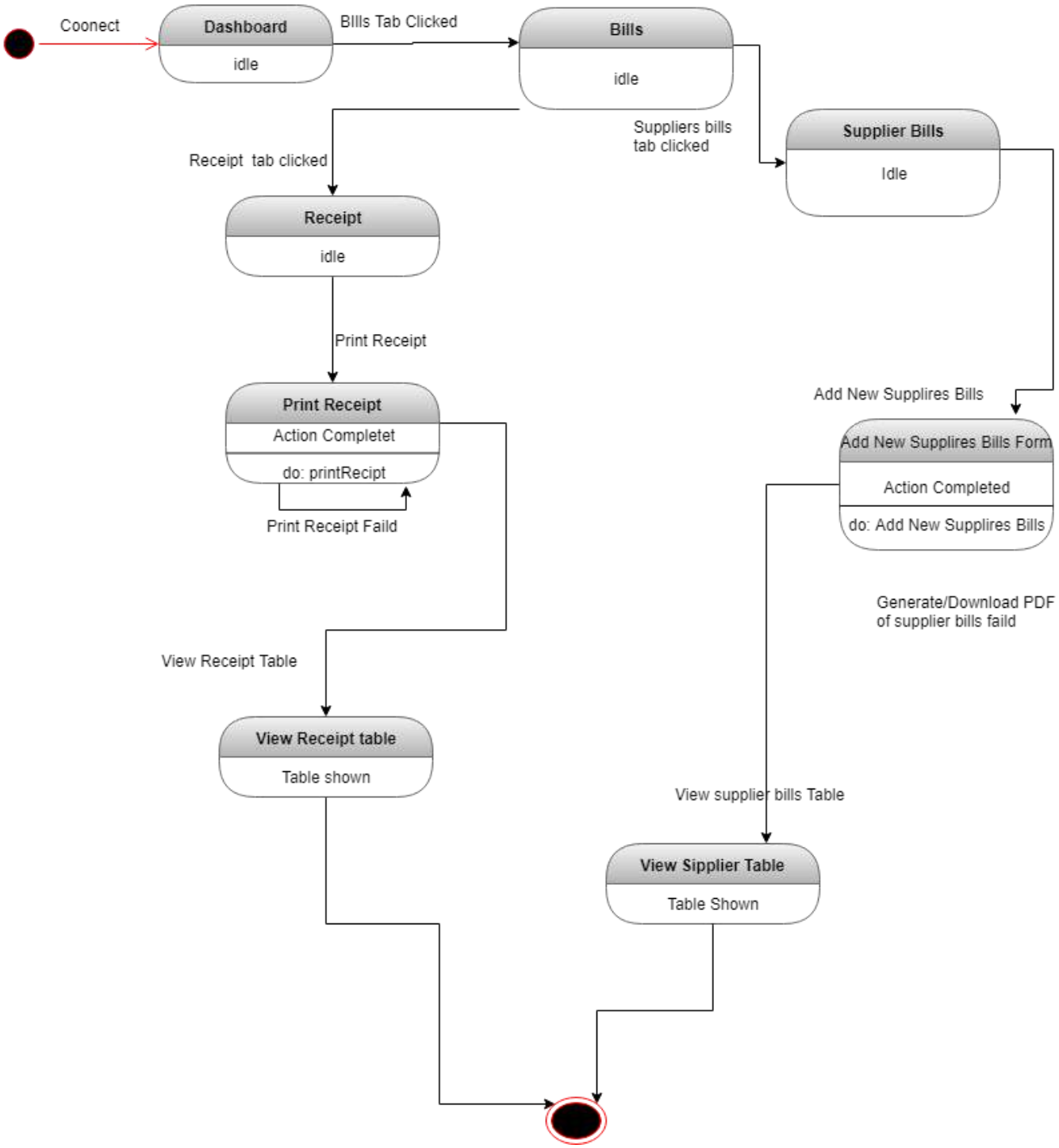
4.5.7 SC_1.9_1.10_Tables_Doc



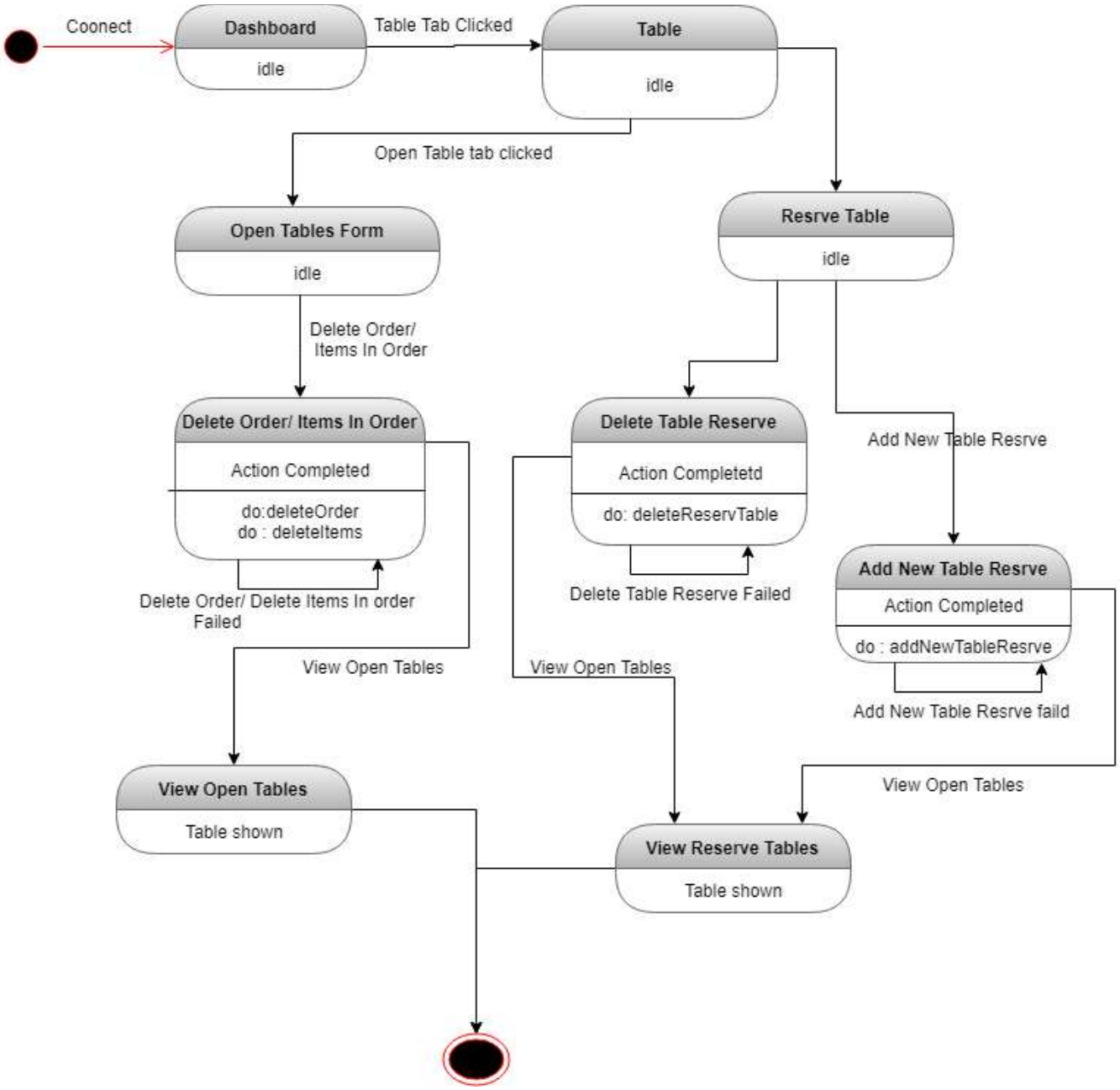
4.5.8 SC_2.1_EmpDashM



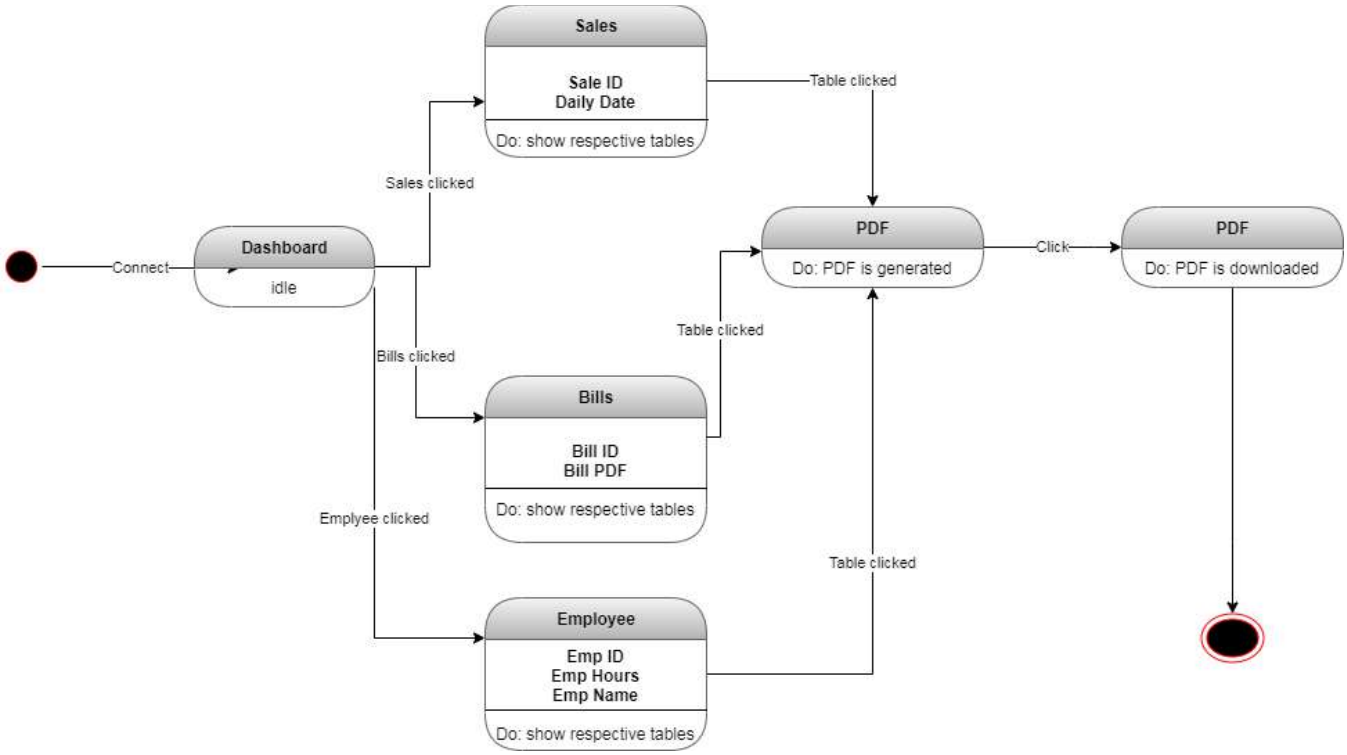
4.5.9 SC_2.5.1_2.5.2_BillsM



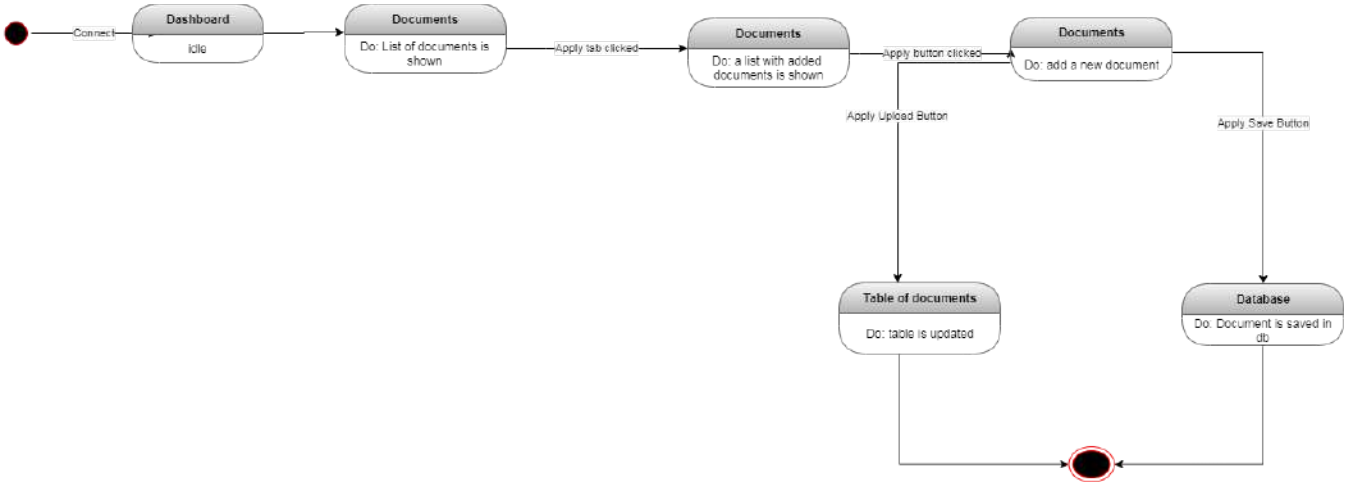
4.5.10 SC_2.6.1_2.6.2.7.1_2.7.2_2.8.1_2.8.2_TablesM



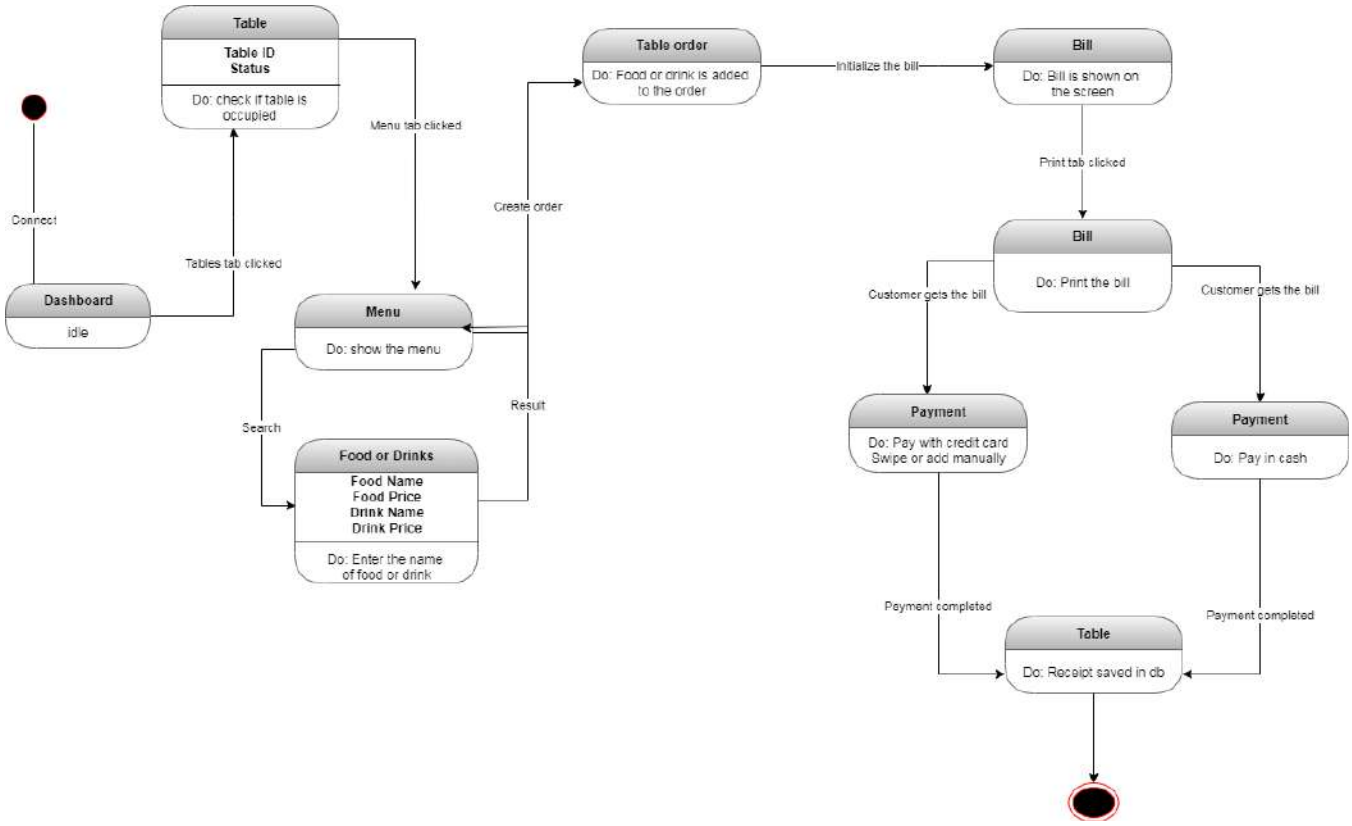
4.5.11 SC_3.1_3.2_3.3_Economist_Sales_Bills_Emp



4.5.12 SC_3.4_Doc



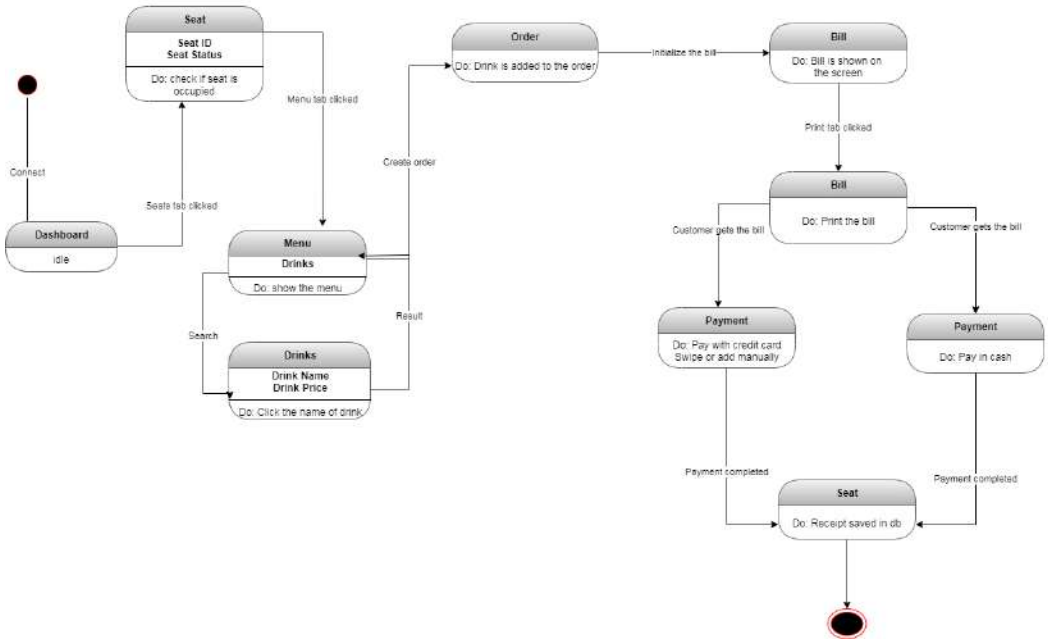
4.5.13SC_4.1_4.2_4.3_4.4_TablesServer.



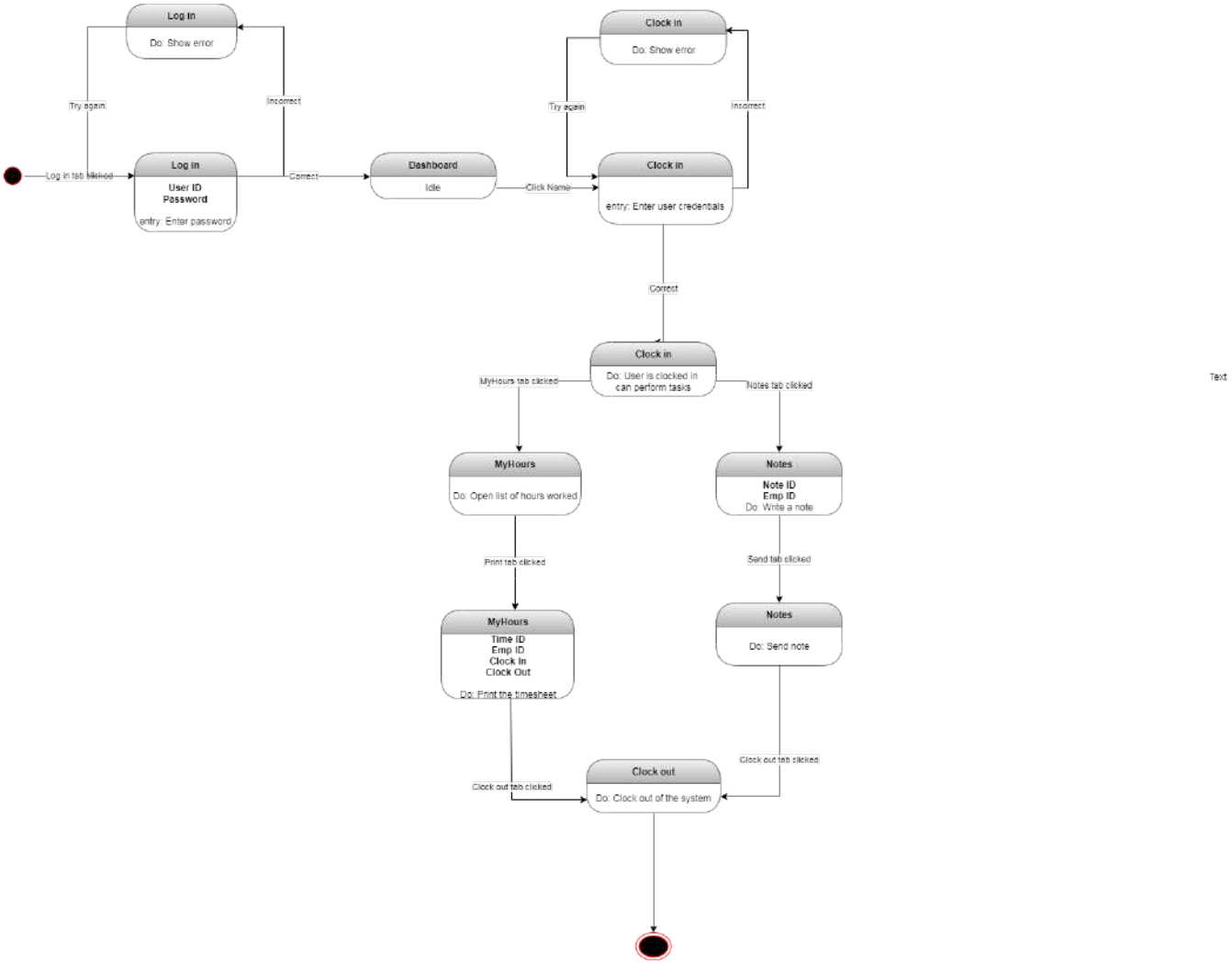
4.5.14 SC_4.5_5.5_Cashout.

