Epoka Canteen Automation

Requirements Specification

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1. Executive Summary

1.1 Project Overview

Technology nowadays is involved in every field of our life making our everyday life and its activities easier and time-saving. Having the same purpose this software aims to facilitate the ordering process in the canteen which is an activity that takes most of the break time the students and staff of the university have. One solution to this problem might be the automation of the canteen.

The automation of the canteen will be in the form of a Web Application which will be adopted to the needs that Epoka Canteen has and in the same time the management of the canteen company will become simpler to handle during peek hours.

This system will give the client side users (students and staff) the flexibility of ordering online in real time reducing the time-consuming queues. Due to real time communication between the cashier and the client the transaction will be faster and more optimized at the same time. On the other side the canteen staff will have more organized work-flow and better management in taking, delivering orders and also managing their inner organization.

This application will be an extension of the existing Epoka University Web Application in order for accounts of the students to be safer and also easier for them to adopt with.

1.2 Purpose and Scope of this Specification

The purpose of this software is to accelerate customer order in Epoka University Canteen and also facilitate the work of the canteen staff by creating a Web Application. This software will take the orders of the students and respond them in real time. This application idea is projected as an extension of the EIS Epoka University site which will give access to students and staff, that from their school/work account order their meal online also by non having the need to pay in cash but by using their own credits(money converted in credits) in their accounts. This system would be practical and beneficial also for the workers of canteen since some operation like paying or handling a long queue will be reduced and the new replacing operations would be very easy to work with. In this documentation would be explained all the facilities that the system have and will give information about the way it works

2. Product/Service Description

2.1 Product Context

Epoka Canten Automation it is a software which from the functional point of view it is divided in two parts, one is the Epoka University side which gives access students to access the canteen menu and make orders and the other one it is the Canteen side which beside handling online orders also has its own management system dedicated to the company functionalities. This software will automate the process of ordering in the canteen and also make the canteen management more time efficient.

2.2 User Characteristics

There are five types of users that will use the system:

1. **Students/Staff:**
    - Views the menu of canteen
    - Orders online by choosing in the menu
    - Views its profile (Epoka profile including the credits section related with the canteen)
    - Views the history of its orders within a cycle of payment
    - Log in with Epoka University account
2. **Cashier:**
    - Views the order's timeline and manages orders
    - Edit menu (regular and daily one)
    - Create order for the clients that are not part of Epoka University system
3. **Epoka Finance:**
    - Will control the credit accounts of the students (edit)
4. **Finance of Canteen:**
    - Will access a list of all orders done in a particular interval
    - Will have access accessing statistics about products and order
    - Will have access in reviewing balances(daily,weekly,monthly)
5. **Administrator of Canteen:**
    - Creates accounts for cashier and finance of the canteen
    - Access the finances of the canteen

2.3 Assumptions

- It is assumed that the Client(Student/Staff) interface and database is part of Epoka University EIS

- It is assumed that the log in for the student/staff will be from Epoka email
- It is assumed the contract between the canteen company (Bereqet) and Epoka university about the credits part it is valid and accepted by both sides including the money transaction and any kind of profit each side takes from each other.
- It is assumed that internet connection is always available(fact: In Epoka University Internet is available for the students and staff)
- It is assumed that for the own administration Canteen(Bereqet) company has its own software
- It is assumed that the Canteen company(Bereqet) is functional. Functionalities include both finance and HR structures of the company.
- It is assumed that the state billing system it is integrated with the software.
- It is assumed that the HR and the administrator communicates in formal ways before creating, deleting or editing a new account.
- It is assumed that when an employee leaves the administrator deletes its existing account but its activity it is saved in employees data.
- It is assumed that the Epoka finance profile it is already developed and the only part implemented in this software will be the one of the credit editing.
- It is assumed that the Canteen Finance office furmishment and order process is managed by the canteen company which is not in our domain.

2.4 Constraints

The only constraint that this Software have is the internet connection which is needed in order for orders to be done in real time. Considering the fact that Epoka University has already free stable internet connection for students and staff this constraint is easier to handle .

2.5 Dependencies

- The software is dependent from EIS Epoka University System since the data of the students and staff which are translated into their accounts.
- The orders are dependent from the credits clients have in their accounts.

3. Requirements

3.1 Functional Requirements

Req#	Requirement	Comments	Priority	Date	SME Reviewed/Approved
BR_01	The software should have different views for each user.	The view for students/staff,finance, Administrator,cashier.			
BR_02	The accounts will be secured by passwords for each user.	The password will be hashed before saving them in the database.			
BR_03	The administrator can edit and add information.	Administrator can edit and add information for each employee.			
BR_04	The information entered by the administrator while creating a new account will be first validated.	It is important that the information entered is accurate and safe.			
BR_05	The user can check the previous orders.	The user can see all the history within a payment and check credits.			
BR_06	A user cannot edit his records.	The profile of a user is in a read view.			
BR_07	A user cannot see the profile of another user.	A user can access only his profile.			
BR_08	A user can get an e-mail by the finance when his credits are transferred in his/her account.				
BR_09	A user will be informed when an order is ready.	A notification will show when the order is ready.			
BR_10	An user will be informed for how much time the food will be ready.	The cashier will add an approximated time each food needs to be prepared.			
BR_11	A cashier is allowed to make changes in the menu.	It can block an item it the canteen has ran out of it and can add and delete from the main menu. Cashier can also create daily menu.			
BR_12	The time that users can make the orders is limited.	An user can order from 8 am to 5 pm.			

BR_13	A cashier can create an order	In case the client is not part of the University and does not have an Epoka account			
BR_14	The Epoka finance has the access to change the credits	Finance also have access to some general information about students and staff members. Epoka finance cannot edit personal information of the student/staff, he/she can edit only their credits.			
BR_15	The canteen finance does not have any access to the users accounts or to the users credits	Canteen finance has access only to the list of orders made and the name and surname of the user who made the order			
BR_16	The user cannot order more than two same items or more that two different items.	Precautions for the queue not to be blocked by one person			
BR_17	A particular item is disabled when it is out of stock	If Canteen ran out of one item that item is blocked automatically and the students are not able to choose that item anymore			
BR_18	Epoka finance accesses the balances in different periods of time and the list of orders	Canteen finance can access the list of orders but not the personal information of those who made the order			
BR_19	An identification bill containing data of the order is generated when the order is finalized	This bill is used as an identification bill			
BR_20	A daily report will be created by the cashier and send to the canteen finance office	The daily report will contain information about the products that are missing in the kitchen			
BR_21	The canteen finance will take care about the update of the amount of the products after furnishment				

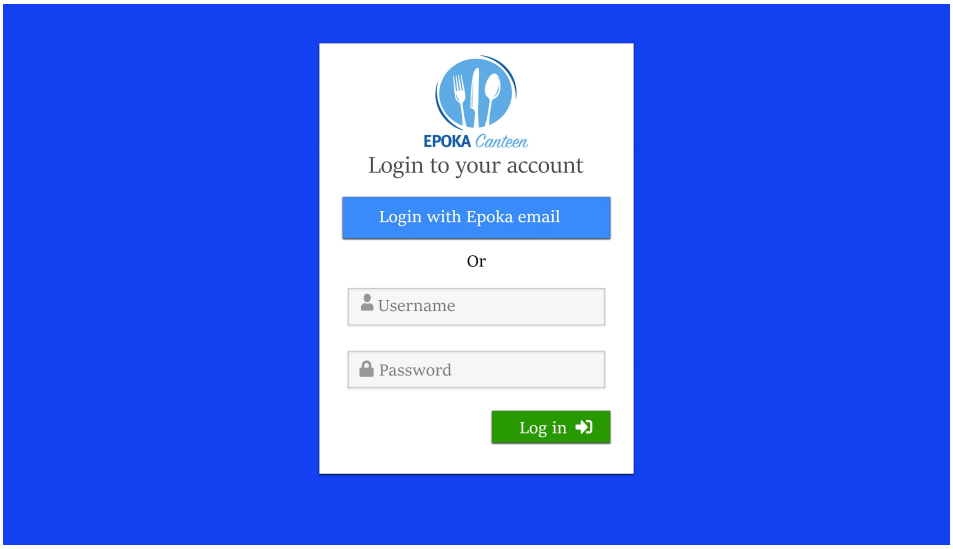
3.2 Non-Functional Requirements

3.2.1 User Interface Requirements

The user will access the app with a browser from every device since the software will be web based. The web app will adapt to every screen resolution.