4.5.15 SC_5.1_5.2_5.3_5.4_Seats

Text



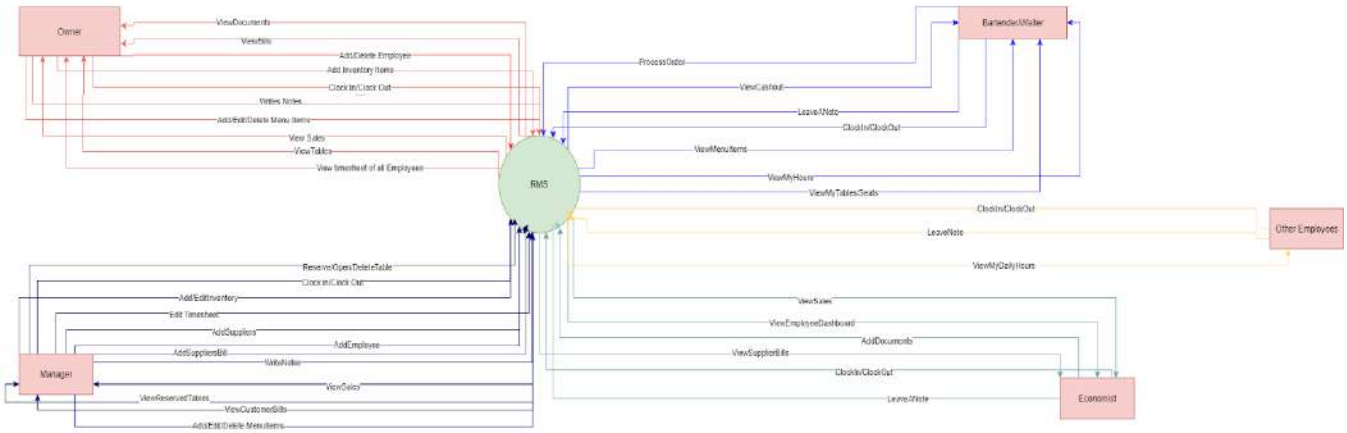
4.5.16 SC_6.1_6.2_6.3_6.4_General



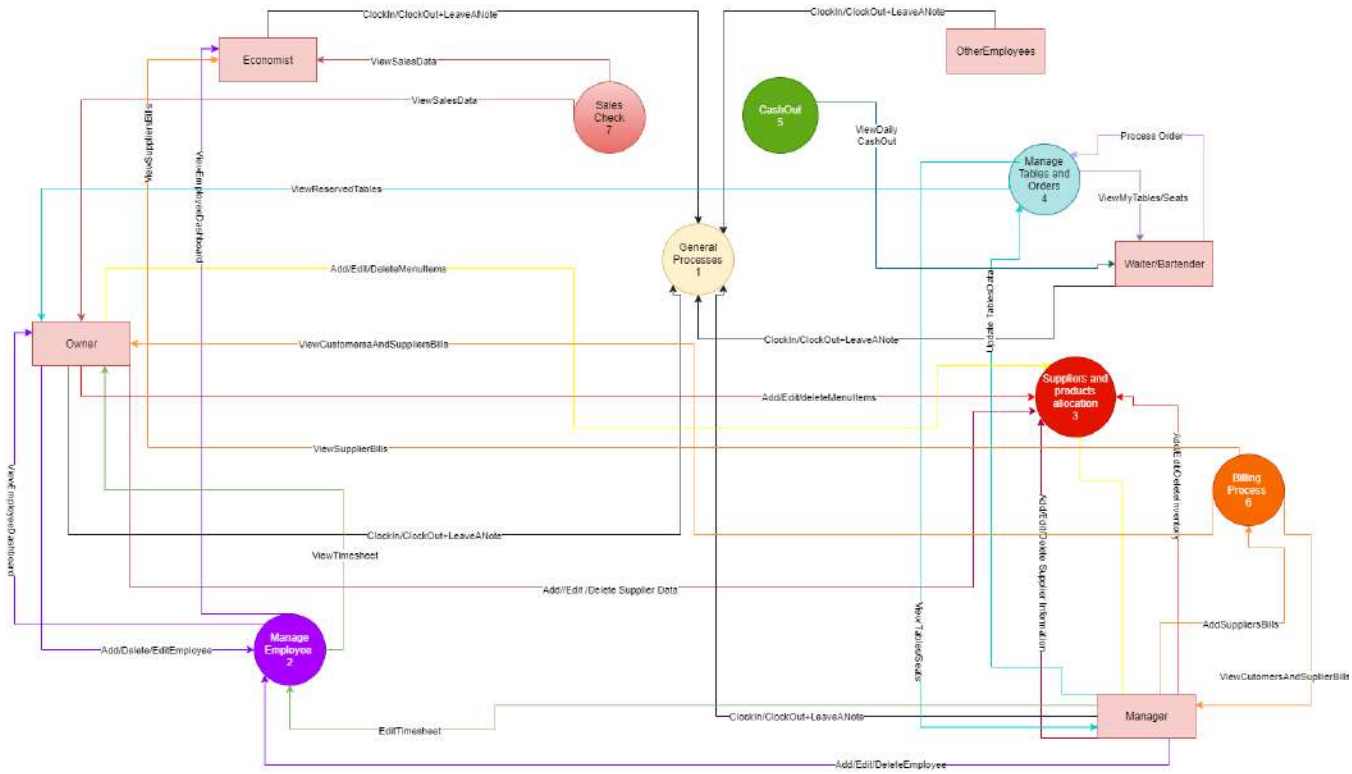
Text

4.6 Data Flow Diagrams

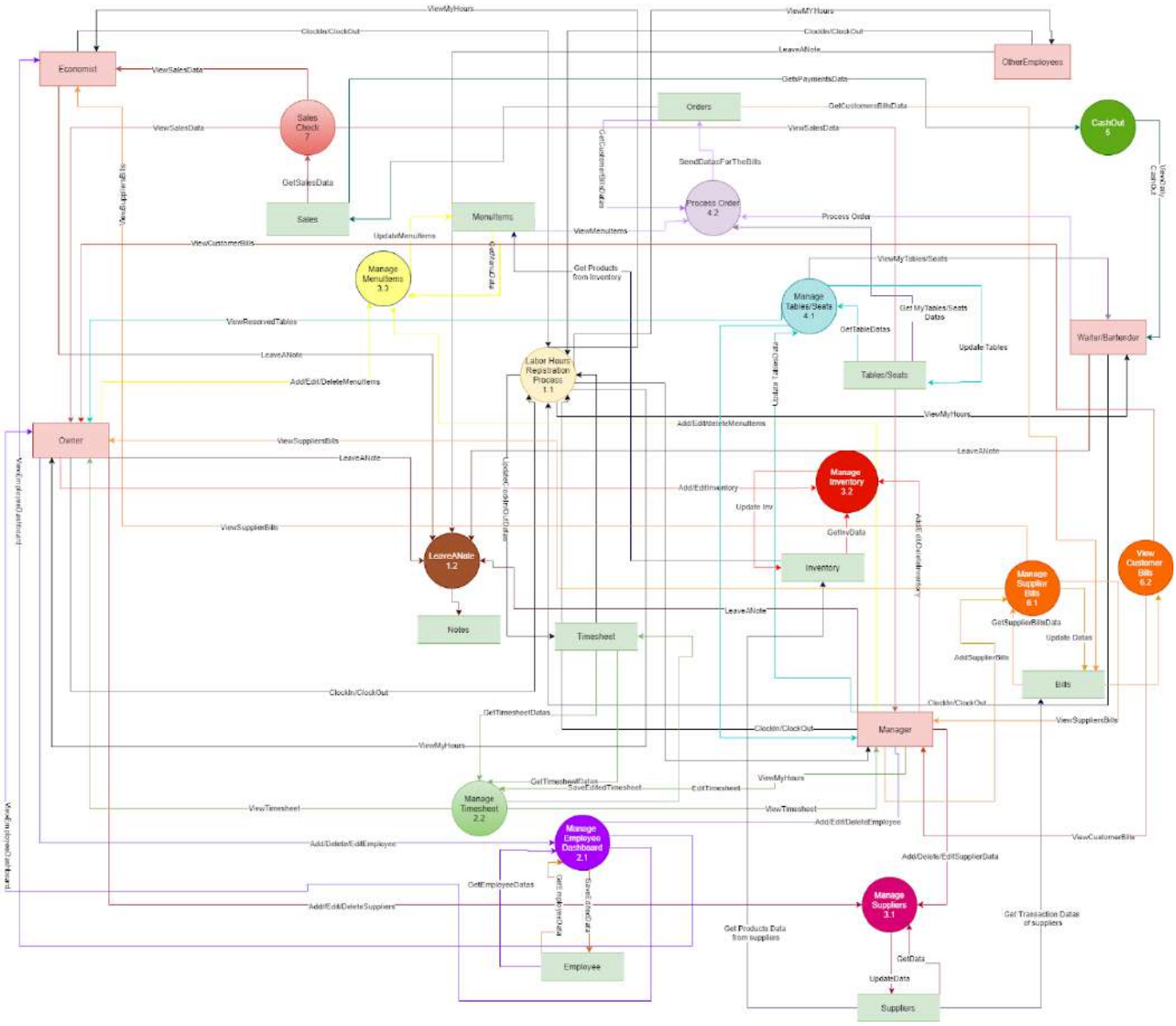
4.6.1 DFD0



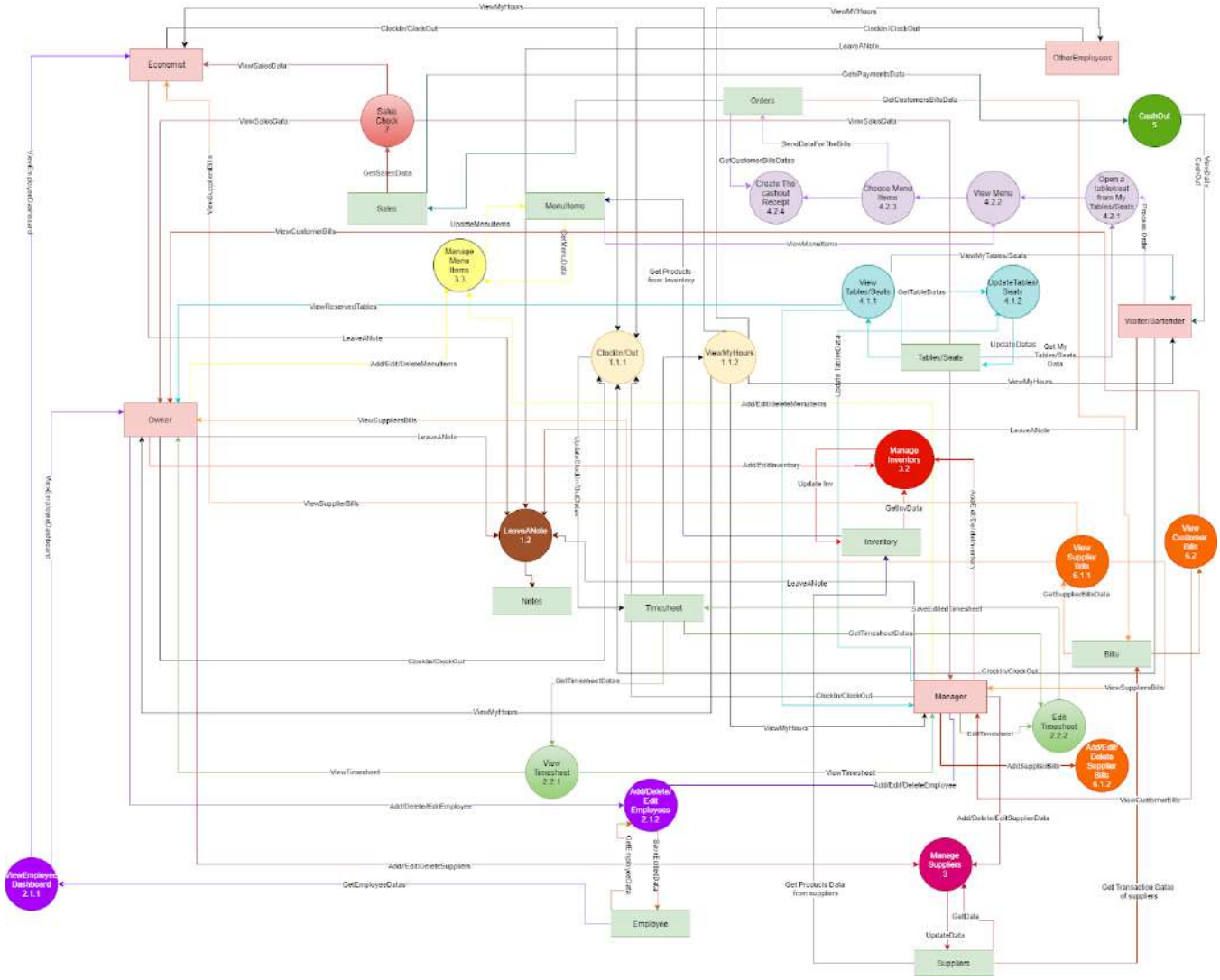
4.6.2 DFD1


ClockIn/ClockOut+LeaveANote
Economist
ViewSalesData
Sales Check 7
ViewSalesData
ClockIn/ClockOut+LeaveANote
OtherEmployees
CashOut 5
ViewDaily CashOut
Process Order
Manage Tables and Orders 4
ViewMyTables/Seats
ViewReservedTables
General Processes 1
Add/Edit/DeleteMenuItems
Waiter/Bartender
Owner
ViewCustomersAndSuppliersBills
ClockIn/ClockOut+LeaveANote
Add/Edit/deleteMenuItems
Suppliers and products allocation 3
ViewSupplierBills
Billing Process 6
ClockIn/ClockOut+LeaveANote
ViewTimesheet
Add//Edit /Delete Supplier Data
Manage Employee 2
Add/Delete/EditEmployee
AddSuppliersBills
ViewCustomersAndSupplierBills
Manager
ClockIn/ClockOut+LeaveANote
EditTimesheet
Add/Edit/DeleteEmployee

4.6.3 DFD2

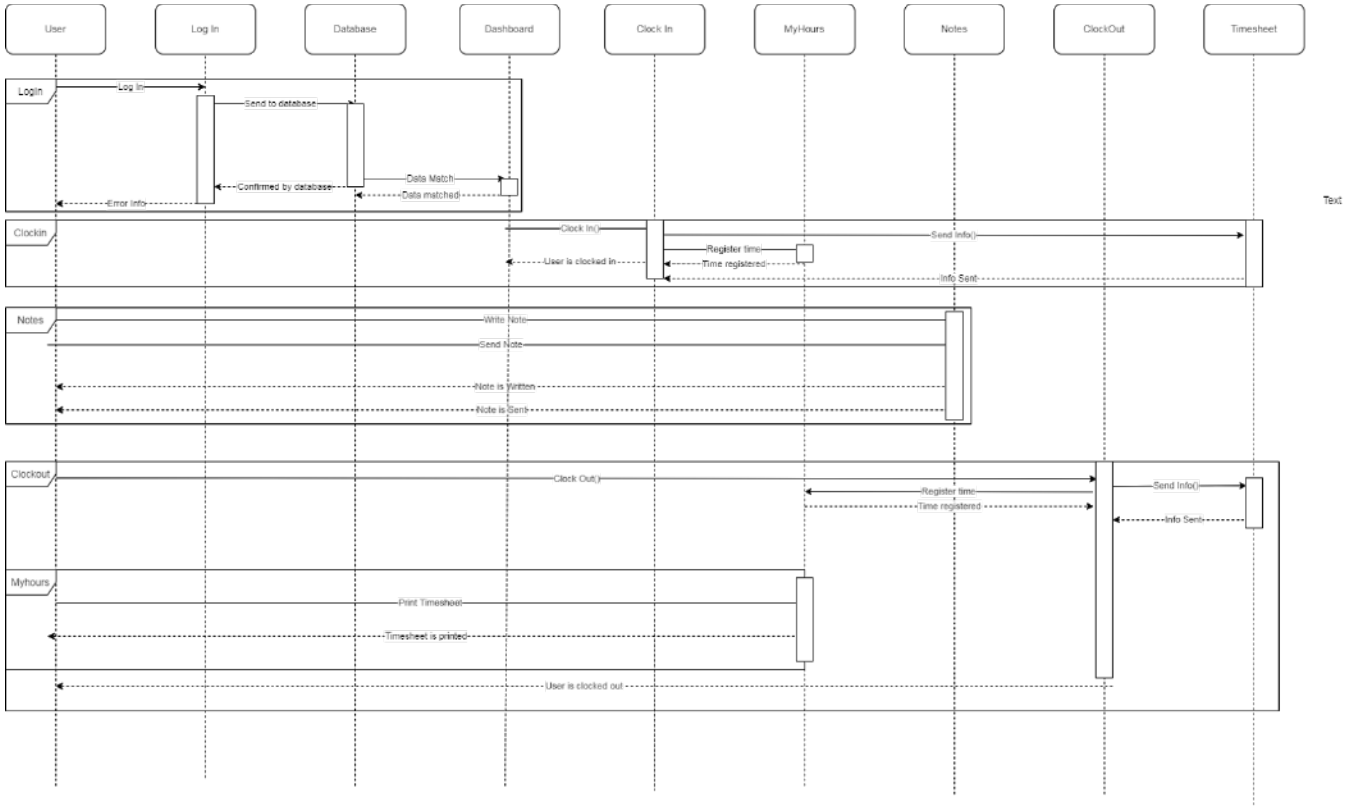

Economist
Owner
OtherEmployees
Waiter/Bartender
Manager
Orders
Sales
Sales Check 7
CashOut 5
Process Order 4.2
Manage MenuItems 3.3
MenuItems
Manage Tables/Seats 4.1
Tables/Seats
Labor Hours Registration Process 1.1
LeaveANote 1.2
Notes
Timesheet
Manage Inventory 3.2
Inventory
Manage Supplier Bills 6.1
View Customer Bills 6.2
Bills
Manage Timesheet 2.2
Manage Employee Dashboard 2.1
Employee
Manage Suppliers 3.1
Suppliers
ViewMyHours
ClockIn/ClockOut
LeaveANote
GetsPaymentsData
ViewSalesData
GetSalesData
SendDatasForTheBills
Process Order
ViewMenuItems
UpdateMenuItems
ViewCustomerBills
Get Products from Inventory
ViewMyTables/Seats
Get MyTables/Seats Datas
GetTableDatas
Update Tables
ViewReservedTables
Add/Edit/DeleteMenuItems
ViewSuppliersBills
Add/EditInventory
Update Inv
GetInvData
GetSupplierBillsData
Update Datas
AddSupplierBills
GetTimesheetDatas
SaveEditedTimesheet
EditTimesheet
ViewTimesheet
Add/Edit/DeleteEmployee
Add/Delete/EditEmployee
GetEmployeeDatas
SaveEditedData
Add/Edit/DeleteSuppliers
Add/Delete/EditSupplierData
Get Products Data from suppliers
Get Transaction Datas of suppliers
GetData
UpdateData

4.6.4 DFD3

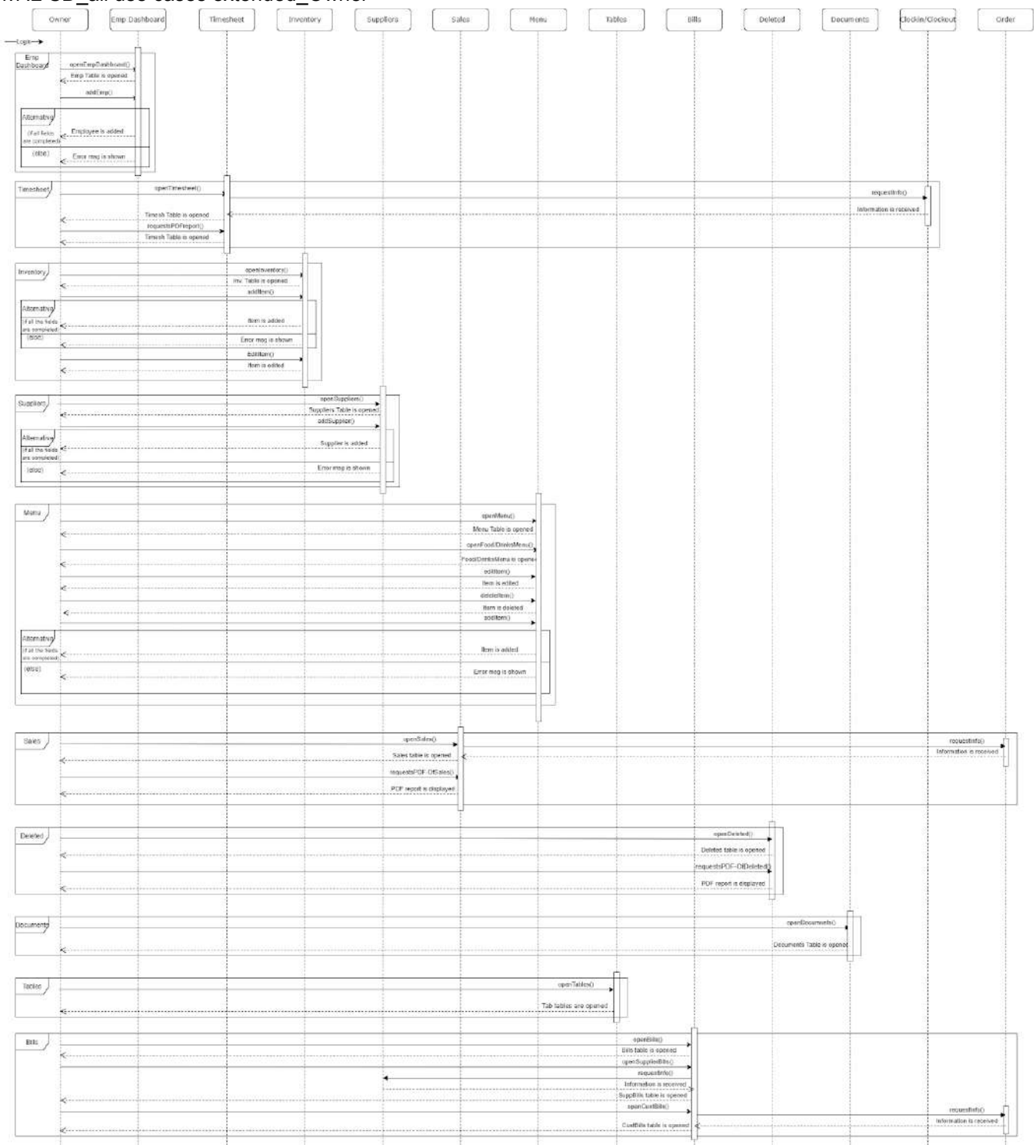

Economist
Owner
Waiter/Bartender
Manager
OtherEmployees
Sales Check 7
Sales
MenuItems
Orders
CashOut 5
Create The cashout Receipt 4.2.4
Choose Menu Items 4.2.3
View Menu 4.2.2
Open a table/seat from My Tables/Seats 4.2.1
Manage Menu Items 3.1
View Tables/Seats 4.1.1
UpdateTables/Seats 4.1.2
Tables/Seats
ClockIn/Out 1.1.1
ViewMyHours 1.1.2
Manage Inventory 3.2
Inventory
LeaveANote 1.2
Notes
Timesheet
View Supplier Bills 6.1.1
View Customer Bills 6.2
Bills
Edit Timesheet 2.2.2
View Timesheet 2.2.1
Add/Delete/ Edit Employees 2.1.2
Add/Delete/ Edit Supplier Bills 6.1.2
Manage Suppliers 3
Employee
Suppliers
ViewMyHours
ClockIn/ClockOut
LeaveANote
ViewSalesData
GetSalesData
GetsPaymentsData
GetCustomersBillsData
SendDataForTheBills
GetCustomerBillsDatas
ViewMenuItems
UpdateMenuItems
ViewCustomerBills
ViewReservedTables
ViewMyTables/Seats
Get Products from Inventory
GetTableDatas
UpdateDatas
Get My Tables/Seats Data
Add/Edit/DeleteMenuItems
ViewSuppliersBills
Add/EditInventory
Update Inv
GetInvData
GetSupplierBillsData
GetTimesheetDatas
SaveEditedTimesheet
ClockInClockOut
ViewSuppliersBills
EditTimesheet
AddSupplierBills
ViewTimesheet
Add/Edit/DeleteEmployee
Add/Delete/Edit/Employee
Add/Edit/DeleteSuppliers
GetEmployeesDatas
SendEmployeeDatas
Get Products Data from suppliers
GetData
UpdateData
Get Transaction Datas of suppliers
ViewCustomerBills
Add/Delete/Edit/SuppliersData