The user interface is divided in 6 main groups:

- ***Log in/Main Interface***



  - The login interface will contain at the top the logo.
  - 2 ways of login
    - Button to log in with epoka email.
    - Username and password fields and the log in button.

  The Student and School Staff user will login with Epoka email. When the button is clicked the interface with the menu will show.

  The Cashier, Epoka Finance, Bereqet Finance and Admin user will login with their respective credentials (username and password). When the login button is pressed the information is validated and their respective interface is showed. In case of wrong credentials an error message is shown indicating that username or password are not correct.

- ***Student/School Staff interface***

  The main page of this interface consists of all the items of the menu and its prices.

  The interface contains:

  1. The navigation bar at the top of the interface with the logo and the interface menu that the user can access:
     - Menu
     - My Profile
     - My Order

- Notification icon
- Log out icon

2. The **"Menu"** menu which is also the home page of the interface will show at the beginning the menu of the day with its price and an order button then under the menu of the day the static menu with all the items and their prices. Each menu item will have a + and − icon with the desired amount to order. Each time the user will click on the plus or minus icon in the **"My Order"** menu a small red dot will appear with inside the amount desired.
3. The **"My Profile"** menu will show all the information of the user like:
   - Profile picture
   - Name and surname
   - Position
   - Card ID number
   - Department
   - Current credit
4. The **"My Order"** menu will show the current order in table format that is not finalized and at the bottom of the table the finalize button which finalizes the order and sends the order to the cashier. On the left side of the current order there will be shown a table with the history of orders with their respective information of the user.
5. The **"Notification"** icon will show when an order is ready.
6. The **"Log out"** icon will redirect the user to the log in interface and will terminate the session.

- ***Cashier interface***

  The main page of this interface consists of all the orders received from the clients.

  The interface contains:

  1. The navigation bar at the top of the interface with the logo and the interface menu that the user can access:
     - Orders (Porositë)
     - Daily menu (Menuja e ditës)
     - Modify Menu (Ndrysho menu)
     - Make order (Krijo porosi)
     - Log out icon
  2. The **"Porositë"** menu which is also the home page of the interface shows all the orders received from the clients in a table format where each row represents an order. The table has columns: Order(items ordered), ID of student, Name and Surname, Time, Total price, and the Done button which will indicate when an order is ready.
  3. The **"Menuja e ditës"** menu is used to create the daily menu, the user selects the items to be on the daily menu and sets the price.
  4. The **"Ndrysho menu"** menu shows all the items of the menu in a table format. The table has columns: Icon (photo of the menu item), Name, Price and the Delete button to delete an item from the menu. The information of each item can be modified by clicking on the

respective field to modify. At the bottom of the table is an Add button which will open a window to add a new item to the menu.

5. The **"Krijo porosi"** menu is used for clients that cannot make an order from the Epoka Canteen app. These clients usually will not be members of the Epoka University.
6. The **"Log out"** icon will redirect the user to the log in interface and will terminate the session.

- ***Epoka Finance interface***

  The main page of this interface consists of all the students and staff users that use the Epoka Canteen app.

  The interface contains:

  1. A header bar at the top of the interface with the logo, the "Financa" name written and a logout icon [→.
  2. All the students and staff users that use the Epoka Canteen app are shown in a table format where each row represents a user. The table has columns: Picture, Name, Surname and a Select button. When the select button is clicked a window will open. The window will contain all the user's information: picture, name, surname, position, department, card ID number, email and current credit. At the bottom there will be a field and a "Add" button where the user will insert the amount of credit to add to the selected student or staff member.
  3. The **"Log out"** icon will redirect the user to the log in interface and will terminate the session.

- ***Bereqet Finance interface***

  The main page of this interface consists of all the orders received from the clients.

  The interface contains:

  1. The navigation bar at the top of the interface with the logo and the interface menu that the user can access:
     - Order List
     - Statistics
     - Log out icon [→
  2. The **"Order List"** menu which is also the home page of the interface shows all the orders received from the clients in a table format where each row represents an order. The table has columns: Order(items ordered), ID of student, Name and Surname, Time and Total price.
  3. When the user will hover on the **"Statistics"** menu a drop down menu will appear with sub menus:
     - Daily balance
     - Weekly balance
     - Monthly balance
  4. The **"Daily balance"** submenu shows the total of money made in a day, the total of money spent in a day, profit of the day, number of products sold, the best selling product and the graph with the amount of each product sold.

5. The **"Weekly balance"** submenu shows the total of money made in a week, the total of money spent in a week, profit of the week, number of products sold, the best selling product of the week and the graph with the balance for each day of the week.
6. The **"Monthly balance"** submenu shows the total of money made in a month, the total of money spent in a month, profit of the month, number of products sold, the best selling product of the month and the grap with the balance for each week of the month.
7. The **"Log out"** icon will redirect the user to the log in interface and will terminate the session.

- ***Admin interface***

  The interface contains:

  1. A header bar at the top of the interface with the logo, the "Admin" name written and a logout icon [→.
  2. All the users (except the student/staff users) that use the Epoka Canteen app are shown in a table format where each row represents a user. The table has columns: Name, Surname, Position, Level and a Delete button. When the delete button is clicked the user will be deleted. The admin can edit the information of each user by clicking on the field to modify. At the bottom of the table there is a special row to add a new user and an "Add" button. When the add button is clicked the new user will be added to database of users.
  3. The **"Log out"** icon will redirect the user to the log in interface and will terminate the session.

3.2.2 Usability

- Learnability
  - All level of users will be able to use the system in a few hours since the system will be very intuitive.

- Efficiency
  - The software will provide users a fast and reliable way of performing each operation.

- Accessibility
  - Student/Staff users and Epoka finance will access the system with the email provided by the university.
  - Cashier, Bereqet finance and admin will access the system with their respective username and password.
  - The software can be accessed from anywhere and at any time, from a computer or a mobile device.

- Effectivness
  - The software will provide the client everything that he needs, from ordering everything that he wants to check the credit left.
  - The software will make the work flow at the canteen more time efficient and more flexible.

3.2.3 Performance

1. Capacity

   The software will work at the same time for all the type of users. Every change made will be reflected on the database so automatically reflected to all the other users. The software will be stored in a web server based on linux. The software will have a maximum size of 150 mb.

2. Availability
    - The web app will be available 24/7.
    - The web app will be available to all the users that have a pc or a mobile device connected to internet.
    - The web app can be accessed from anywhere.
    - The orders can be done only from 8 AM – 8 PM.

3. Latency

   The latency of the web application will depend on:
    - Internet connection strength.
    - The efficiency of algorithms used to retrieve data from the database.

3.2.4 Manageability/Maintainability

- Monitoring

  The system will be built to be secure and reliable. For the system to be secure and reliable there will be followed procedures to validate the information entered by every user. For every error scenario specific messages will be shown to the user so he can be informed about the problem encountered.

- Maintenance
    - The web application will be developed in modules so the issues can be isolated and managed more easily
    - MySQL and an Apache server will be used to maintain the application.

- Operations
    - The users can log in and log out.
    - Students and Staff members log in with epoka email.
    - Cashier, Epoka finance user, Bereqet finance user, admin log in with username and password.
    - Student/Staff members can make orders.
    - Student/Staff members can check their information and the current credit left.
    - Student/Staff members can check in the notification section when their order is ready.
    - Cashier can check all the orders that are waiting to be prepared.
    - Cashier updates the daily menu.
    - Cashier updates the static menu.
    - Cashier can download a pdf of a specific order.
    - Cashier can create an order for clients that do not have an account.
    - Epoka finance user can check all the student/staff members that use the web application.
    - Epoka finance user can add credit to all the student/staff members that use the web application.
    - Bereqet finance user can check all the orders that the clients have made.
    - Bereqet finance user can check the daily, weekly, monthly balance.
    - The admin can read, update, create and delete users, specifically cashiers, Epoka finance and Bereqet finance users.

3.2.5 System Interface/Integration

- Network and Hardware Interfaces

  The web application will use a Wi-Fi, Ethernet or mobile data connection to connect to the internet. Since it is a web application it will be stored in a web server so the browser has to establish a TCP connection with the server.

3.2.6 Security

- Protection
  - All sensitive information will be encrypted using hash functions.
  - All information will be validated.
  - The student/staff user will see information only related to them.

- Authorization and Authentication
  - The user authentication will be using Epoka email or username and password.
  - Each user will access only their respective information and interface.
  - There will be used sessions for logged users.