4.7 Sequence Diagrams

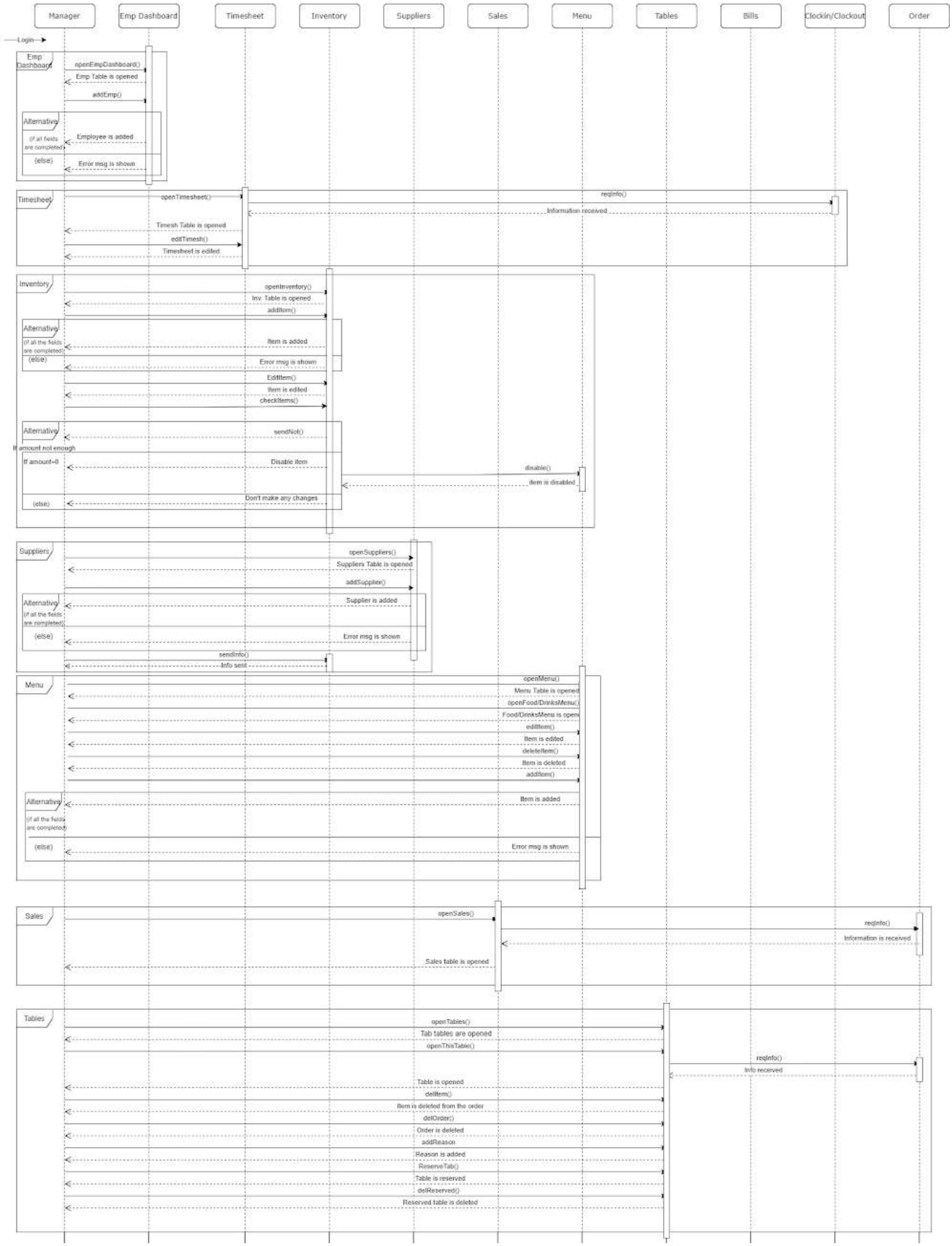
4.7.1 SD_6.1_6.2_6.3_6.4_General



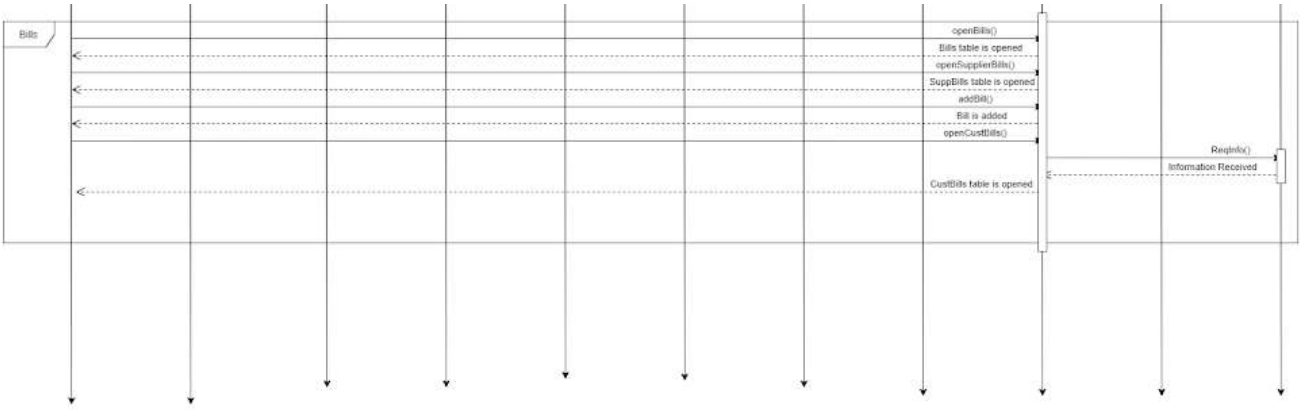
4.7.2 SD_all use cases extended_Owner



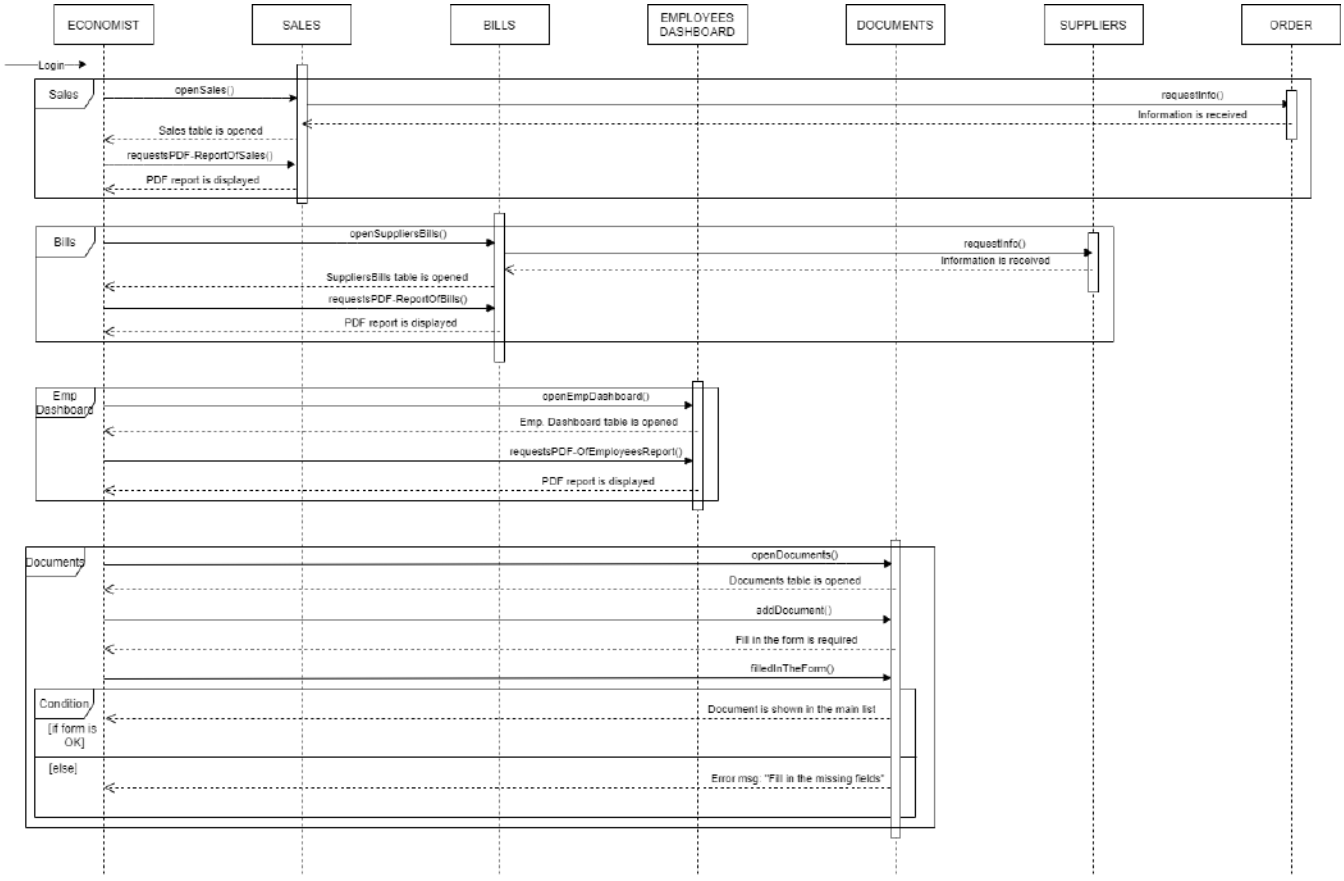
4.7.3 SD_all user cases extended_Manager


Manager
Emp Dashboard
Timesheet
Inventory
Suppliers
Sales
Menu
Tables
Bills
Clockin/Clockout
Order
Login
Emp Dashboard
openEmpDashboard()
Emp Table is opened
addEmp()
Alternative
(if all fields are completed)
Employee is added
(else)
Error msg is shown
Timesheet
openTimesheet()
reqInfo()
Information received
Timesh Table is opened
editTimesh()
Timesheet is edited
Inventory
openInventory()
Inv. Table is opened
addItem()
Alternative
(if all the fields are completed)
Item is added
(else)
Error msg is shown
EditItem()
Item is edited
checkItems()
Alternative
sendNot()
If amount not enough
If amount=0
Disable item
disable()
Item is disabled
(else)
Don't make any changes
Suppliers
openSuppliers()
Suppliers Table is opened
addSupplier()
Alternative
(if all the fields are completed)
Supplier is added
(else)
Error msg is shown
sendInfo()
Info sent
Menu
openMenu()
Menu Table is opened
openFood/DrinksMenu()
Food/DrinksMenu is open
editItem()
Item is edited
deleteItem()
Item is deleted
addItem()
Alternative
(if all the fields are completed)
Item is added
(else)
Error msg is shown
Sales
openSales()
reqInfo()
Information is received
Sales table is opened
Tables
openTables()
Tab tables are opened
openThisTable()
reqInfo()
Info received
Table is opened
delItem()
Item is deleted from the order
delOrder()
Order is deleted
addReason
Reason is added
ReserveTab()
Table is reserved
delReserved()
Reserved table is deleted

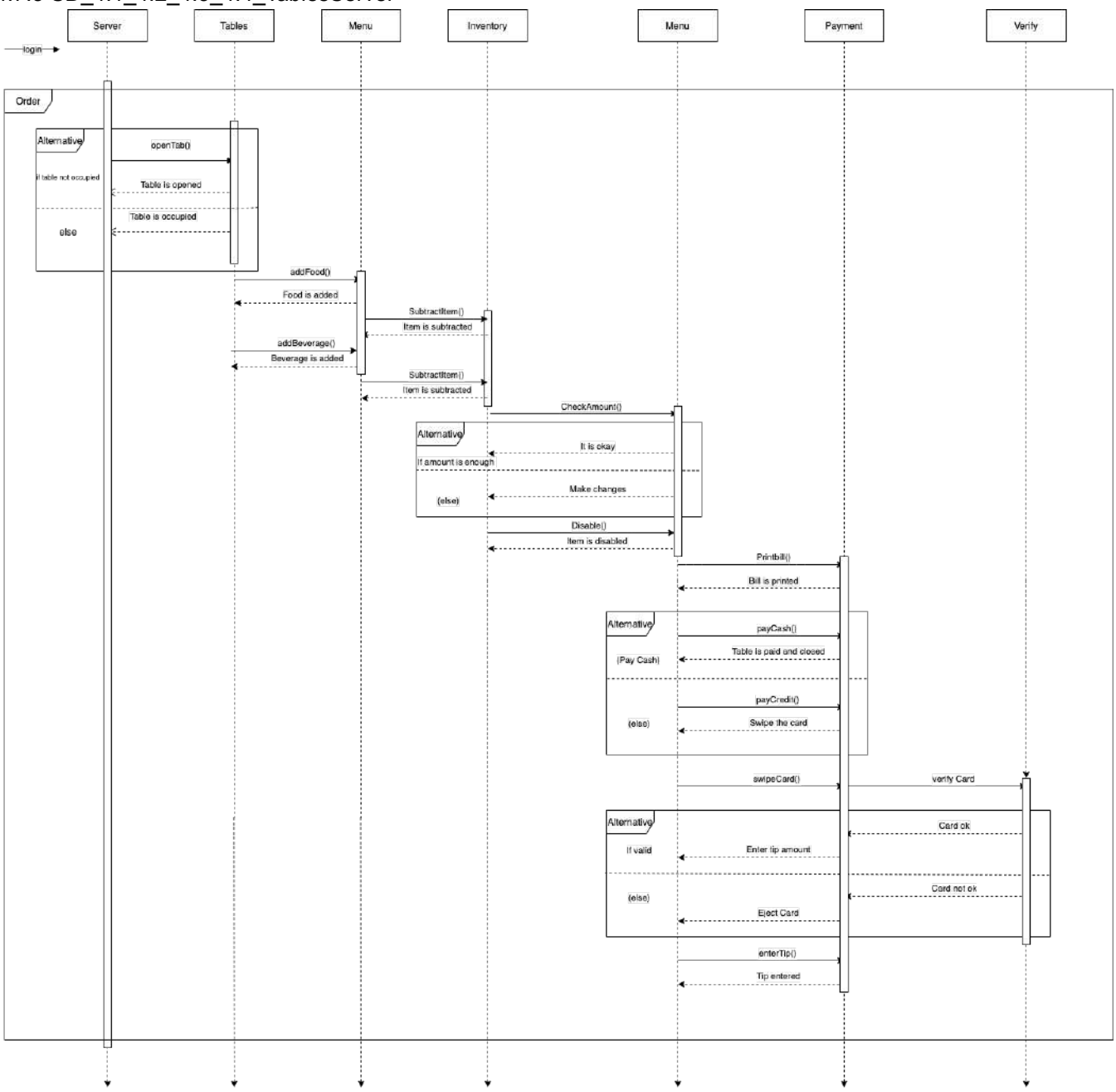
continues:



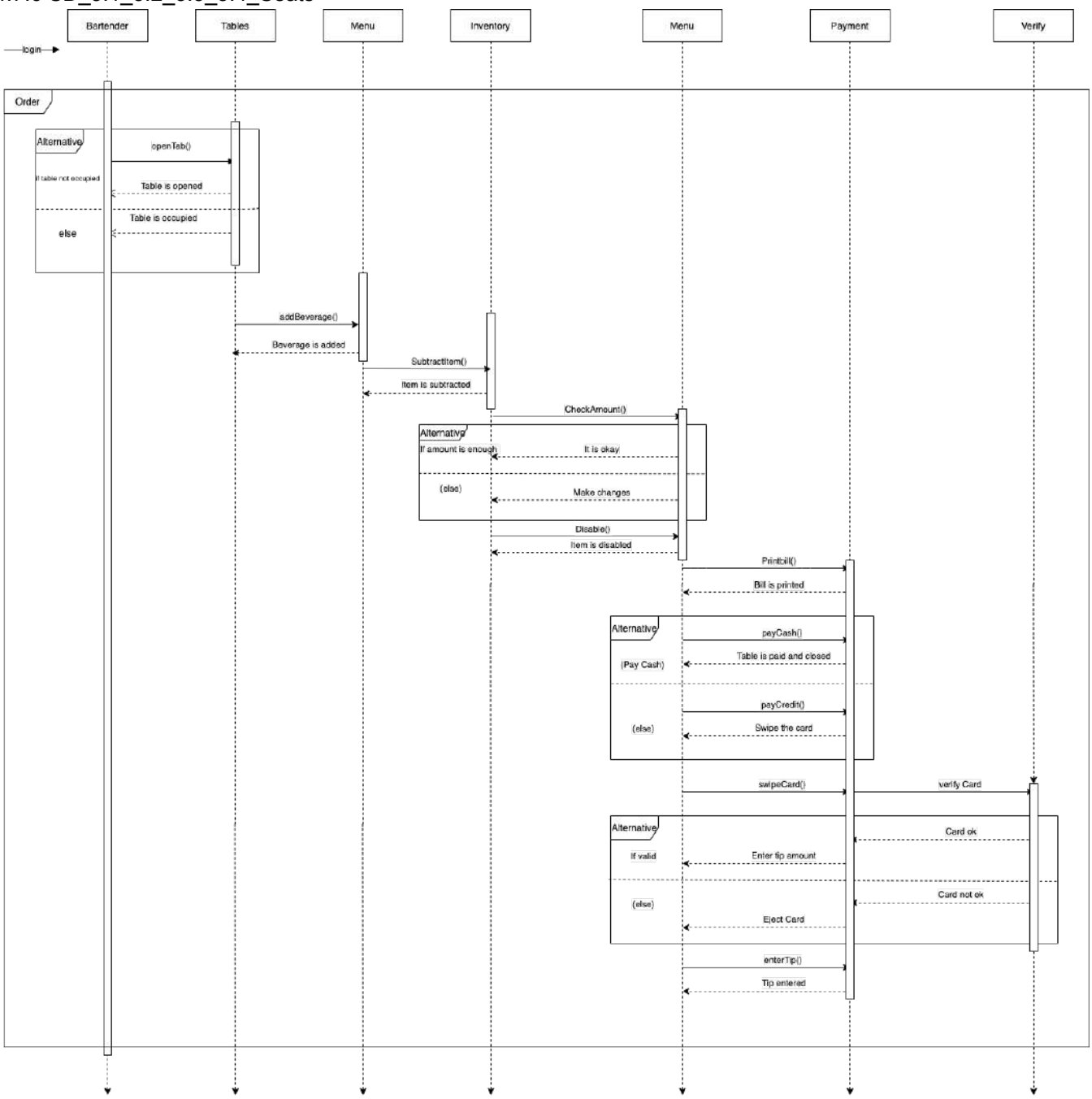
4.7.4 SD_all use cases_Economist



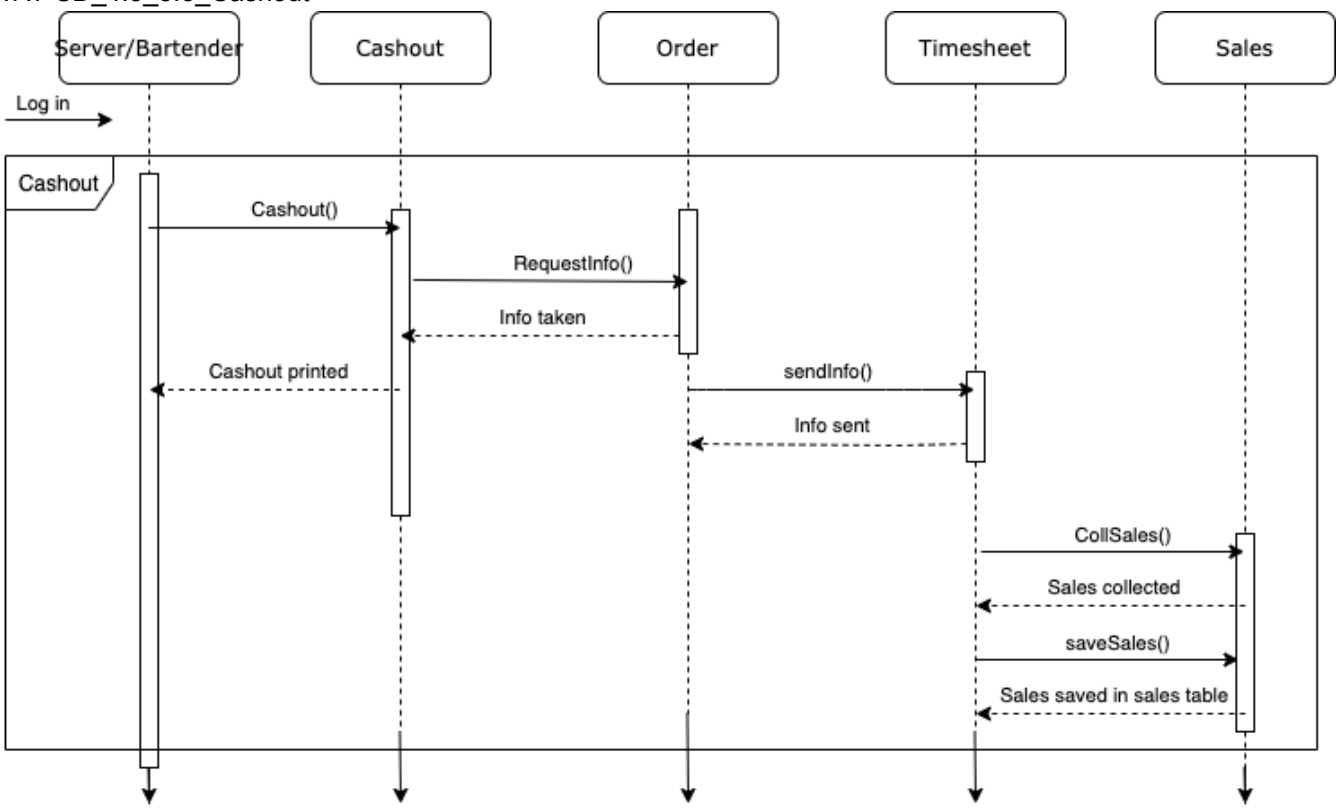
4.7.5 SD_4.1_4.2_4.3_4.4_TablesServer



4.7.6 SD_5.1_5.2_5.3_5.4_Seats

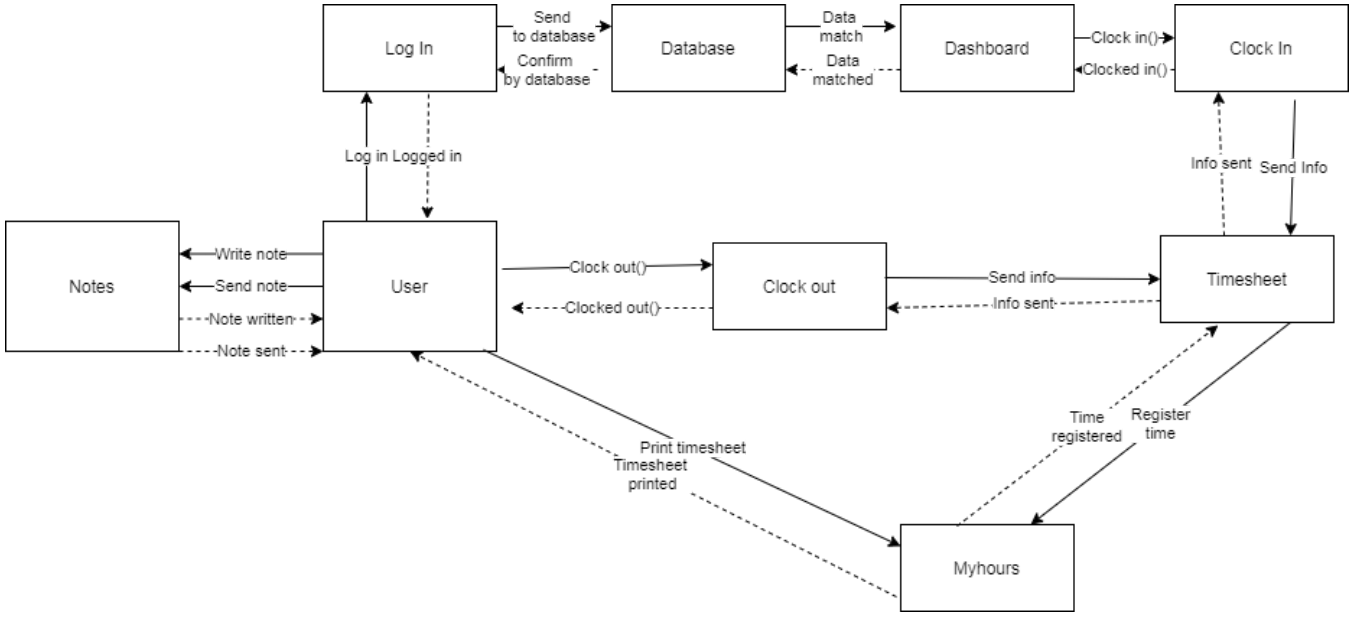


4.7.7 SD_4.5_5.5_Cashout

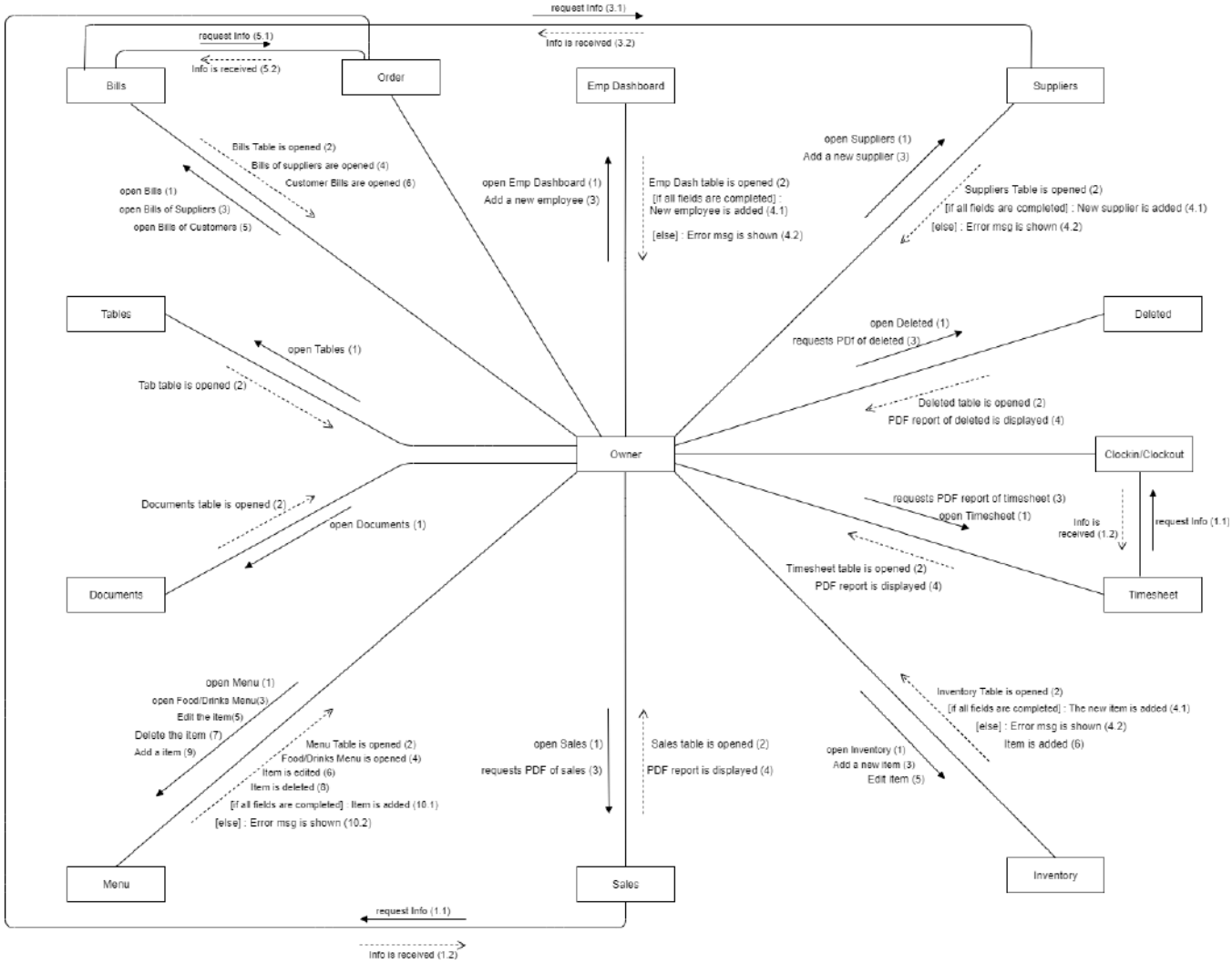


4.8 Collaboration Diagrams

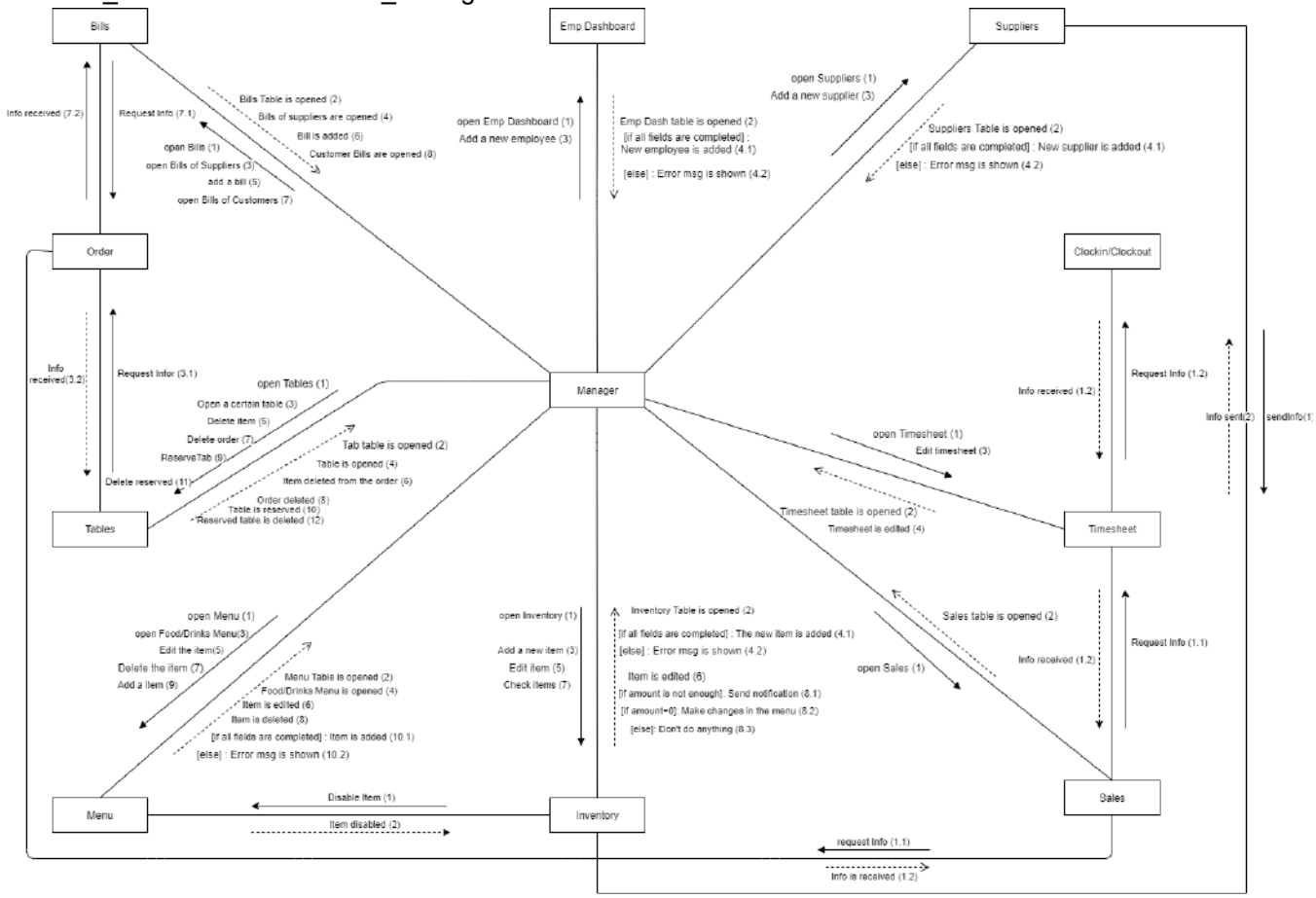
4.8.1 CC_6.1_6.2_6.3_6.4_General



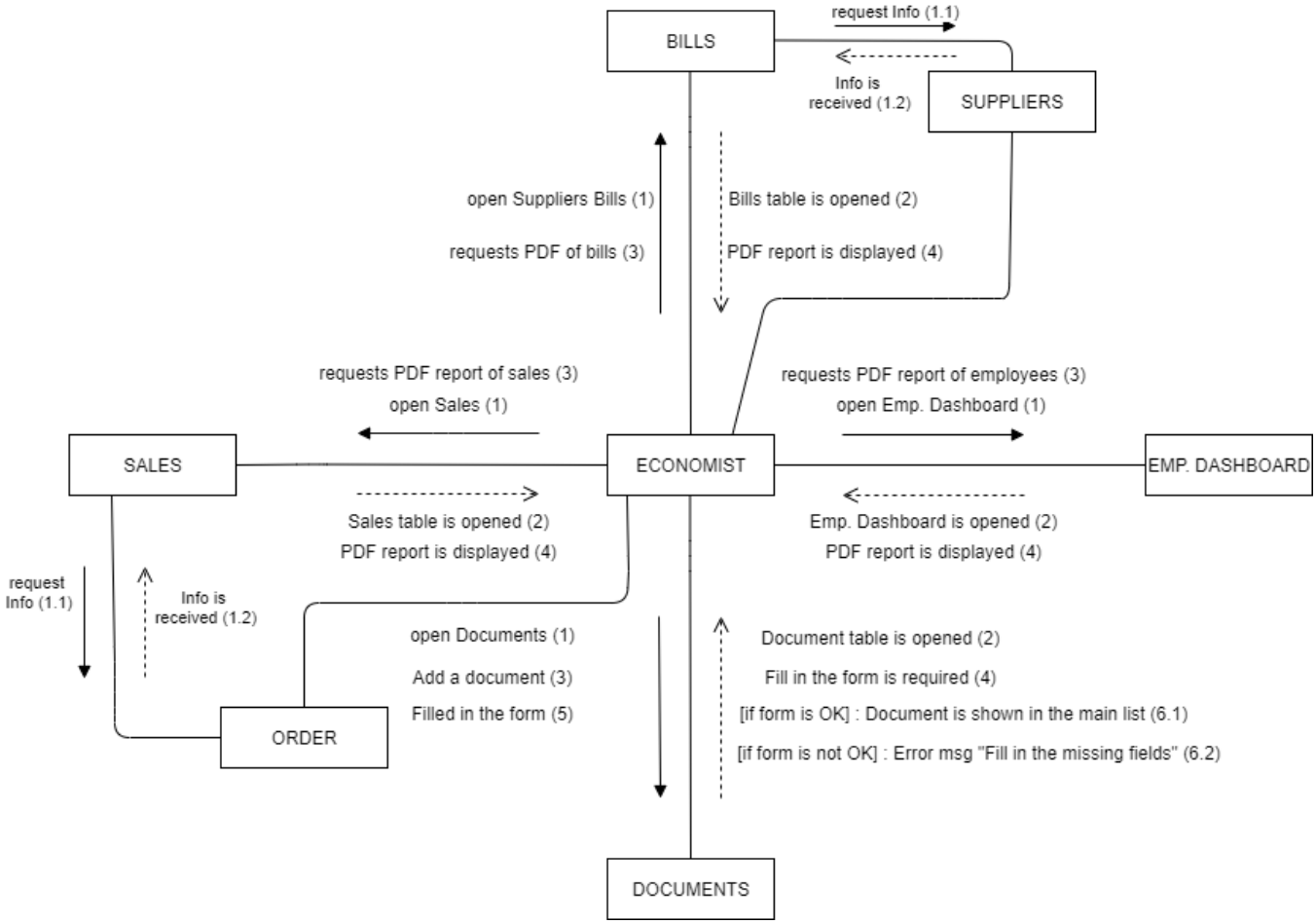
4.8.2 CC_all use cases extended_Owner



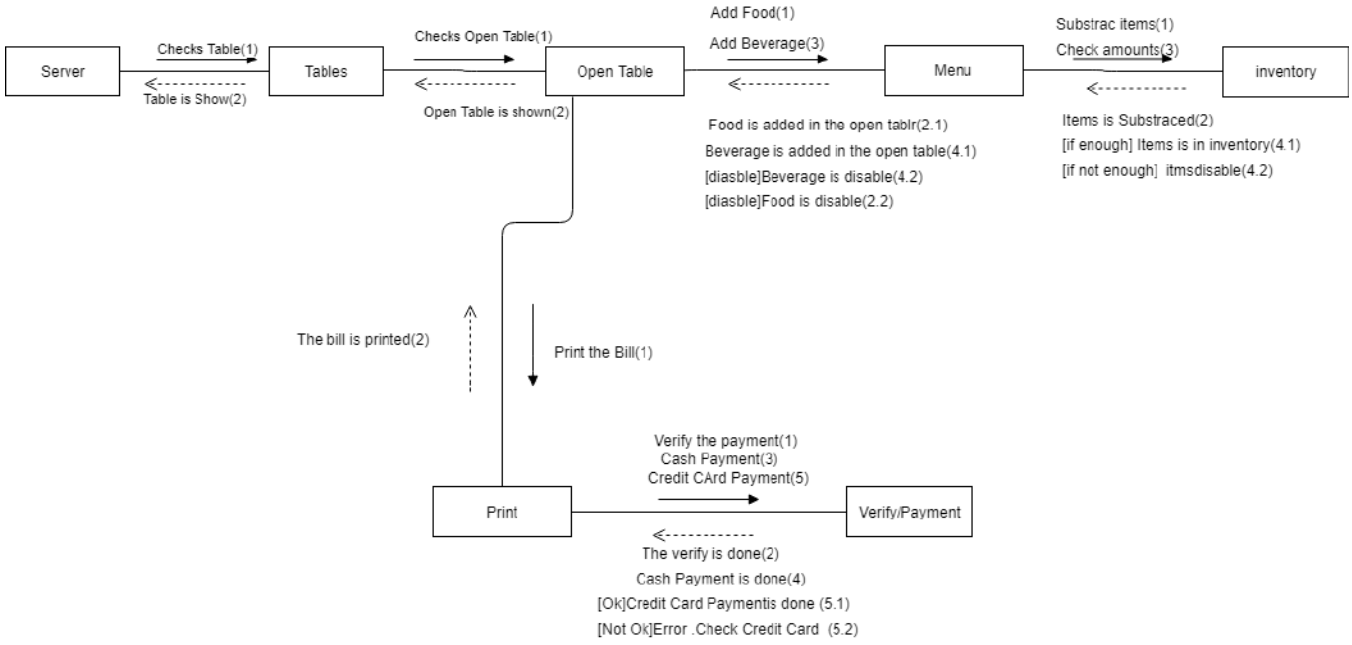
4.8.3 CC_all use cases extended_Manager



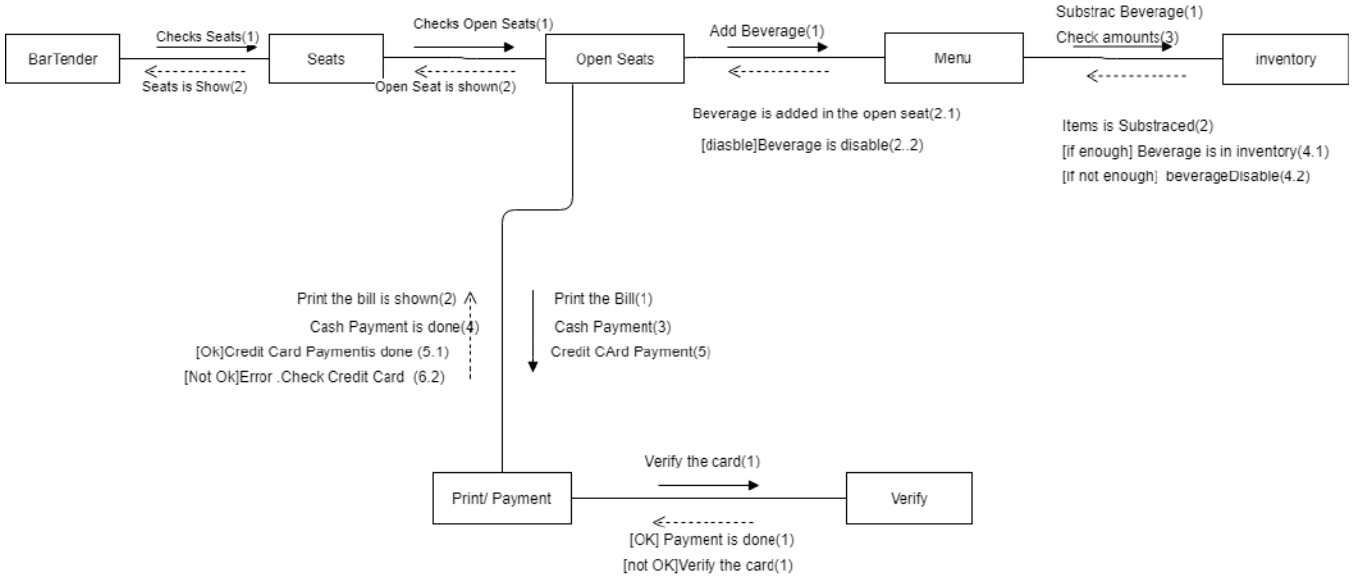
4.8.4 CC_all use cases extended_Economist