3.2.7 Data Management

- All the data will be stored in a database using MySQL.
- The database will be an ER model.
- Users, orders, menu items will all be stored in their respective table with their respective attributes.
- There will be two databases one that will represent the Epoka database that will hold all information of the student and the other database will belong to the canteen company which will hold the orders, finances etc.
- Some information in database will be deleted in regular periods of time for example the history of the orders for each student or staff member within a payment period (this information is not needed once the new payment is done and the client has no complaints).

3.2.8 Standards Complianceis

- Every bill generated should be in the state format bill and every bill information should be connected with the cash register approved from the state in order for the transaction to be legal.
- Monthly reports must be generated in order for Epoka finance office and Canteen Company finance to make the needed transaction.

3.2.9 Portability

- Web based application, it can operate in every device that has an internet connection.
- Real time updates when the orders are made.
- The system can be adapted with another canteen company in case a new contract is made.

3.3 Domain Requirements

The system manages everything related to a school canteen, from taking orders to be notified where the order is ready to be taken. The main purpose is to digitalize the process,to reduce queue at the canteen and to make the operation of the canteen staff faster and easier.

4. User Scenarios/Use Cases

Scenarios:

Scenario 1: ***Student makes an order:***

- Student/Staff member will log in with Epoka account
- Student/Staff member selects items in the menu
- Client can review the order with all the chosen items.
- If the client has enough credits a pop up will appear showing the approximate time the order is ready
- If the client decide to continue with the order he/she finalizes it
- Client wait for notification then goes and takes the order

Scenario 2: ***Client wants to review the history of orders:***

- Client logs in with Epoka Account
- Client goes to the orders option and there he/she can check the order history

Scenario 3: ***Client wants to check the profile and the balance of its account :***

- Client logs in with Epoka Account
- Client goes to the profile option and there he/she can view its personal data and the credits
- Client cannot make any changes in the data

Scenario 4: ***Cashier delivers orders:***

- Cashier log in with its personal account created by admin
- Cashier looks the order timeline that appears in the homepage
- Cashier communicates the order to the kitchen.
- Cashier prints the bill for the specific order
- When the order is ready cashier sends notification to the client
- When the client cames to take the order cashier delivers the order and the bill and deletes the order from the timeline

Scenario 5: ***Cashier creates an order for a client that has no Epoka account :***

- Cashier log in with its personal account created by admin
- Cashier goes to the order page
- Cashier selects from the menu the items the clients wants to order and finalize it
- The new created order appears in the timeline
- Cashier communicate the order to the kitchen and prints the bill
- When the order is ready cashier deletes the order from the timeline

Scenario 6: ***Cashier edit a specific item in the menu :***

- Cashier log in with its personal account created by admin
- Cashier goes to the modify menu page
- Selects the item he/she wants to modify and perform the changes
- Cashier selects the item he/she and unblocks it (in his mode the item wont be selected be the clients

Scenario 7: ***Cashier adds an item in the menu:***

- Cashier log in with its personal account created by admin
- Cashier goes to the modify menu page
- Cashier selects the add menu button and enters the required information for a new item to be created

Scenario 8: ***Cashier deletes an item from the menu:***

- Cashier log in with its personal account created by admin
- Cashier goes to the modify menu page
- Cashier selects the delete menu button and the item is deleted from the menu

Scenario 9: ***Cashier creates the daily menu:***

- Cashier log in with its personal account created by admin
- Cashier goes to daily menu page
- Cashier selects the items and puts the price of the daily menu
- Cashier approve the changes and the daily menu is launched

Scenario 10: ***Epoka Finance edits credits to the students/staff member:***

- The Epoka Finance user logs in with Epoka account
- Selects the person whose credits will be entered
- Clicks add button, adds the value to be added and finalize the process

Scenario 11: ***Administrator create new account:***

- Log in in the system
- At the end of the user table the admin can edit the asked information for the new account to be created
- By clicking add the new account will be added in the table

Scenario 12: ***Administrator edit an account:***

- Log in in the system
- Selects the information that want to be added from the table of the users
- Save the changed information

Scenario 13: ***Administrator deletes an account:***

- Log in the system
- Selects the account that he/she wants to be deleted and clicks the delete button

Scenario 14: ***Canteen finance wants to check the list of orders:***

- Log in the system with its personal canteen account
- He/she can see the list of orders in the homepage