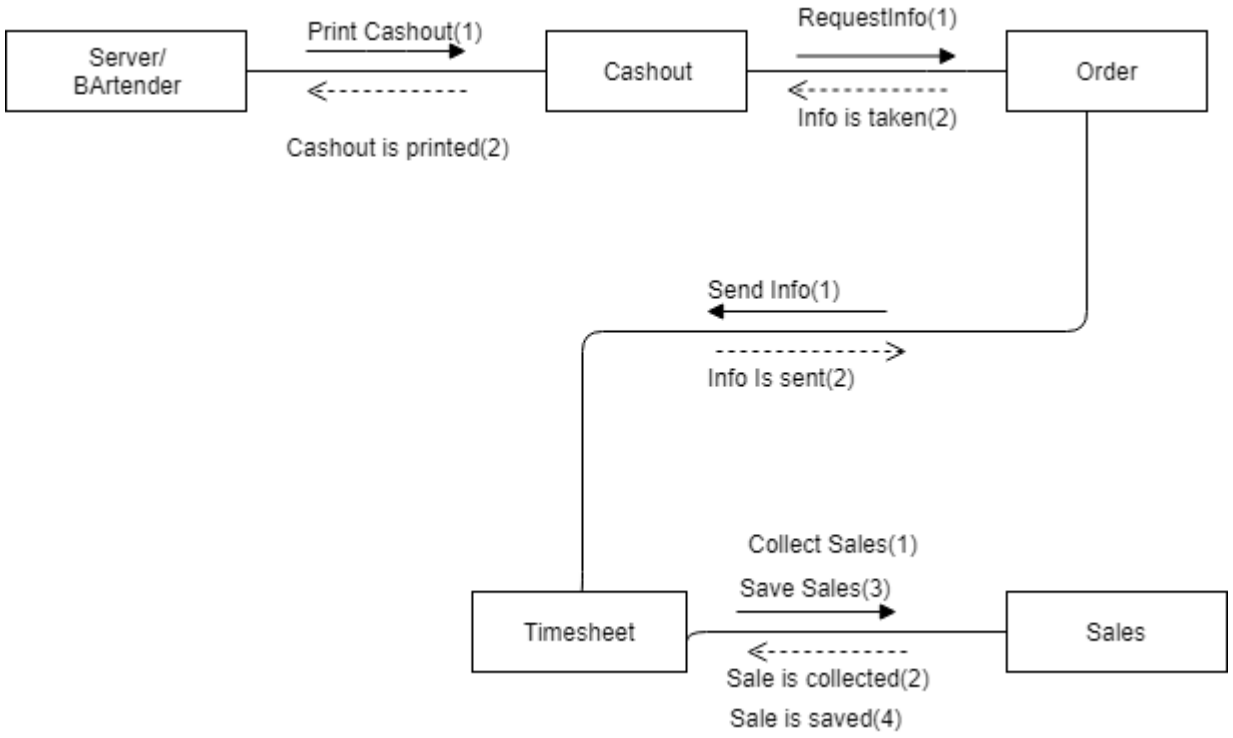
4.8.5 CC_4.1_4.2_4.3_4.4_TablesServer



4.8.6 CC_5.4_5.2_5.3_5.4_Seats

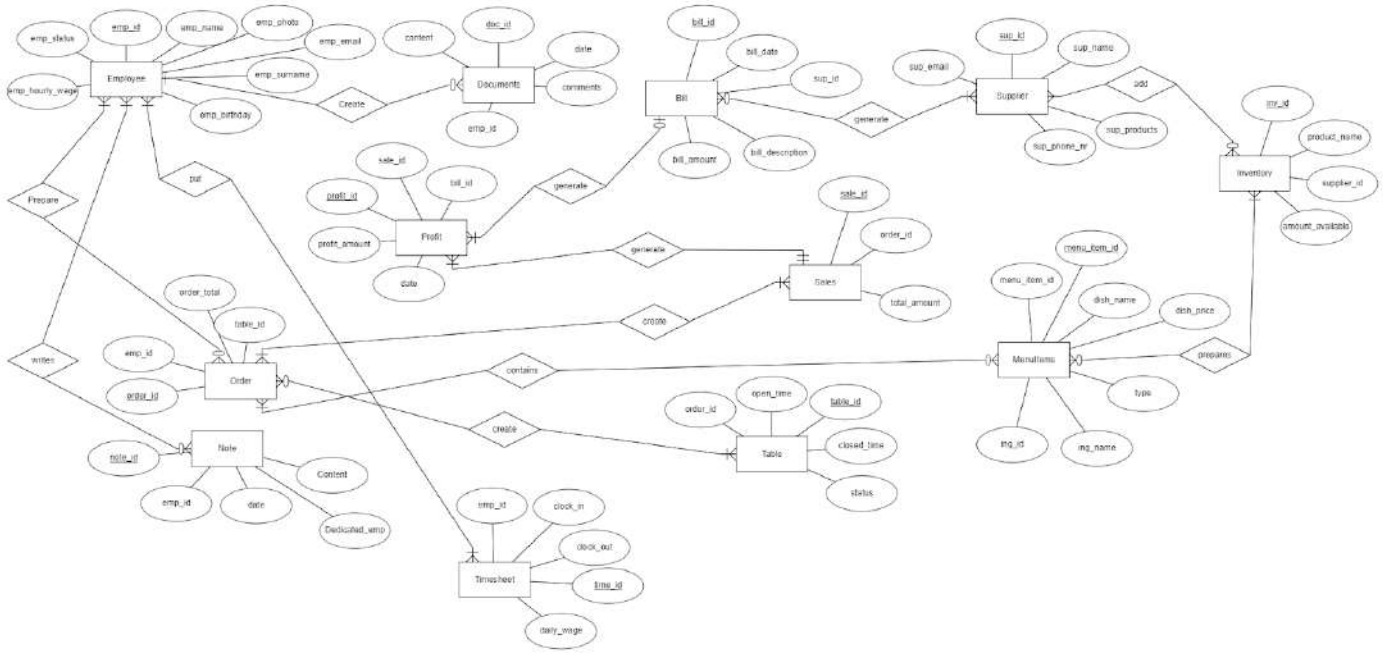


4.8.7 CC_4.5_5.5_Cashout

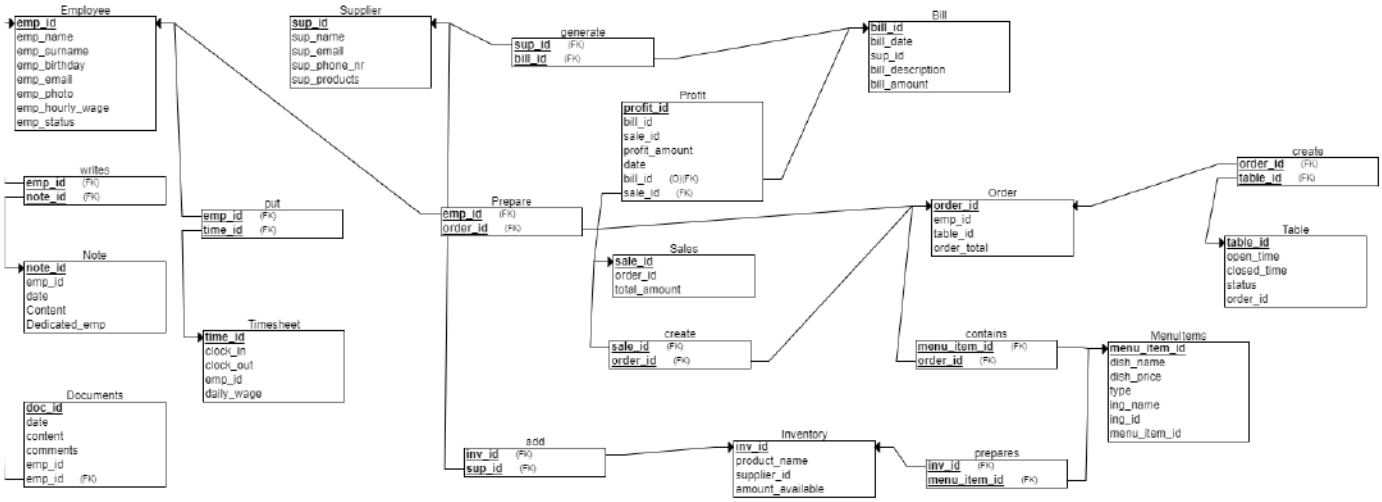


4.9 ERD

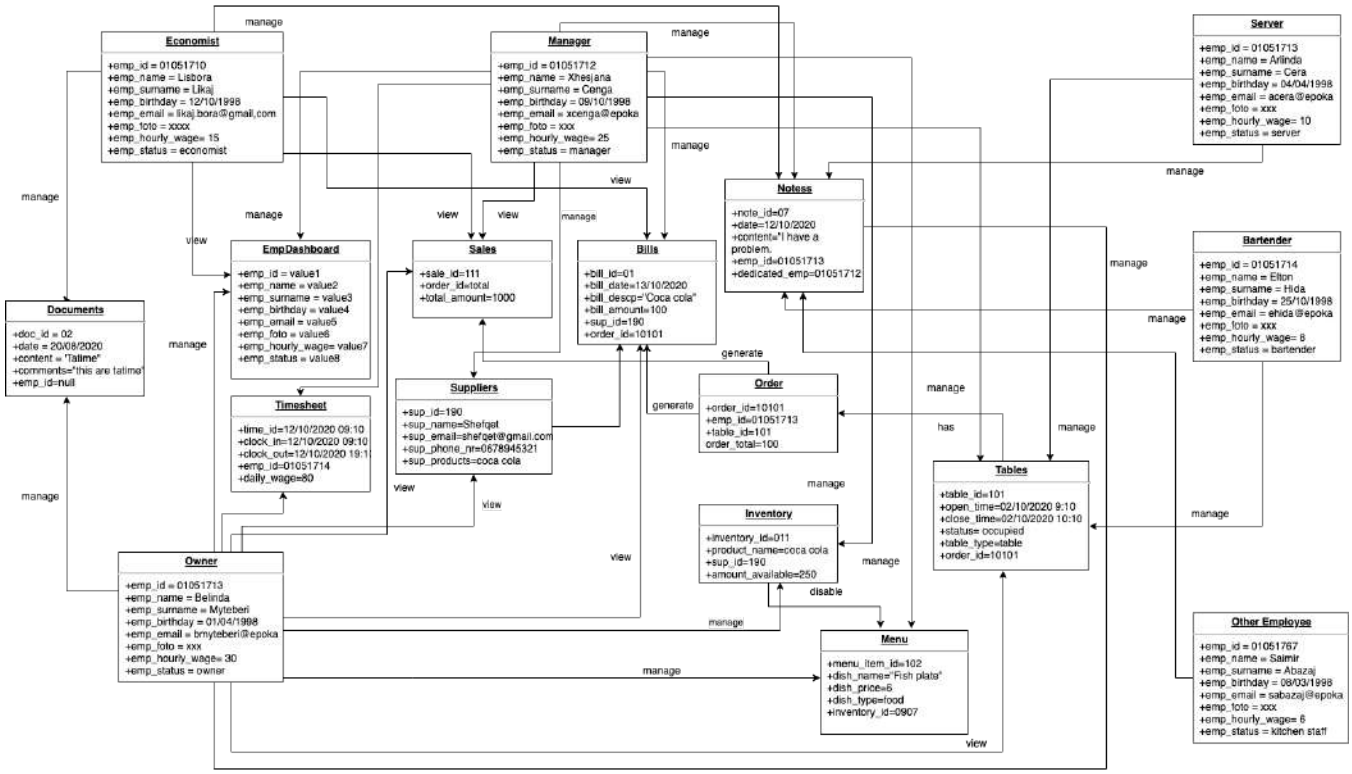
4.9.1 ERD



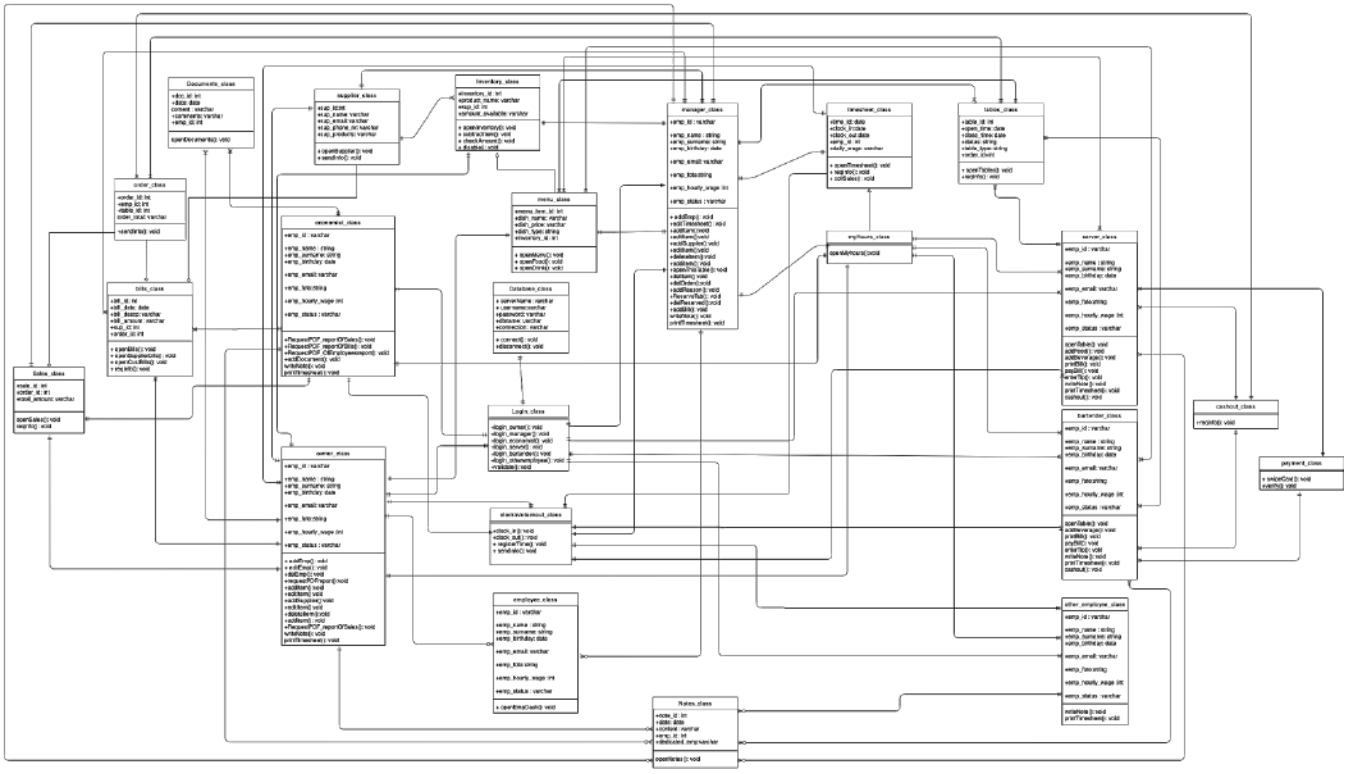
4.9.2 ERD_Schema



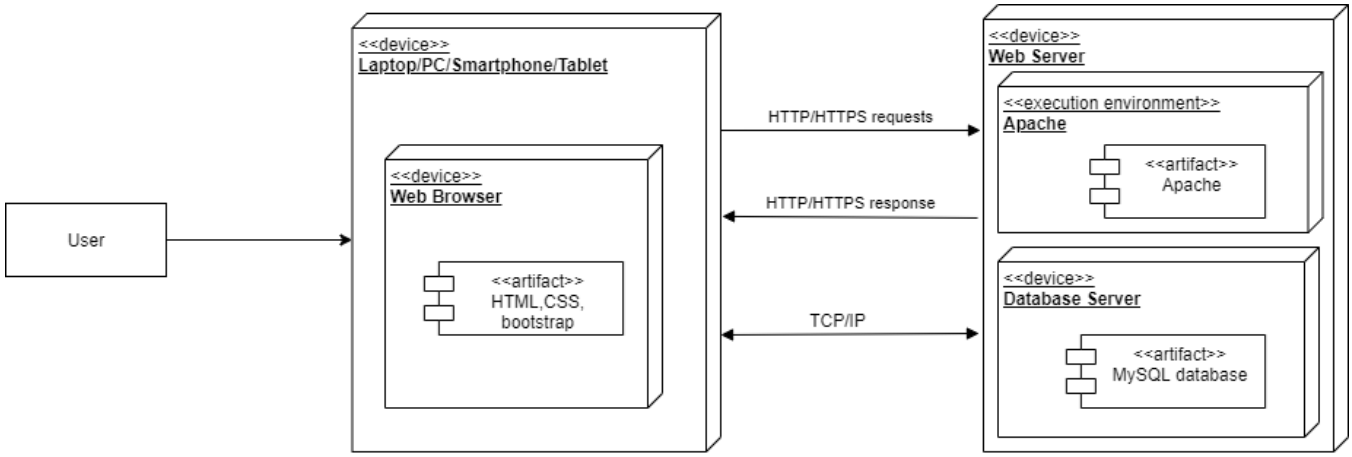
4.10 Object Diagram



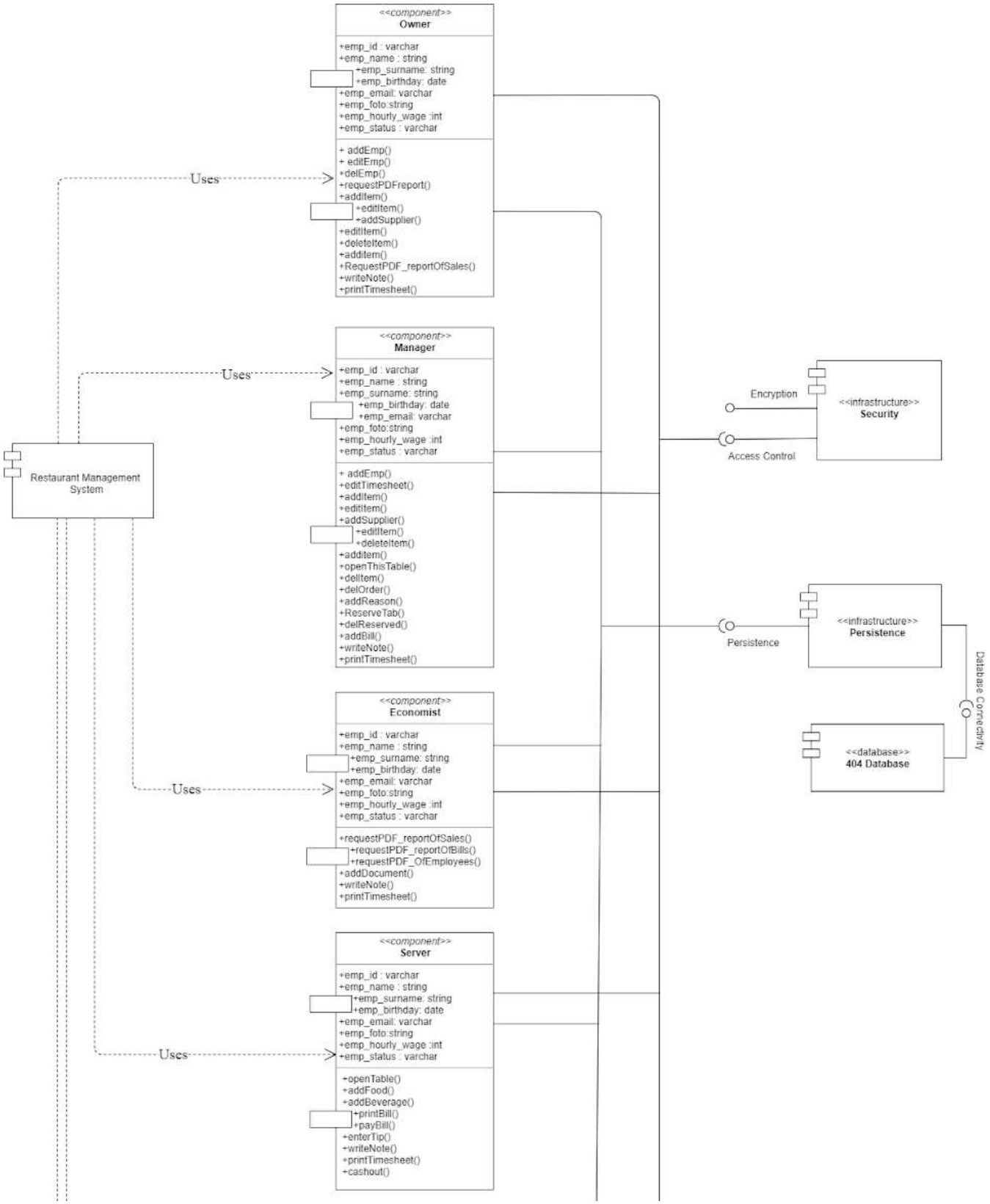
4.11 Class Diagram



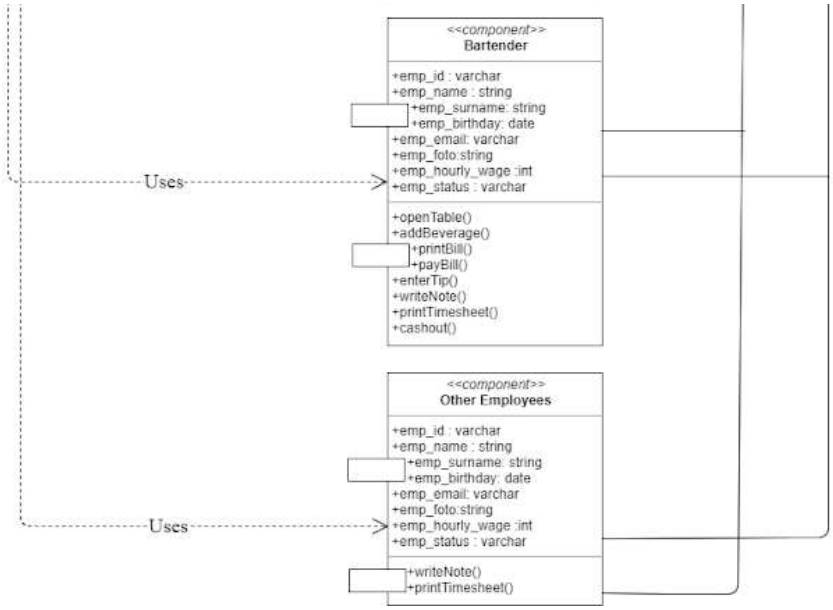
4.12 Deployment Diagram



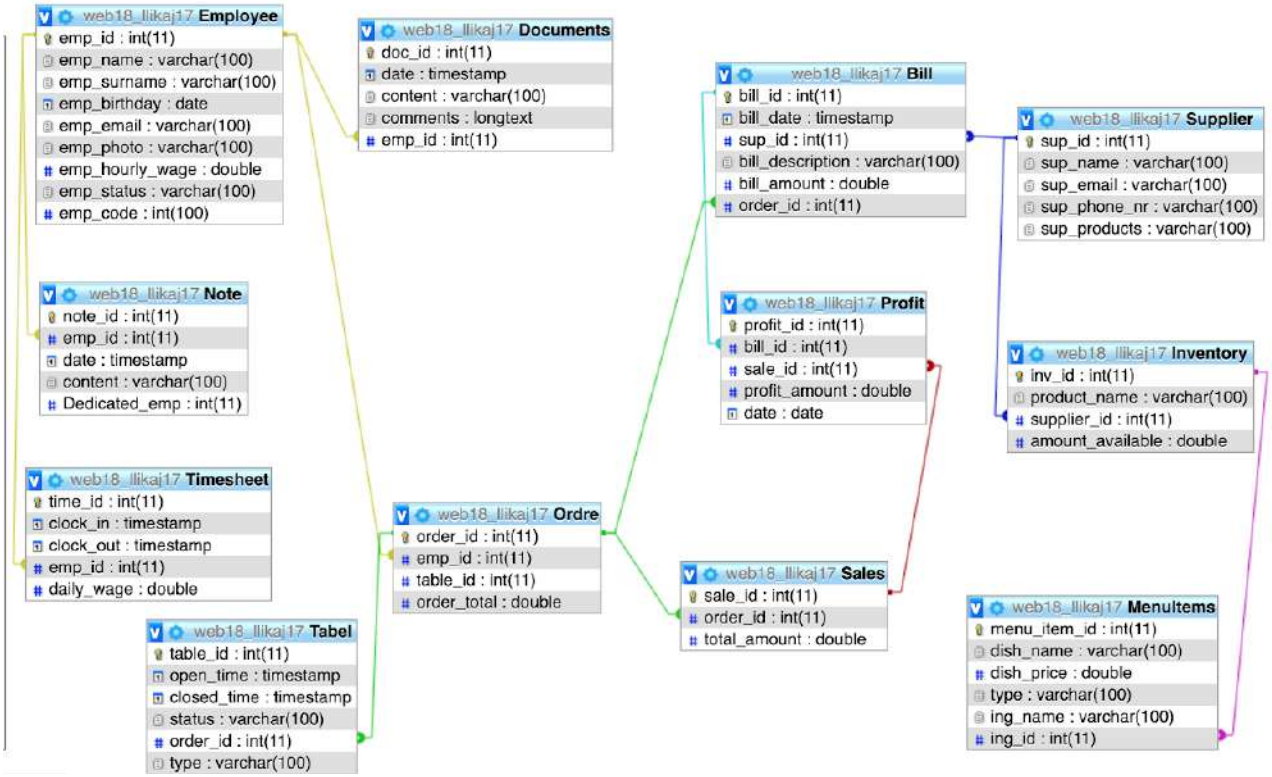
4.13 Component Diagram



continues…


Uses
<<component>>
Bartender
+emp_id : varchar
+emp_name : string
+emp_surname: string
+emp_birthday: date
+emp_email: varchar
+emp_foto:string
+emp_hourly_wage :int
+emp_status : varchar
+openTable()
+addBeverage()
+printBill()
+payBill()
+enterTip()
+writeNote()
+printTimesheet()
+cashout()
Uses
<<component>>
Other Employees
+emp_id : varchar
+emp_name : string
+emp_surname: string
+emp_birthday: date
+emp_email: varchar
+emp_foto:string
+emp_hourly_wage :int
+emp_status : varchar
+writeNote()
+printTimesheet()

4.14 Relational Database Schema



5. Implementation

5.1 Technologies used

5.1.1 Client-Side Programming (Front End)

- HTML (Hypertext Markup Language)
- CSS (Cascading Style Sheets)
- Bootstrap
- JS (JavaScript)

5.1.2 Server-Side Programming (Back End)

- Programming Language - Simple PHP
- Database - mySQL
- Server - Apache
- This web application will initially be saved into a student's dedicated server which is part of the Epoka server: stud-proj.epoka.edu.al.

5.2 Conclusion:

After all at this point, we finalized a monthly work for our Restaurant Management Software.

It is a brand new software, which is designed by the model required by the owner of "Restaurant Besniku", the business that we chose to be responsible for.

Overall, we processed the gathered data by dividing our work into some main parts: executive summary, service description, requirements and software design. Each part was shared homogeneously between the team members. The desire to end up with the appropriate product was our everyday motivation.

Our product is the software that will be used by the employees of the restaurant. The owner, manager, economist, server, bartender and the other employees will be able to generate it in every possible electronic device. They can manage works like: clock in and clock out, list of

employees data, sales information, orders generation, bills information, suppliers information, tables and seats information, interaction by leaving notes and making possible changes, etc. Now that they will have this software in their hands, their work will be easier and modern. The employees will enjoy the simplicity and quietness that this program will provide to them.

5.3 Future Improvement:

Since, the most goals are reached at this point, there is little left to add in the future. It would consists in adding the supplier and client access. The supplier will be part of this system by automatically being noticed if anything is missing in the inventory and the clients will be free to order online by checking the varieties in the menu, their prices and their availability.

A continuous future work will absolutely be the technological improvement based on the innovations in the market, in order for our clients to generate the best coherent system.