Scenario 15: ***Canteen finance wants to check weekly balance:***

- Log in the system with its personal canteen account
- He/she goes to weekly balance and gets the needed information

Scenario 16: ***Canteen finance wants to check monthly balance:***

- Log in the system with its personal canteen account
- He/she goes to monthly balance and gets the needed information

Scenario 17: ***Canteen finance wants to check daily balance:***

- Log in the system with its personal canteen account
- He/she goes to daily balance and gets the needed information

Scenario 18: ***Cashier generates reports :***

- Log in the system with its personal canteen account
- He/she goes to *report* tab in the navigation bar
- Reviews items generated by the system
- Adds comments or extra items to be ordered
- Send report to canteen finance

Scenario 19: ***All users log out :***

- Users must be logged in in the system with respective accounts
- Users go in the navigation bar and click the log out icon.

Scenario 20: ***Administrator wants to check weekly balance:***

- Log in the system with its personal canteen account
- He/she goes to weekly balance and gets the needed information

Scenario 21: ***Administrator wants to check monthly balance:***

- Log in the system with its personal canteen account
- He/she goes to monthly balance and gets the needed information

Scenario 22: ***Administrator wants to check daily balance:***

- Log in the system with its personal canteen account
- He/she goes to daily balance and gets the needed information

Scenario 23:***Canteen finance edits items amount :***

- Log in the system with its personal canteen account
- He/she goes to *Reports* and check the items that are missing
- He/She delivers the order
- He/She after the order is delivered in the canteen search the item and enters new amount

Use Cases:

Use case 1: ***Client Log in :***

Name	Client Log in
Summary	Client logs in in the system by using the Epoka Student /Staff account
Actor	Client(Epoka Student/Staff)
Description	In order for a user to access the software he/she must log in in their Epoka Student /Staff account.
Precondition	User must first have an Epoka account
Alternatives	No alternative option
Post condition	The software facilities are accessed

Use case 2: ***Canteen Staff Log in :***

Name	Canteen Staff Log in
Summary	Canteen Staff logs in in the system by using their personal account
Actor	Cashier, Economist, Administrator
Description	Staff must enter their credentials in the system (username and password)
Precondition	Canteen staff cannot create accounts by their own so the account that they want to access must be

	already created. Only administrator can create accounts.
Alternatives	For economist and cashier no other alternative. This is done for safety reasons. Only administrator will have the forget password option.
Post condition	The software is accessed

Use case 3: ***Create order :***

Name	**Create order**
Summary	The clients of the canteen order the food online by choosing in the menu
Actor	Epoka student/staff
Description	The clients login in the system and navigate in the menu that is in the *homepage*. They choose the items respecting the conditions: they can choose any available item (if the item is not available it will be blocked for the client), they cannot order more than two of the same item and more than two items (this is done in order the queue not to be blocked by the same person). The quantity of the chosen item will be set in a field next to Add button After the client has chosen he/she reviews the order in the *Order* page in the navigation bar which is represented by an icon then, if the client wants to delete an item in the list it can be done in *Delete* button. Otherwise, if the client wants to continue with the items in the list clicks *Finalize* button and a pop up window appears telling the time the order is ready and asking about if you want to finalize the order. If he client agrees he/she clicks the *Finalize* and the order is delivered to the cashier. When finalize it is clicked the credits in the client account is decreased.
Precondition	First the client must be logged in in the system in order to order online. The client must have enough credits in order to make an order.
Alternatives	If the client does not have an account the cashier can make an order for him/her but in this case the client has to wait in queue to get the order. This is done for the people that are not part of Epoka University.

Post condition	Client waits until a notification is received to get the order.

Use case 4: ***Cashier manages the order:***

Name	**Cashier manages the order**
Summary	The cashier receivers the orders made online and communicates with the kitchen to notify the client when his/her order is ready.
Actor	Cashier
Description	Cashier logs in and in the homepage or in the page Porosite in the navigation bar he/she has a timeline which shows the orders sorted by their ordering time in order to respect the “online queue”. The cashier communicates the coming orders to the kitchen. When an order is communicated to the kitchen the cashier prints the bill approved by the state and another informal one used to identify the order by clicking the *Printo faturen* button then, when the order is ready the cashier sends notification to the client by clicking the tick button. A notification is send to the client and the bills are attached to the order.
Precondition	An order must be made first for cashier to continue with the procedure
Alternatives	For the clients with no account the payment is made in cash.
Post condition	The order made is saved in the history of orders of each client and in the order database.

Use case 5: ***Add item in the menu :***

Name	Add item in the menu
Summary	Cashier adds new items in the menu
Actor	Cashier
Description	The cashier after is logged in in the system with his/her personal account and goes to the *Ndrysho menu* tab in the navigation bar. In *Ndrysho menu* page the menu appears in a table form and in the end there is an empty row having an *Shto artikull* button which adds the new row in the table. After the information asked is edit and saved by Clicking *Shto Artikull* button the information is saved in database.
Precondition	The item must be approved by the administrator but this is not done in the system.
Alternatives	No other alternative
Post condition	The item is added in the database and is visible for all the students. A notification about new item in the system is generated for all the clients.

Use case 6: ***Delete item from the menu :***

Name	Delete item from the menu
Summary	Cashier deletes the items the company considers that are not more appropriate to be present.
Actor	Cashier
Description	Cashier logs in in the system and goes to the *Ndrysho menu* tab in the navigation bar. In *Ndrysho menu* page the menu appears in a table form, each row represents an item in the menu. The last column of the row is represented by a delete button which removes from the menu the item.
Precondition	The item must exist in the menu.
Alternatives	No other alternative for deleting an item

Post condition	The item does not appear in the menu anymore

Use case 7: ***Edit item from the menu :***

Name	**Edit item**
Summary	Edit the menu items
Actor	Cashier
Description	Cashier logs in in the system and goes to the *Ndrysho menu* tab in the navigation bar. In *Ndrysho menu* page the menu appears in a table form, each row represents an item in the menu. By double clicking in the field cashier want to change the edit mode will be on and cashier will change the data and then save the changes by *save* button if the cashier does not want to continue editing to go to the initial state he/she can click *cancel* button.
Precondition	The item must exist in the list
Alternatives	The cashier can delete the item and create a new changed item again.
Post condition	The changes will be visible in the menu.

Use case 8:***Create daily menu:***

Name	**Create daily menu**
Summary	The canteen company offers for the client a daily menu which is created by the cashier
Actor	Cashier
Description	Cashier logs in in the system and goes to the *Menuja e dites* tab in the navigation bar. *Menuja e dites* it is a page that allows the client to choose the items that are part of that menu, puts the price in the input box and then launch the daily menu by clicking *Finalizo*.button.
Precondition	The daily menu can contain only items that exist in

	menu
Alternatives	No alternative about this feature.
Post condition	The menu is accessed by everyone.

Use case 9:***View profile:***

Name	**View profile**
Summary	The client can view profile in order to check its balance
Actor	Client
Description	Client logs in and goes in the *my profile* icon placed in the navigation bar. There its data including their credits are shown. The data are only readable.
Precondition	The client must have an Epoka account
Alternatives	The client can see its profile from any other service of Epoka University
Post condition	The client is acknowledged about its balance.

Use case 10:***Administrator create account:***

Name	**Administrator create account**
Summary	Administrator creates new account for new canteen employees
Actor	Administrator
Description	Administrator logs in in the system using username and password. In the homepage an editable table is shown containing all the information of the canteen company users. The last row of the table is an editable row where every cell represents information needed to make the creation of an account valid. Every field must be filled in order for the new account to be created. After all the fields are completed according the validation rules the button *Add* creates the new account.

Precondition	Administrator should have the approval of the canteen company HR in order to proceed.
Alternatives	No other alternative.
Post condition	The new account is ready to be used.