6. Project Management

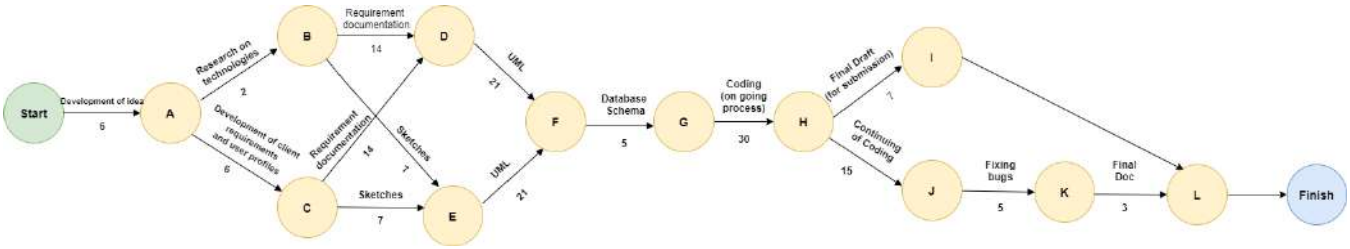
6.1 Work Division Table

TASK ID	TASK	DURATION	TEAM MEMBER RESPONSIBLE	PREDECESSORS
A	**Development of the idea**	**6**	**Everyone**	
	Brainstorming	4	Everyone	
	Research	3	Everyone	
	First Meet with the client	1	Xhesjana	
B	**Research on technologies**	**2**	**Everyone**	**A**
	php/css/javascript/boot strap	2		
C	**Development of client requirements and user profiles**	**6**	**Everyone**	**A**
D	**Requirement Documentation**	**14**		**B, C**
	Project overview	1	Belinda	
	Purpose and scope specification	1	Arlinda	
	Product context	1	Xhesjana	
	User characteristics	2	Elton	
	Assumptions	1	Saimir	
	Constraints and dependencies	2	Lisbora	
	Functional Requirements	5	Elton, Saimir	
	Non-functional	5	Arlinda, Belinda, Lisbora,	

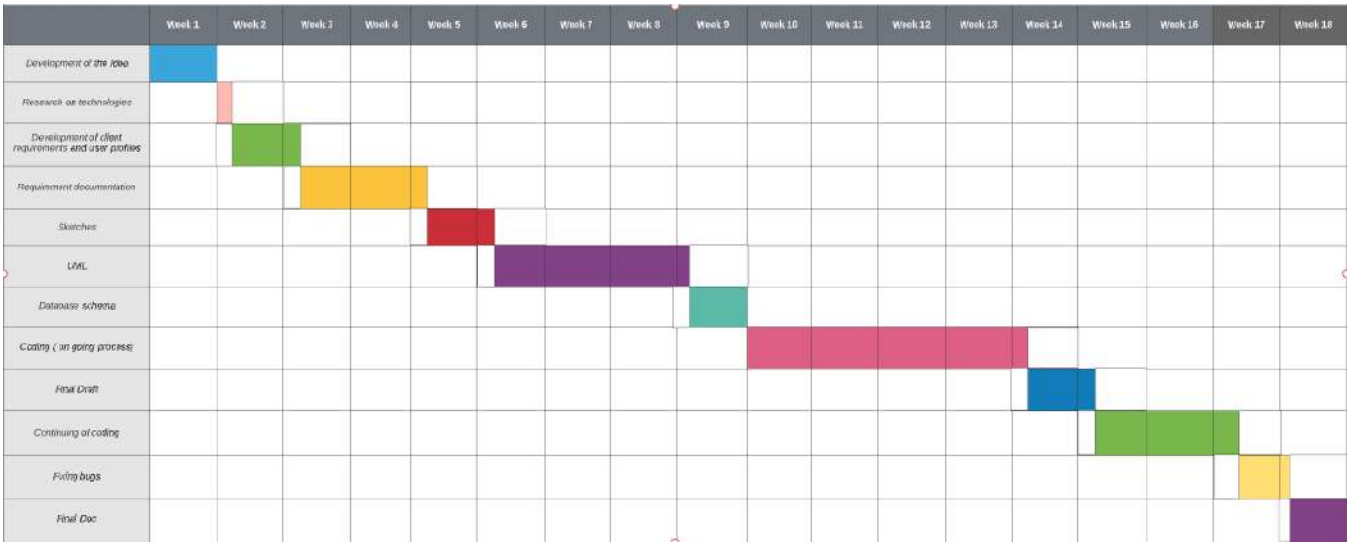
	Requirements		Xhesjana	
	Domain Requirements	1	Arlinda	
E	**Sketches**	**7 days**		**B, C**
	Amateur sketches	3	Everyone	
	Final sketches	4	Lisbora	
F	**UML**	**21**		**D, E**
	User-scenarios	**4**	Everyone	
	Activity Diagrams	**3**	Arlinda, Lisbora	
	State Charts	**3**	Elton, Saimir	
	DFD	**5**	Belinda, Xhesjana	
	Sequence Diagrams	**3**	Arlinda, Lisbora, Xhesjana	
	Collaboration Diagrams	**3**	Elton, Saimir, Xhesjana	
	ERD	**3**	Belinda	
	Class Diagram	**2**	Lisbora, Xhesjana	
	Object Diagram	**2**	Arlinda, Belinda	
	Component Diagram	**1**	Xhesjana	
	Deployment Diagram	**1**	Xhesjana	
G	**Database Schema**	**5**	Belinda	**F**
H	**Coding (on going process)**	**30**	Belinda, Lisbora	**G**
I	**Final Draft (for Submission)**	**7**		**I**
	Project Management	2	Arlinda, Elton, Saimir	
	Changes on Requirement Documentation	2	Belinda	
	Screenshots (for the unfinished web	2	Lisbora	

	application)			
	Conclusion and future improvement	1	Arlinda, Xhesjana	
J	Continuing of coding (after the submission of the project for the course)	15		**G**
K	Fixing bugs	5		**J**
L	Final Doc	3		**K**

6.2 Critical path



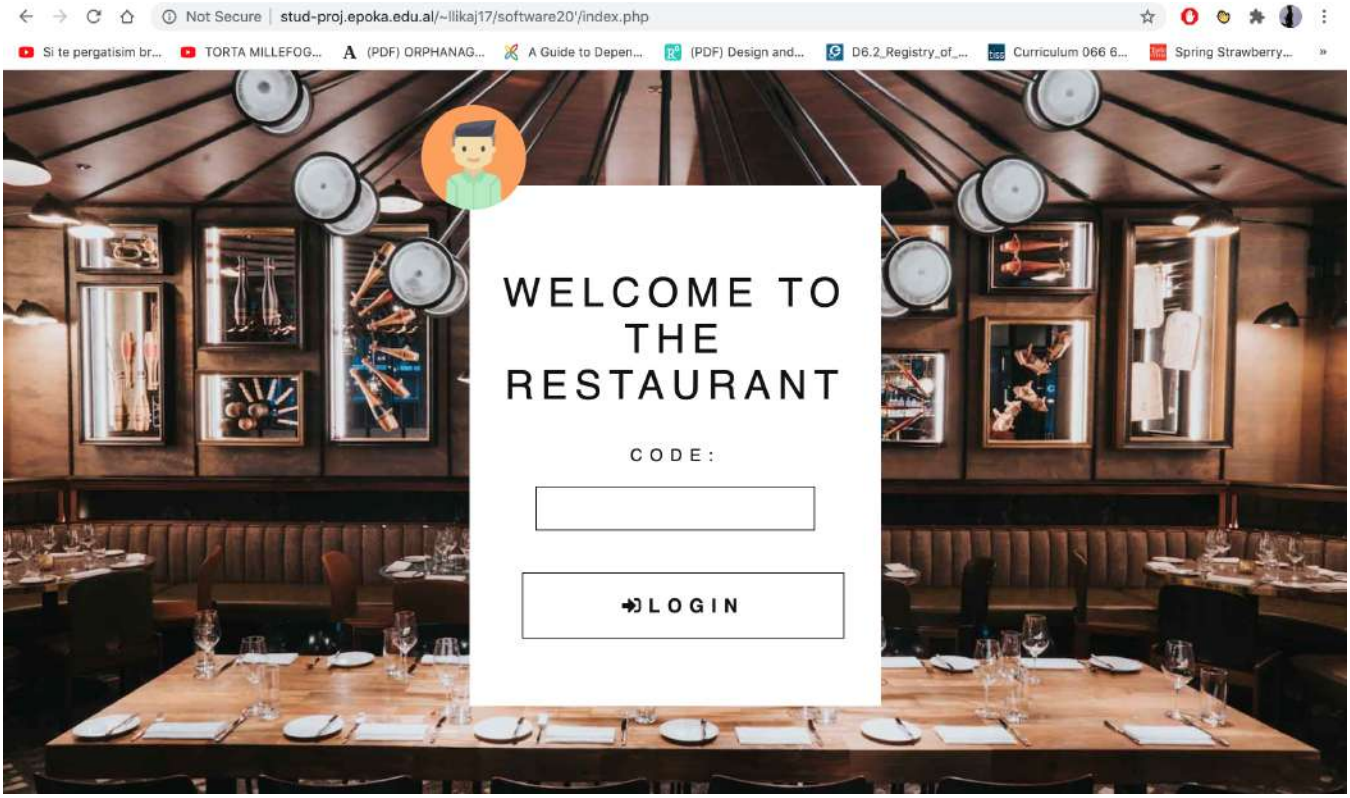
6.3 Ghantt Chart



7. Appendix

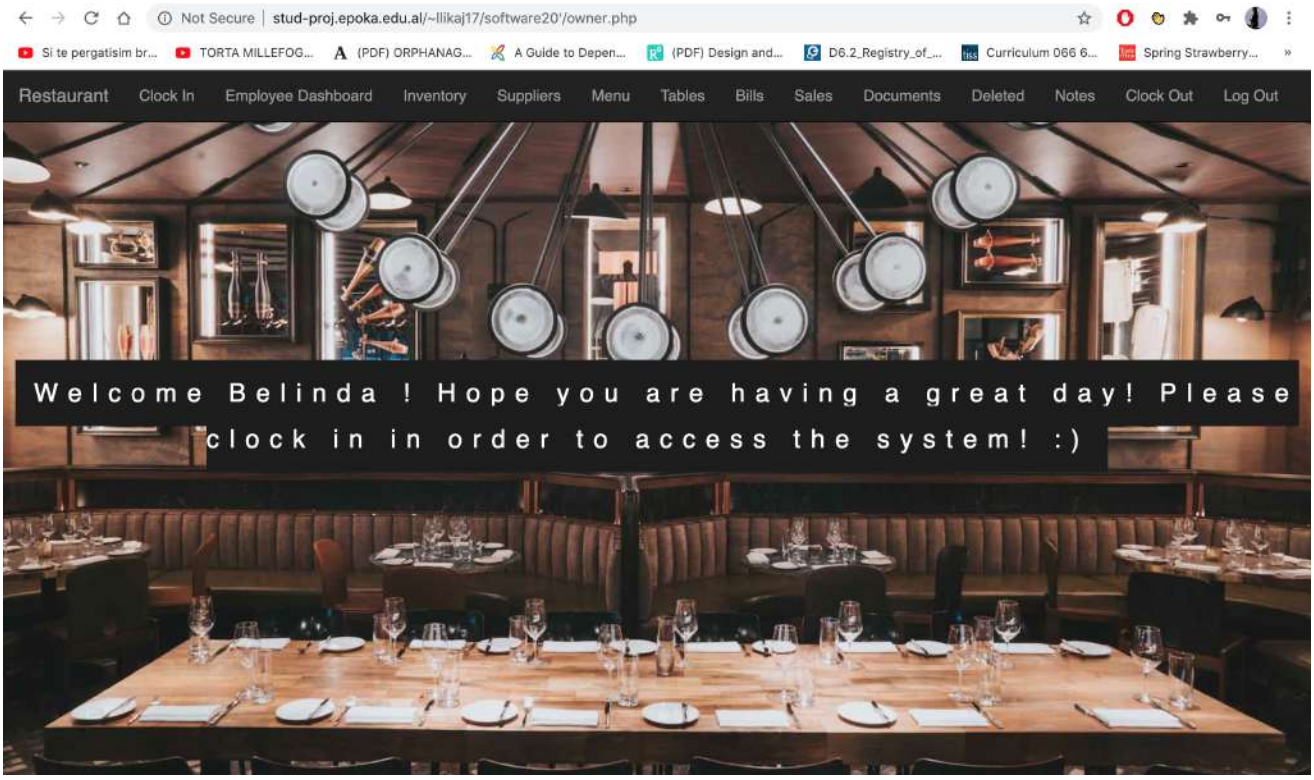
7.1 Screenshots

7.1.1 Login Page

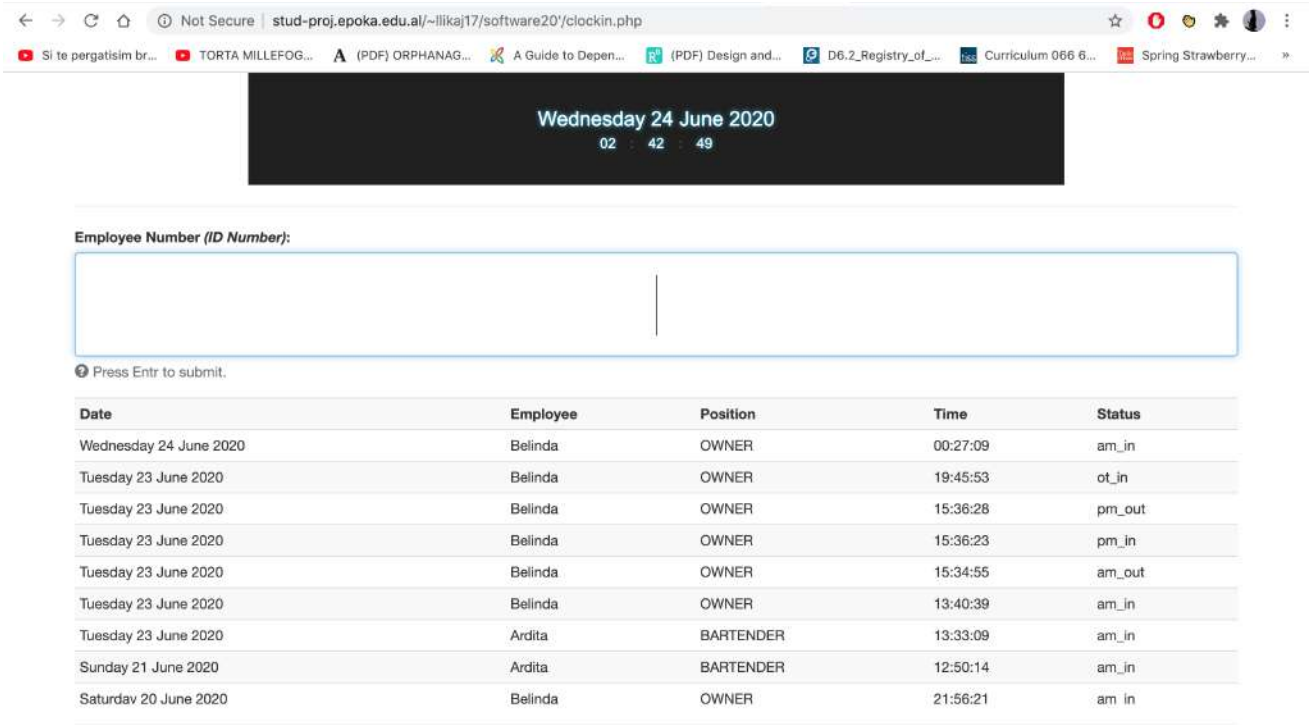


7.1.2 Manager/Owner

Manager or Owner Logs in:

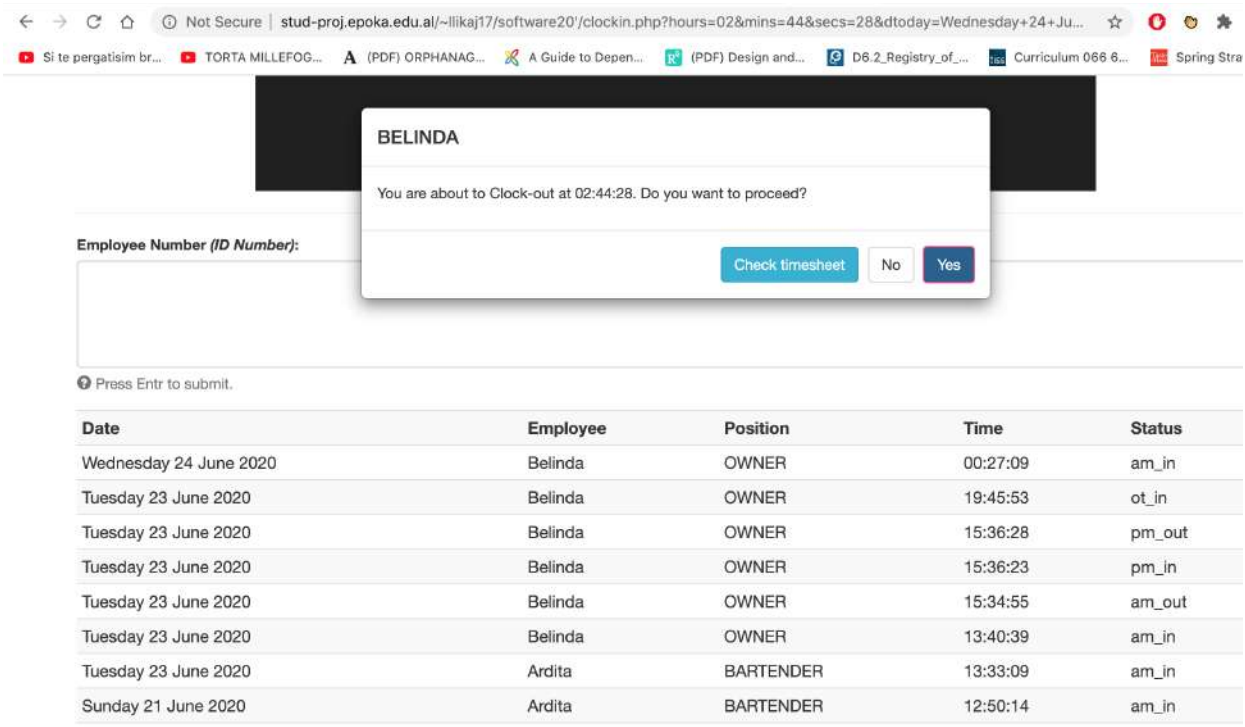


Manager/Owner clicks clockIn: (Weekly clockin/clock out of all employees is shown)



Date	Employee	Position	Time	Status
Wednesday 24 June 2020	Belinda	OWNER	00:27:09	am_in
Tuesday 23 June 2020	Belinda	OWNER	19:45:53	ot_in
Tuesday 23 June 2020	Belinda	OWNER	15:36:28	pm_out
Tuesday 23 June 2020	Belinda	OWNER	15:36:23	pm_in
Tuesday 23 June 2020	Belinda	OWNER	15:34:55	am_out
Tuesday 23 June 2020	Belinda	OWNER	13:40:39	am_in
Tuesday 23 June 2020	Ardita	BARTENDER	13:33:09	am_in
Sunday 21 June 2020	Ardita	BARTENDER	12:50:14	am_in
Saturday 20 June 2020	Belinda	OWNER	21:56:21	am_in

Manager/Owner enters his/her working code in order to clock in:



Date	Employee	Position	Time	Status
Wednesday 24 June 2020	Belinda	OWNER	00:27:09	am_in
Tuesday 23 June 2020	Belinda	OWNER	19:45:53	ot_in
Tuesday 23 June 2020	Belinda	OWNER	15:36:28	pm_out
Tuesday 23 June 2020	Belinda	OWNER	15:36:23	pm_in
Tuesday 23 June 2020	Belinda	OWNER	15:34:55	am_out
Tuesday 23 June 2020	Belinda	OWNER	13:40:39	am_in
Tuesday 23 June 2020	Ardita	BARTENDER	13:33:09	am_in
Sunday 21 June 2020	Ardita	BARTENDER	12:50:14	am_in

Manager/Owner checks his/her own weekly timesheet (Print Option):

7.1.3 Server/Bartender

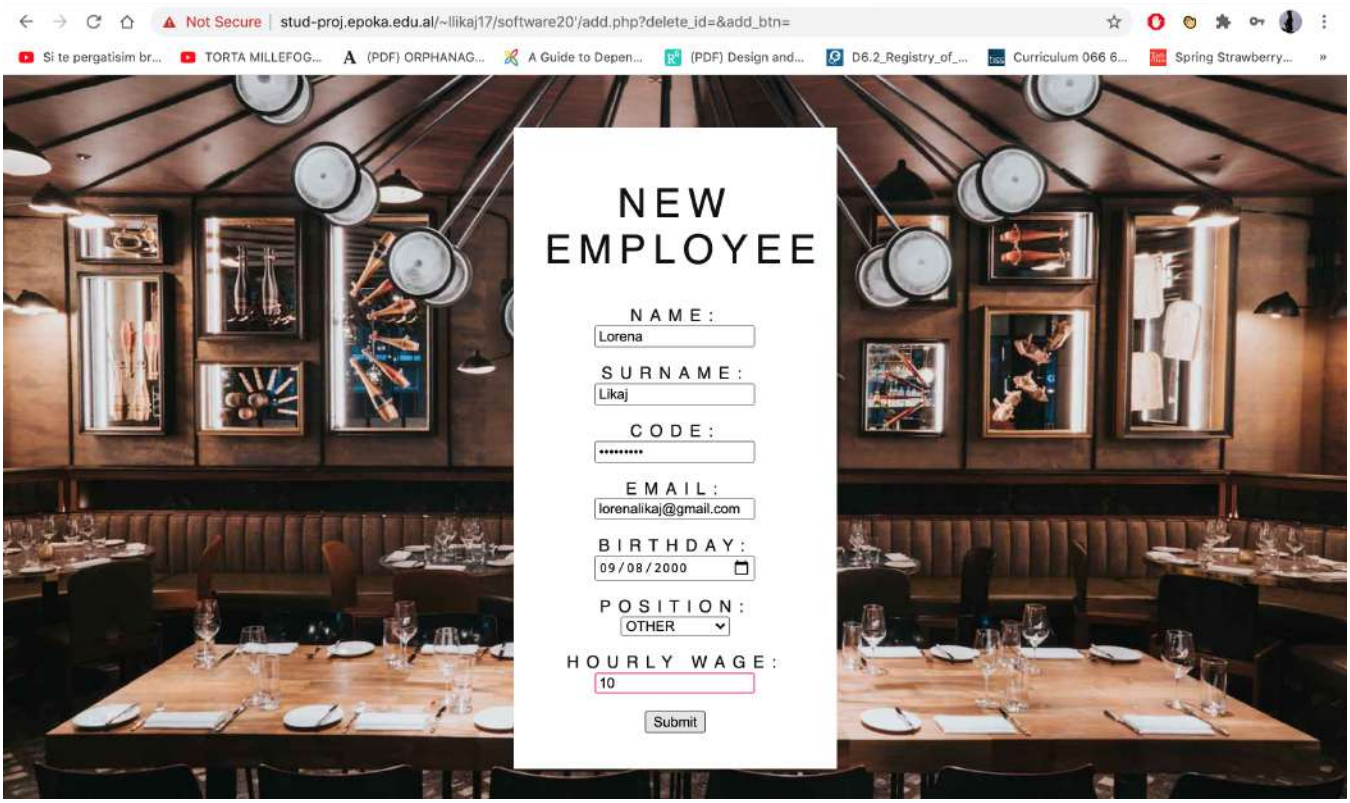
Manager/Owner clicks the Employee Dashboard:

Welcome to Employee Dashboard, Belinda

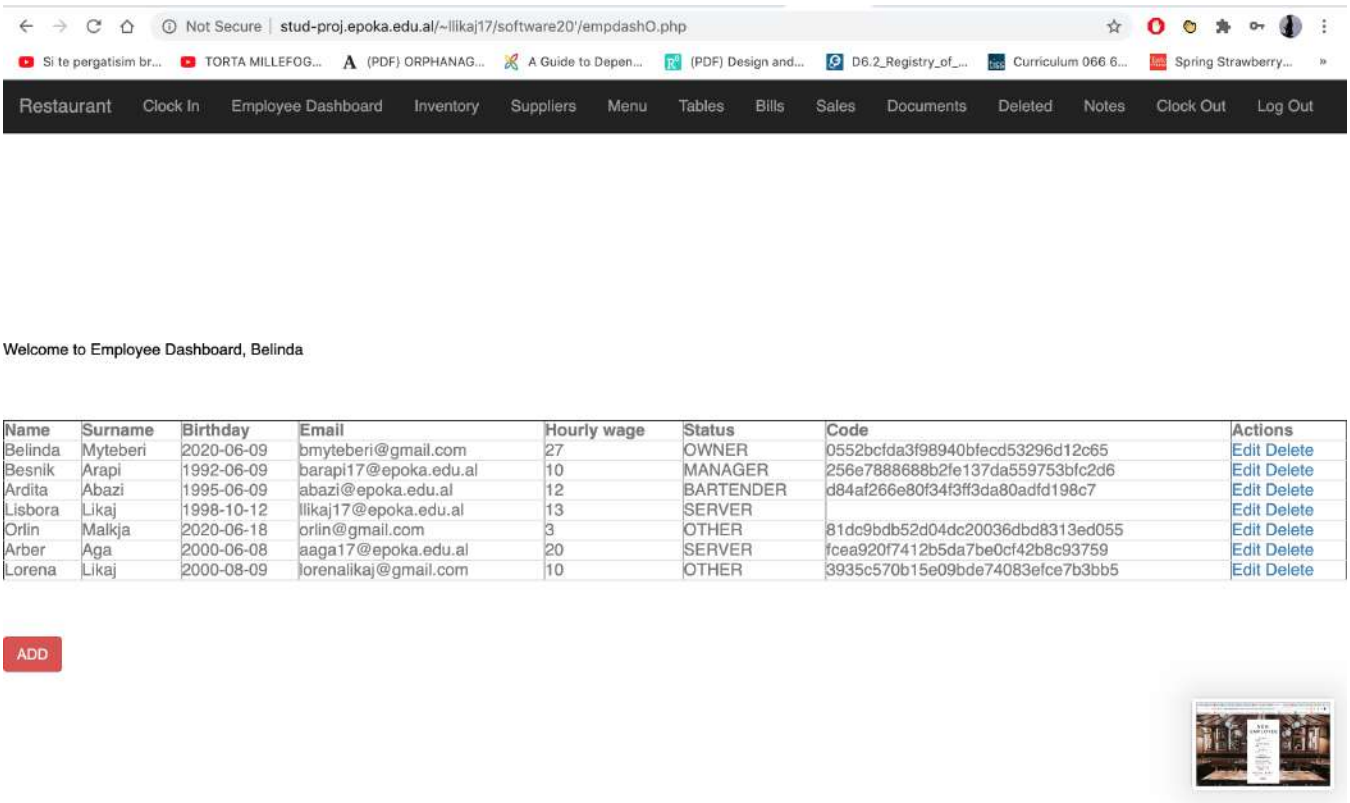
Name	Surname	Birthday	Email	Hourly wage	Status	Code	Actions
Belinda	Myteberi	2020-06-09	bmyteberi@gmail.com	27	OWNER	0552bcfda3f98940bfecd53296d12c65	Edit Delete
Besnik	Arapi	1992-06-09	barapi17@epoka.edu.al	10	MANAGER	256e7888688b2fe137da559753bfc2d6	Edit Delete
Ardita	Abazi	1995-06-09	abazi@epoka.edu.al	12	BARTENDER	d84af266e80f34f3ff3da80adfd198c7	Edit Delete
Lisbora	Likaj	1998-10-12	llikaj17@epoka.edu.al	13	SERVER		Edit Delete
Orlin	Malkja	2020-06-18	orlin@gmail.com	3	OTHER	81dc9bdb52d04dc20036dbd8313ed055	Edit Delete
Arber	Aga	2000-06-08	aaga17@epoka.edu.al	20	SERVER	fcea920f7412b5da7be0cf42b8c93759	Edit Delete

ADD

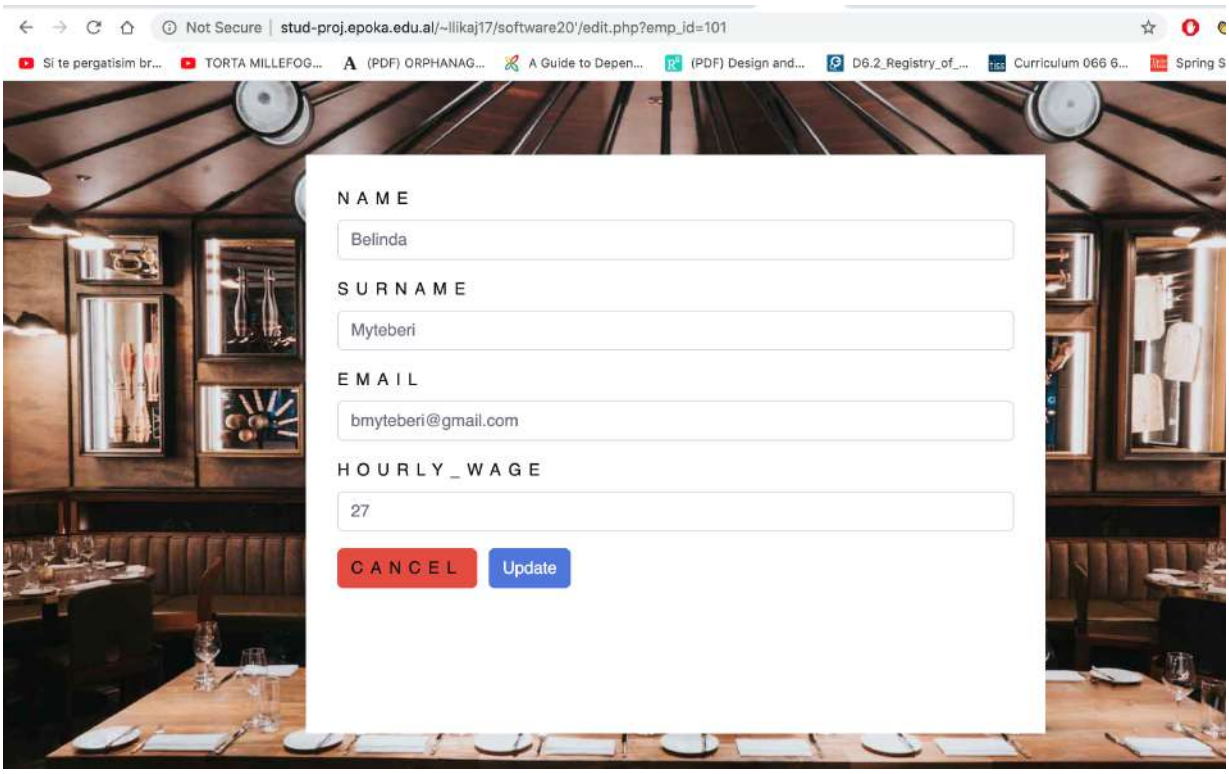
Manager/Owner clicks Add:



The new employee “Lorena” is added to the database:



Same way, he/she can edit or delete the employees from the system.



Manager/Owner check Suppliers (Add option works in the same way as for the employee dashboard)

Welcome to Suppliers Dashboard, Belinda

Product name	Supplier Name	Amount Available	Actions
Uje tonik	119	150	Edit Delete
Gin	118	50	Edit Delete
Vodka	117	50	Edit Delete
Whiskey	115	50	Edit Delete
Bravo	113	100	Edit Delete
Linguine	111	130	Edit Delete
Fanta	112	100	Edit Delete
Coke	111	100	Edit Delete
Sea Products	123	100	Edit Delete
Onion	121	100	Edit Delete
Chicken	122	90	Edit Delete

ADD

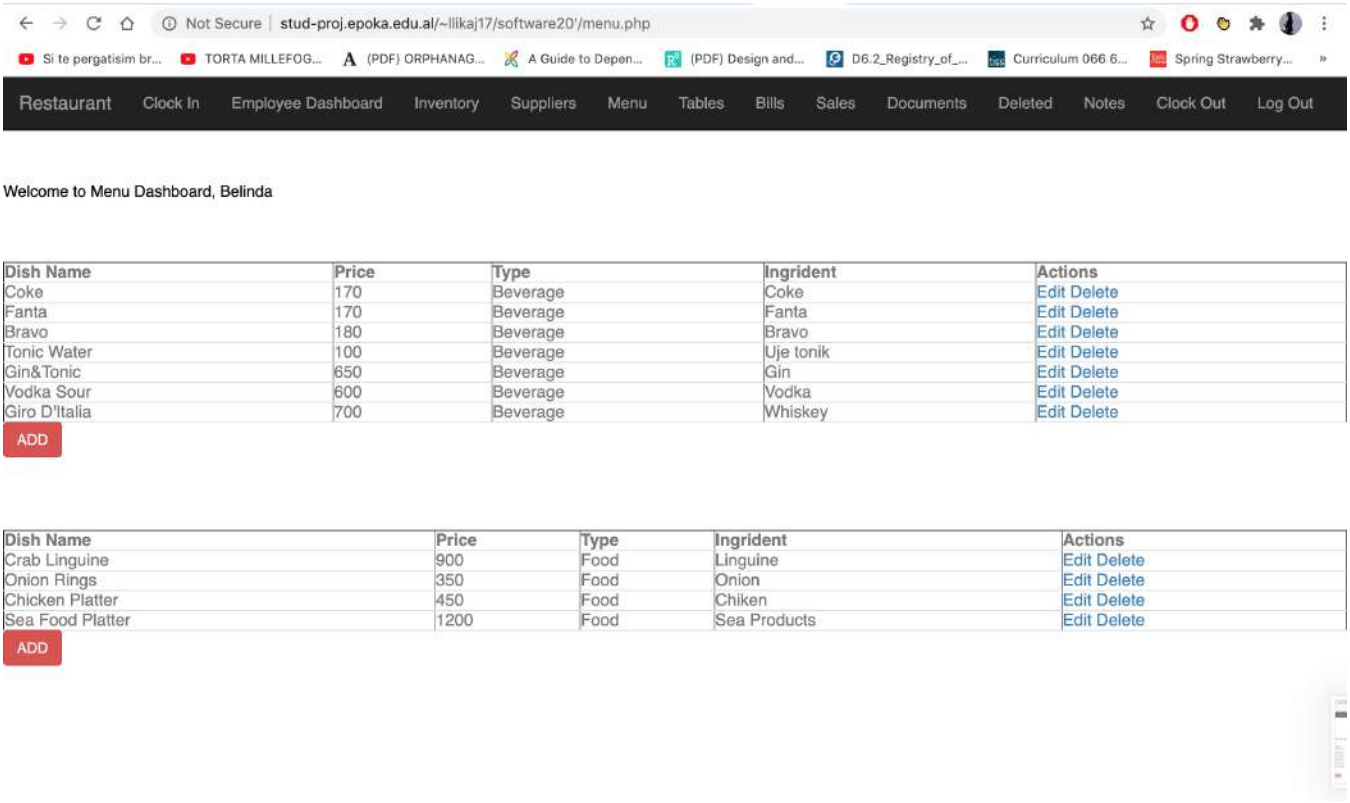
Manager/Owner check Inventory: (Add option works in the same way as for the employee dashboard)

Welcome to Suppliers Dashboard, Belinda

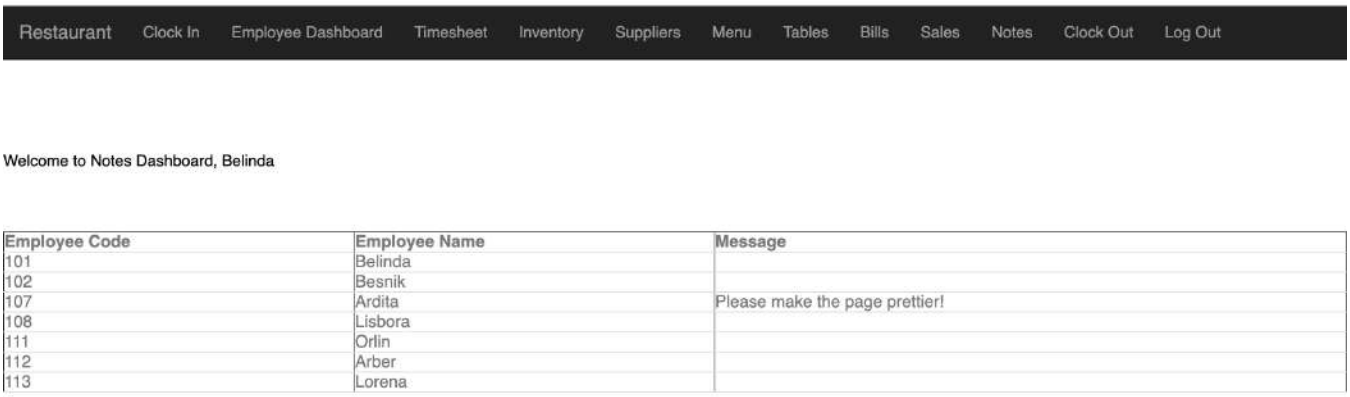
Name	Email	Phone Number	Products	Actions
Elton Abazaj	eabazaj@gmail.com	0698976543	Coke	Edit Delete
Leo Likaj	llikaj@gmail.com	0697025937	Fanta	Edit Delete
Ana Marta	amarta@gmail.com	0697045321	Bravo	Edit Delete
Endrit Imeraj	eimeraj@gmail.com	0698075643	Whiskey	Edit Delete
Endri Mina	emina@gmail.com	0698976543	Vodka	Edit Delete
Artan Elezi	aelezi@gmail.com	0698754321	Gin	Edit Delete
Orlin Koci	okoci@gmail.com	0675463241	Uje tonik	Edit Delete
Qerem Mika	qmika@gmail.com	07675463421	Onions	Edit Delete
Ekrem Cabej	ecabej@gmail.com	0687543523	Chicken	Edit Delete
Arian Hena	ahena@gmail.com	0675463212	Sea Products	Edit Delete

ADD

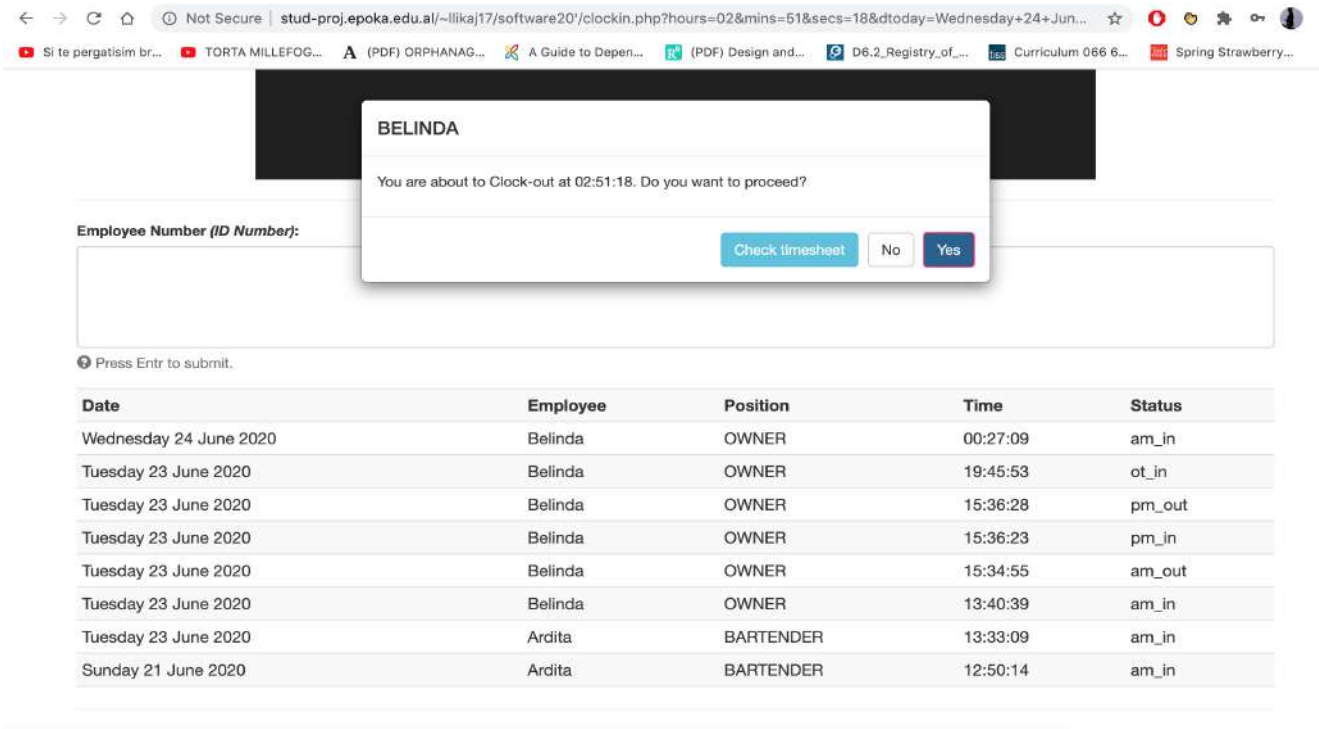
Manager/Owner check Menu: (Add option works in the same way as for the employee dashboard)



Manager/Owner check Notes: (to see if they have any notes from the employees)

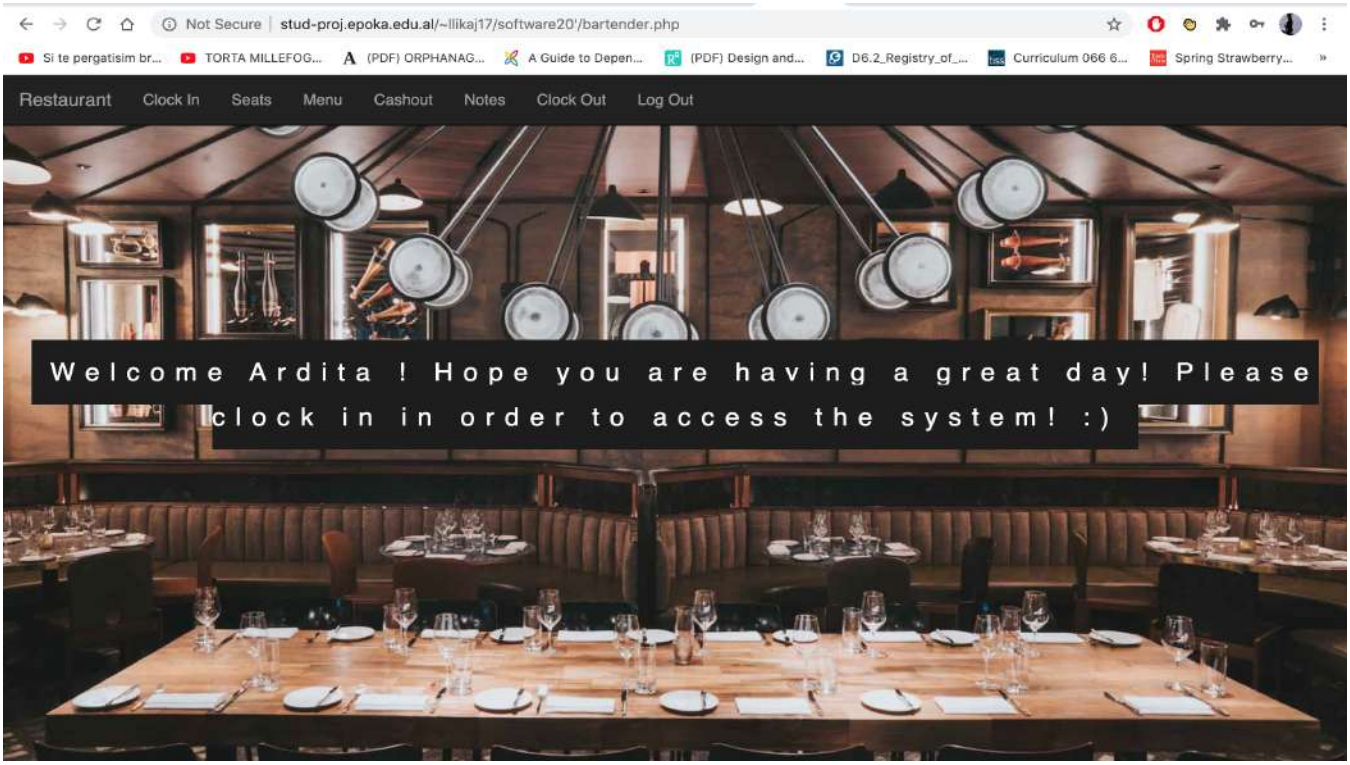


Manager/Owner click ClockOut:

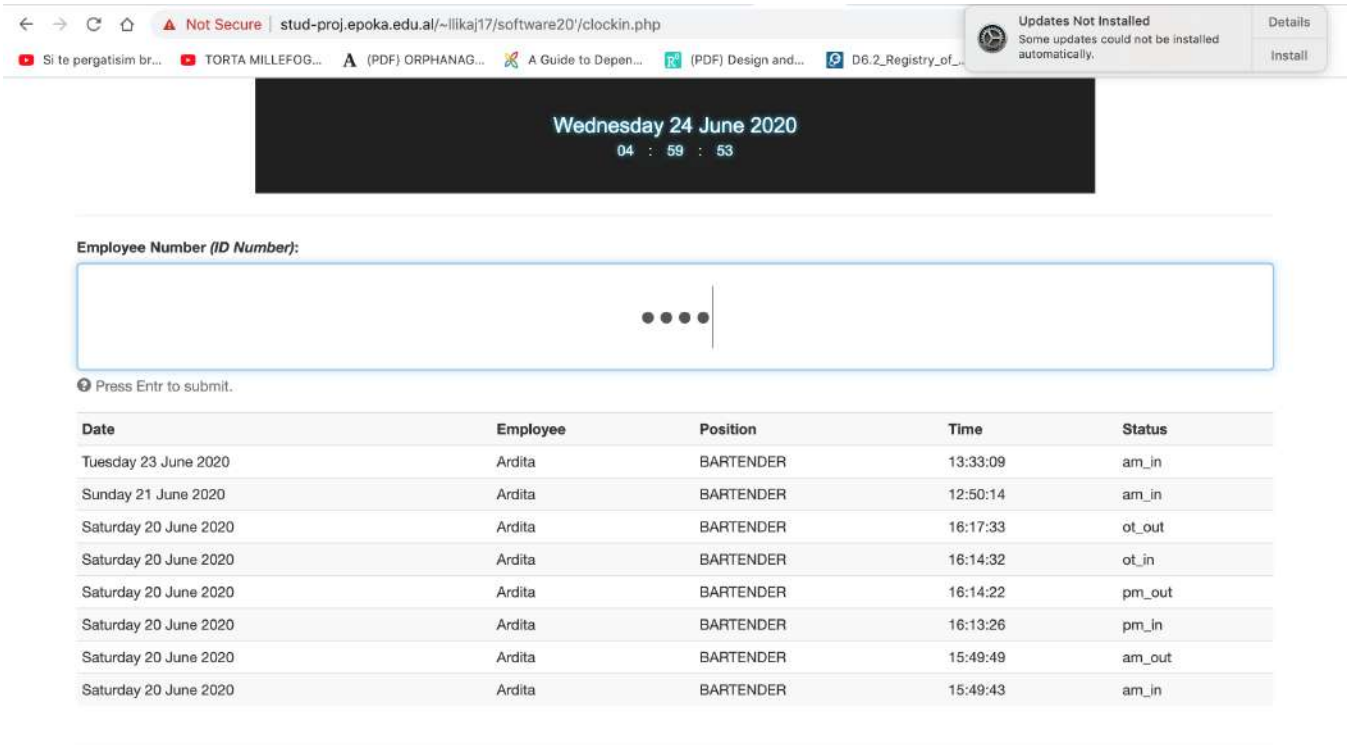


7.1.3 Server/Manager

Server or bartender logs in:

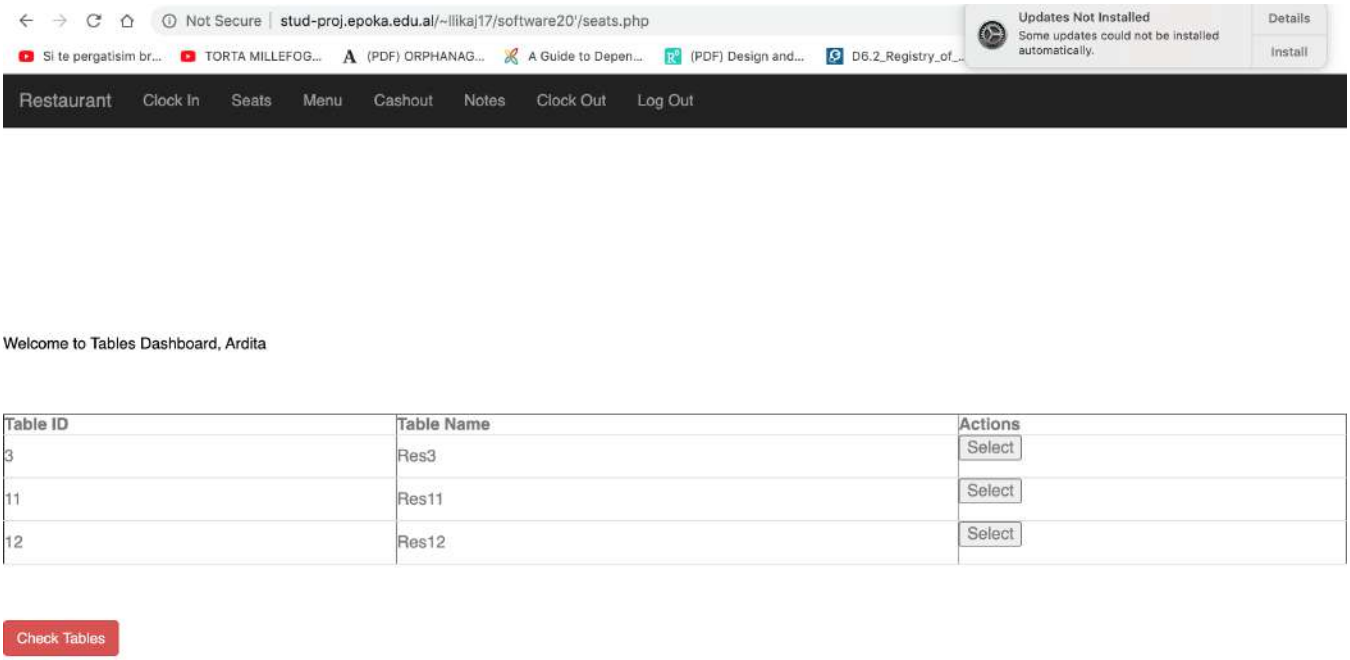


Server or bartender clocks in (he/she can only access his/her own timesheet) Server/bartender inserts the code in order to clock in::

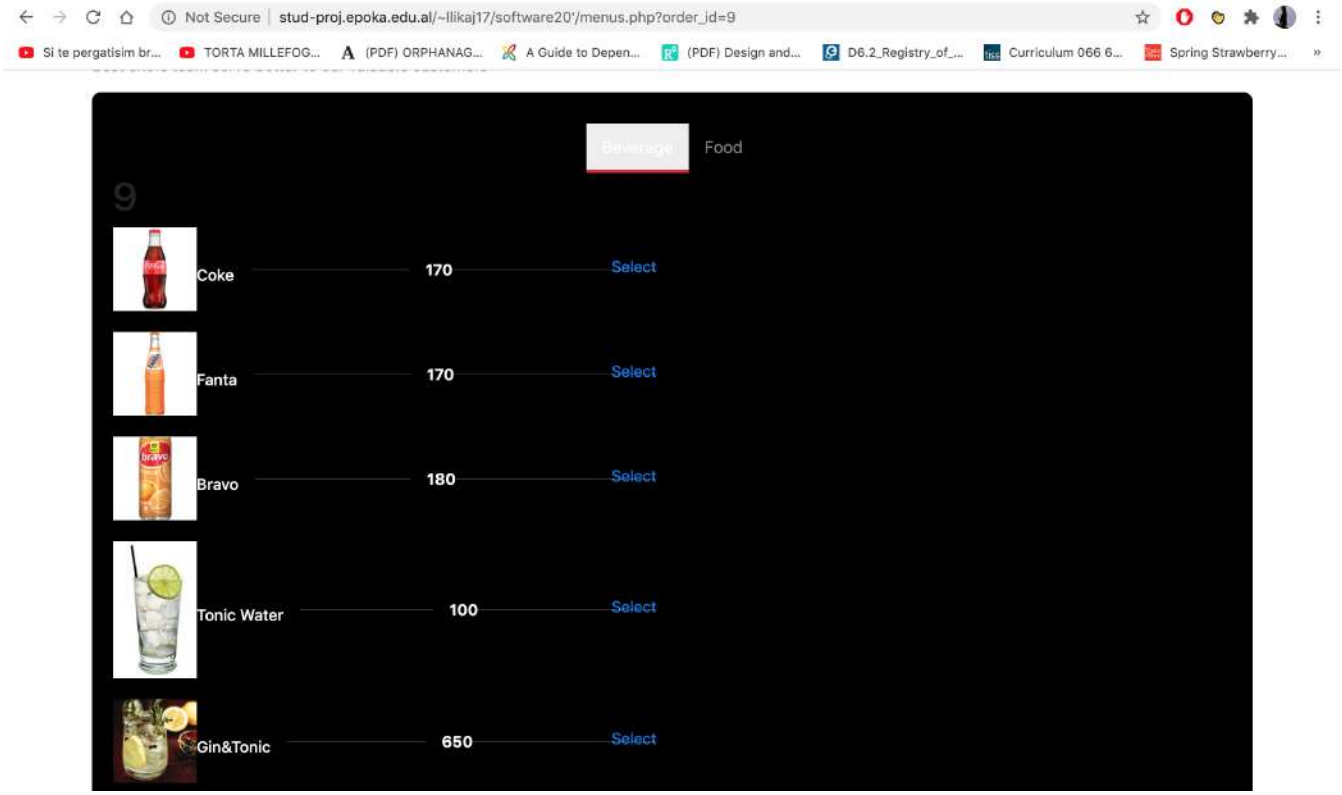


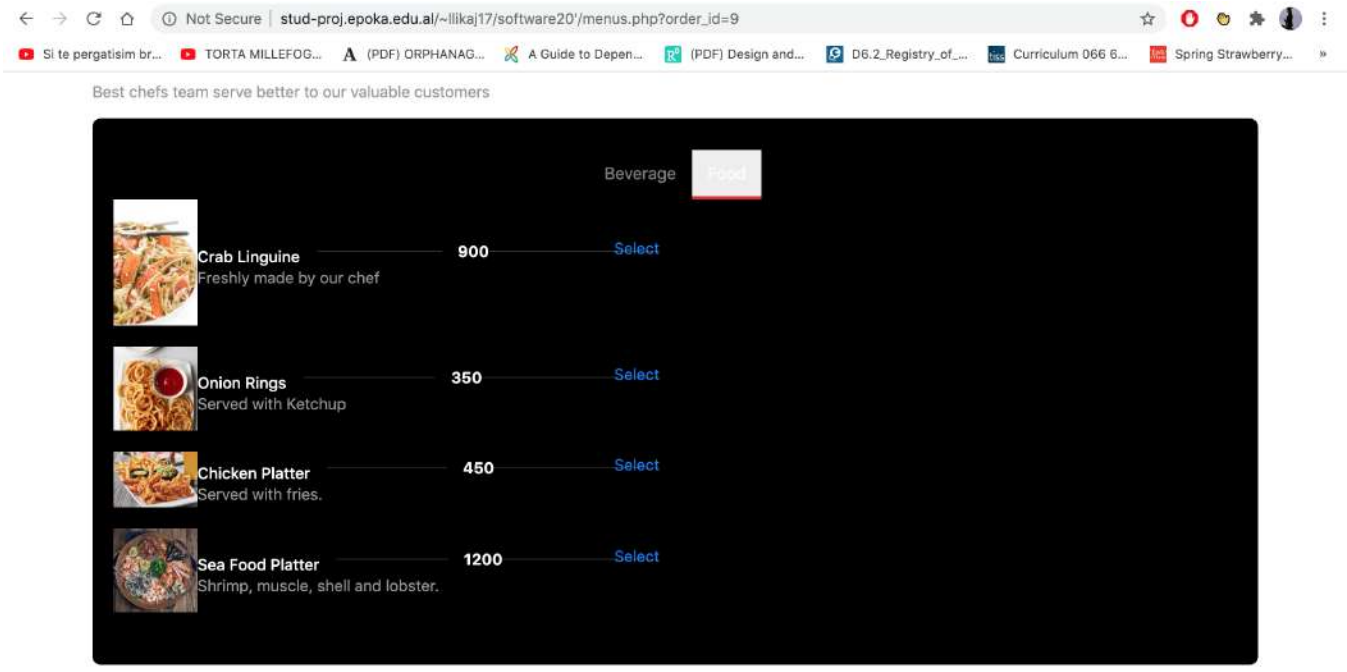
Date	Employee	Position	Time	Status
Tuesday 23 June 2020	Ardita	BARTENDER	13:33:09	am_in
Sunday 21 June 2020	Ardita	BARTENDER	12:50:14	am_in
Saturday 20 June 2020	Ardita	BARTENDER	16:17:33	ot_out
Saturday 20 June 2020	Ardita	BARTENDER	16:14:32	ot_in
Saturday 20 June 2020	Ardita	BARTENDER	16:14:22	pm_out
Saturday 20 June 2020	Ardita	BARTENDER	16:13:26	pm_in
Saturday 20 June 2020	Ardita	BARTENDER	15:49:49	am_out
Saturday 20 June 2020	Ardita	BARTENDER	15:49:43	am_in

Bartender checks available seats:

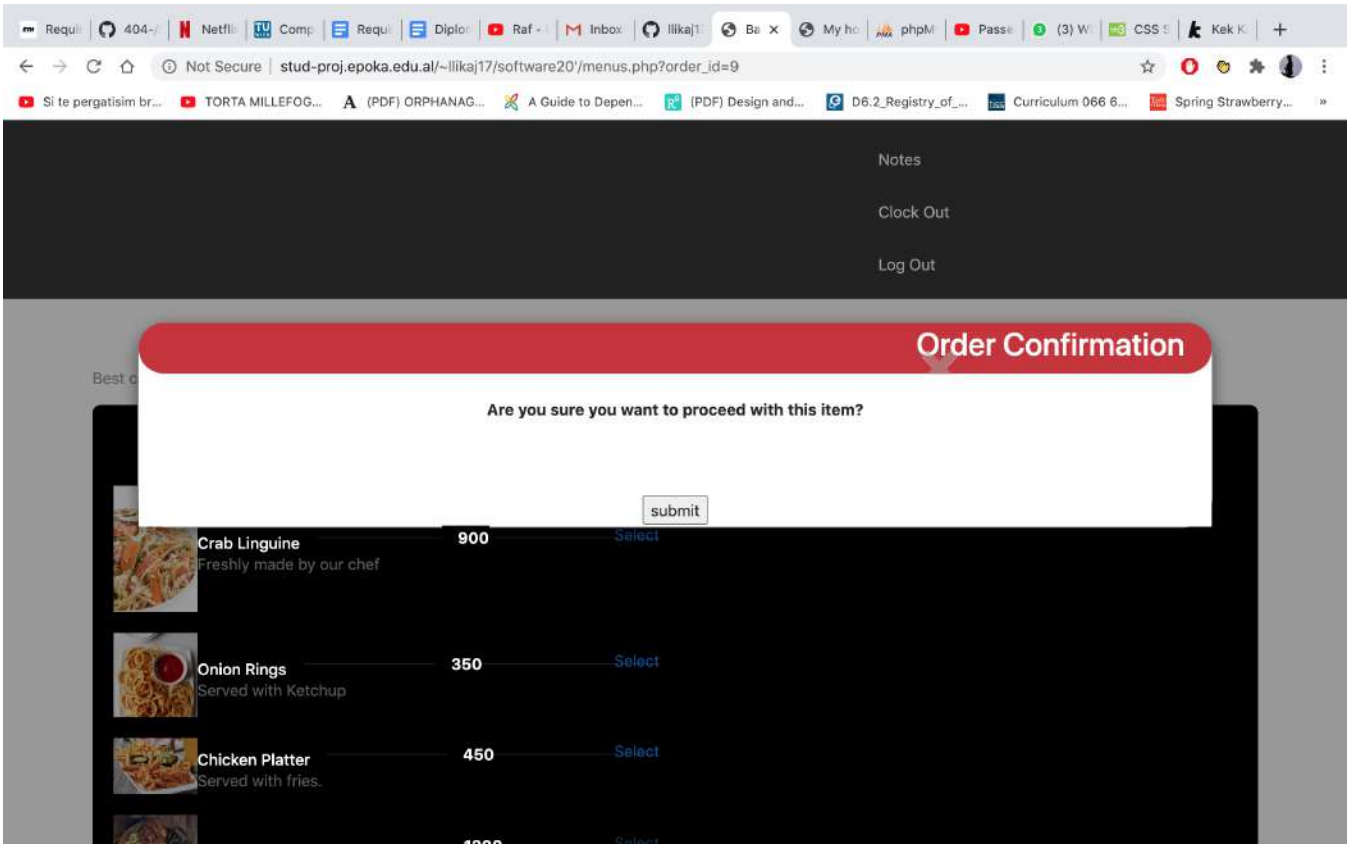


He can select one seat in case he/she has customers to serve (for example Table 3). The page directs them to the Menu Interface which is divided into Beverages and Food as shown below:


Not Secure | stud-proj.epoka.edu.al/~llikaj17/software20'/menus.php?order_id=9
Si te pergatisim br...
TORTA MILLEFOG...
(PDF) ORPHANAG...
A Guide to Depen...
(PDF) Design and...
D6.2_Registry_of_...
Curriculum 066 6...
Spring Strawberry...
Beverage
Food
9
Coke 170 Select
Fanta 170 Select
Bravo 180 Select
Tonic Water 100 Select
Gin&Tonic 650 Select


Not Secure | stud-proj.epoka.edu.al/~llikaj17/software20'/menus.php?order_id=9
Best chefs team serve better to our valuable customers
Beverage
Food
Crab Linguine 900 Select
Freshly made by our chef
Onion Rings 350 Select
Served with Ketchup
Chicken Platter 450 Select
Served with fries.
Sea Food Platter 1200 Select
Shrimp, muscle, shell and lobster.

The bartender can select an item to put for the open table (for example the Sea Food Platter). A confirmation window is opened. The bartender clicks submit:

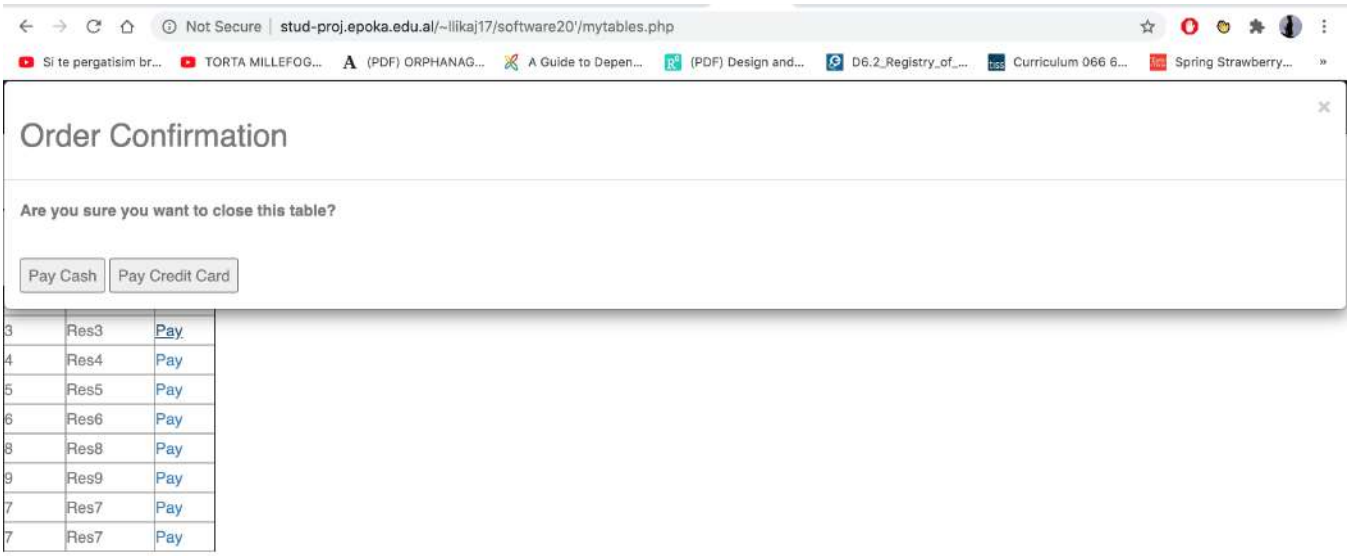


The system directs her/him to his/her open tables:

Welcome to Your Tables Dashboard, Ardita

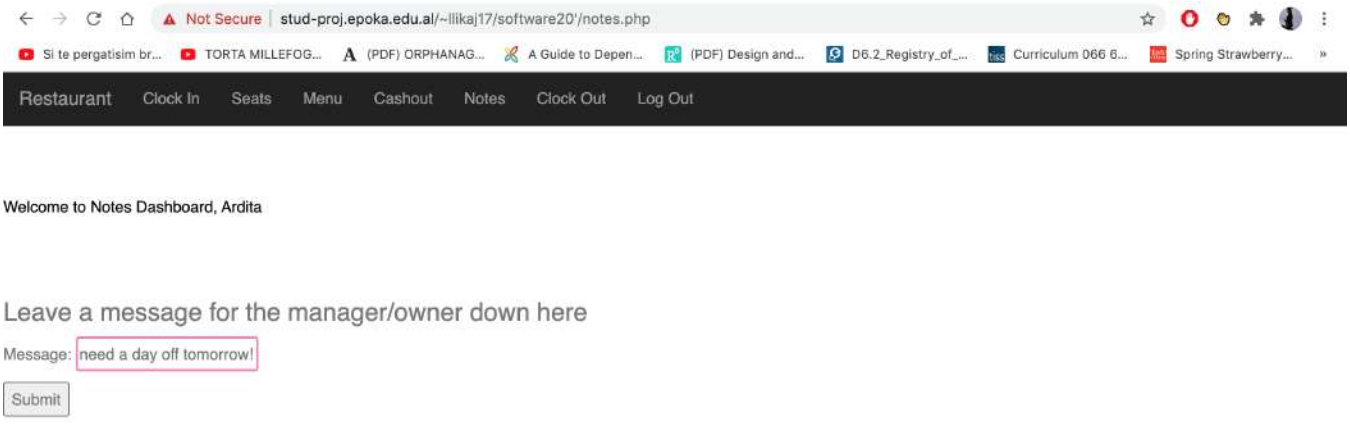
Table ID	Table Name	Actions
3	Res3	Pay
4	Res4	Pay
5	Res5	Pay
6	Res6	Pay
8	Res8	Pay
9	Res9	Pay
7	Res7	Pay
7	Res7	Pay

The bartender can close a seat and generate the receipt, by clicking the pay button. 2 options are provided:

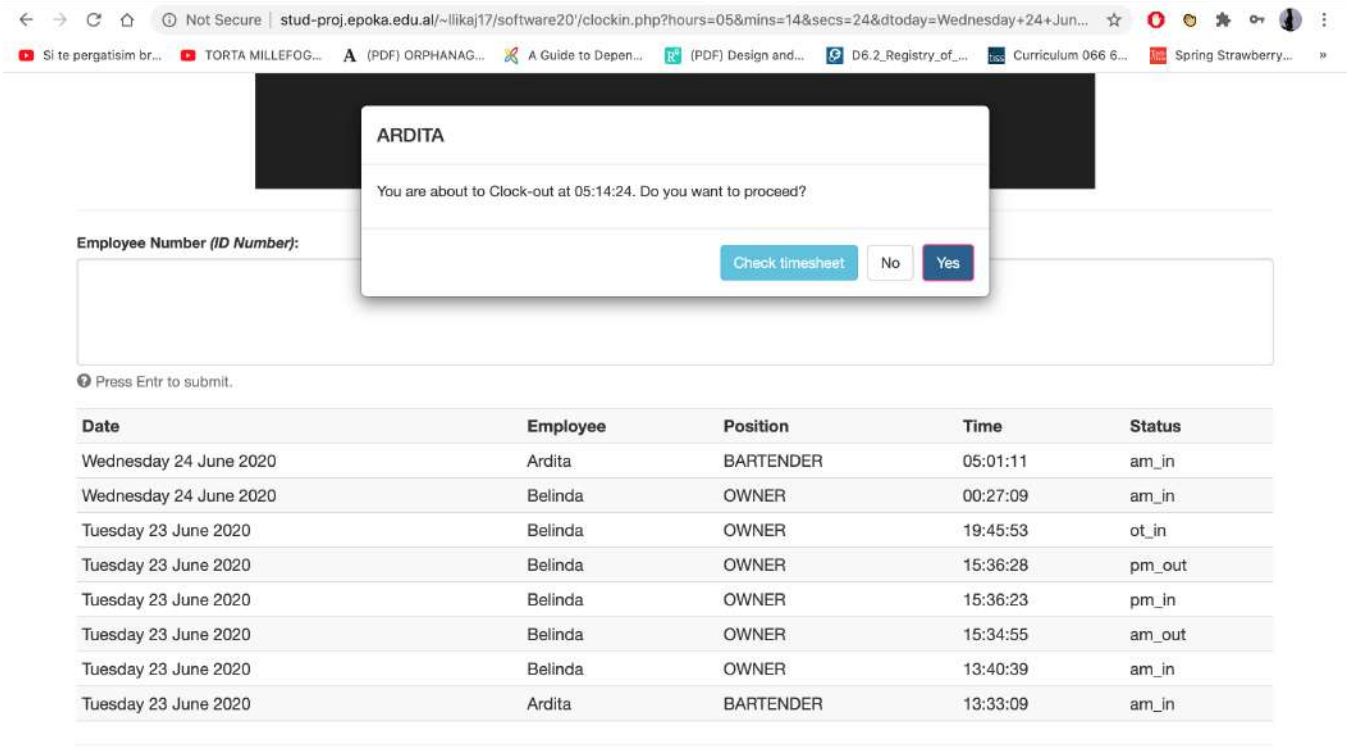


When the bartender clicks cash, the table is closed and is now free for other bartenders or for the same bartender again to put a new order.

Bartender can also access the Notes Interface, where he/she can leave a message visible for the owner or manager:

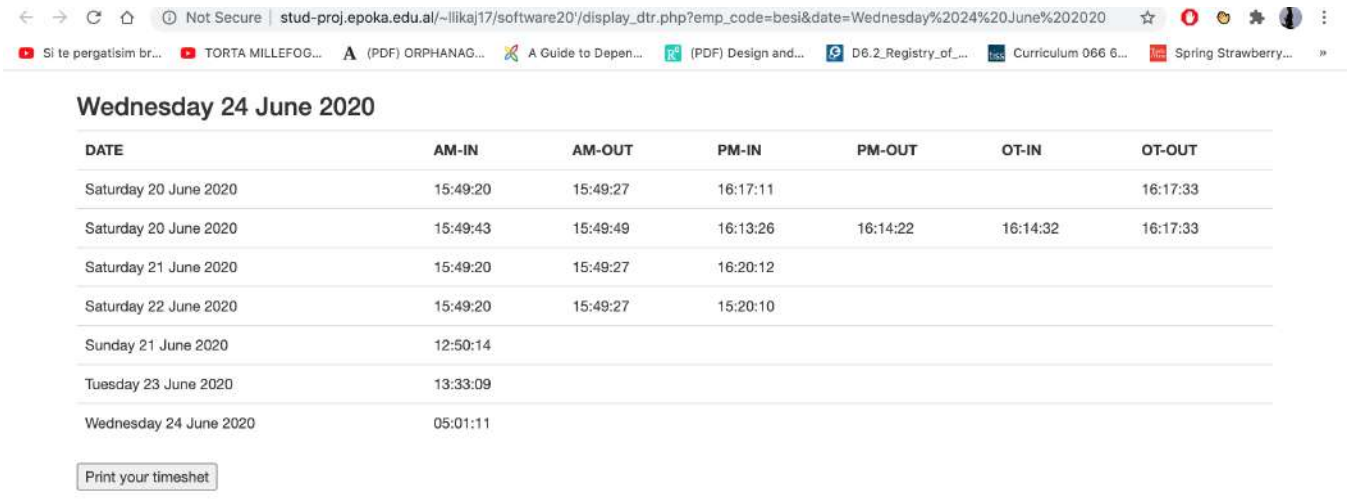


To clock out when the shift has finished, the server/bartender clicks clock out and writes his/her code:



Date	Employee	Position	Time	Status
Wednesday 24 June 2020	Ardita	BARTENDER	05:01:11	am_in
Wednesday 24 June 2020	Belinda	OWNER	00:27:09	am_in
Tuesday 23 June 2020	Belinda	OWNER	19:45:53	ot_in
Tuesday 23 June 2020	Belinda	OWNER	15:36:28	pm_out
Tuesday 23 June 2020	Belinda	OWNER	15:36:23	pm_in
Tuesday 23 June 2020	Belinda	OWNER	15:34:55	am_out
Tuesday 23 June 2020	Belinda	OWNER	13:40:39	am_in
Tuesday 23 June 2020	Ardita	BARTENDER	13:33:09	am_in

To print the timesheet of the last week, bartender clicks Check Timesheet:



DATE	AM-IN	AM-OUT	PM-IN	PM-OUT	OT-IN	OT-OUT
Saturday 20 June 2020	15:49:20	15:49:27	16:17:11			16:17:33
Saturday 20 June 2020	15:49:43	15:49:49	16:13:26	16:14:22	16:14:32	16:17:33
Saturday 21 June 2020	15:49:20	15:49:27	16:20:12			
Saturday 22 June 2020	15:49:20	15:49:27	15:20:10			
Sunday 21 June 2020	12:50:14					
Tuesday 23 June 2020	13:33:09					
Wednesday 24 June 2020	05:01:11					