Use case 11:***Administrator deletes account:***

Name	**Administrator deletes account**
Summary	When an employee leaves his/her account is deleted.
Actor	Administrator
Description	Administrator logs in in the system using username and password. In the homepage an editable table is shown containing all the information of the canteen company users. The last cell of each row in the table it is represented by a *Delete* button. By clicking *Delete* a confirm dialog box will appear if administrator agrees to continue the account will be deleted.
Precondition	The administrator should have approval of the HR of the company.
Alternatives	No other alternative
Post condition	The account it cannot be used anymore

Use case 12:***Administrator edit account:***

Name	**Administrator edit account**
Summary	When an employee changes position in the company or one of the personal information is changed.
Actor	Administrator
Description	Administrator logs in in the system using username and password. In the homepage an editable table is shown containing all the

	information of the canteen company users. All the row cells are editable by double clicking the cell that contains the information to be changed the cell will be editable. When the administrator is done with the changes the *save* button will save the changes made.
Precondition	The administrator should have approval of the HR of the company.
Alternatives	No other alternative
Post condition	The account it cannot be used anymore

Use case 13:***Epoka finance edit credits:***

Name	**Epoka finance edit credits**
Summary	When a client adds more credits into their accounts the Epoka finance office edits them in the system
Actor	Epoka finance office
Description	The person who works at finance office logs in with its own username and password. By clicking the *select user* button the list of users staff and students will appear. By clicking select button a new page representing the selected profile will be opened. In this window in the number of credits field the amount of the credits will be inserted then by clicking *ADD* button the operation will be completed and saved.
Precondition	The payment must be done in cash by the student/staff
Alternatives	No other alternative
Post condition	The number of credits is increased and the history of orders of every client is deleted.

Use case 14:***Cashier generate daily reports:***

Name	**Cashier generate daily reports**

Summary	Cashier send reports to canteen staff in order to inform about the amount of each product
Actor	Cashier
Description	Cashier logs in in the system. At the end of the day the cashier goes in *Create Report* tab in the navigation bar. Reviews the off limits items suggested by the system and adds other items in the textarea next to report if is needed and send report to the finance office by clicking *Dergo* button
Precondition	The canteen activity must be closed
Alternatives	No other alternative
Post condition	The canteen staff responsible for company orders will be announced about the products balance.

Use case 15:***Client views orders history:***

Name	**Client views orders history**
Summary	Client can look its order history for one period of payment.
Actor	Client(Staff/Student)
Description	Client logs in with Epoka account goes in the *My order* icon in the navigation bar and by clicking it a new page containing all the orders done within a payment period will appear.
Precondition	No precondition if the client has not done any order the page will be empty
Alternatives	No other alternative
Post condition	The client will be informed in case of inconveniences.

Use case 16:***Canteen finance access the reports send by the cashier:***

Name	**Canteen finance access the reports send by**

	the cashier
Summary	Finance office analyzes the reports send by the cashier.
Actor	Canteen finance office
Description	The canteen finance office representative logs in in the system using its credentials, in homepage or ,if it is already in another page ,goes in the *Reports* tab in the navigation bar . A new page is opened containing all the reports history by clicking the current date the daily report will be opened.
Precondition	The report must be created by the cashier
Alternatives	No other alternative
Post condition	The items send in the report are processed to be ordered for the next day of work.

Use case 17:***Canteen finance edits items amounts :***

Name	**Canteen finance edits items amounts**
Summary	After the furnishment of the items needed the amount of that items must be added in the data base.
Actor	Canteen finance office
Description	The canteen finance office representative logs in in the system using its credentials, in homepage or,if it is already in another page ,goes in the *Reports* tab in the navigation bar . A section in this page has a search bar where the finance representative searches the product to be add and edit its amount.
Precondition	The order about furnishment must have arrived in the canteen
Alternatives	No other alternative
Post condition	The items amount has changed

Use case 18: ***Access balances(daily,weekly,monthly):***

Name	Access balances
Summary	Administrator has the right to access the balances in different period of times
Actor	Administrator, Canteen finance
Description	The user admin of canteen finance representative logs in in the system using their own credentials go to the *Balances* in the navigation bar and select from the dropdown list the period of time they want to check.
Precondition	No precondition
Alternatives	No other alternative
Post condition	The user is informed about the balances in a certain period

APPENDIX

The appendixes are not always considered part of the actual Requirements Specification and are not always necessary. They may include

- Sample input/output formats, descriptions of cost analysis studies, or results of user surveys;
- Supporting or background information that can help the readers of the Requirements Specification;
- A description of the problems to be solved by the system;
- Special packaging instructions for the code and the media to meet security, export, initial loading, or other requirements.

When appendixes are included, the Requirements Specification should explicitly state whether or not the appendixes are to be considered part of the requirements.

Appendix A. Definitions, Acronyms, and Abbreviations

Define all terms, acronyms, and abbreviations used in this document.

Appendix B. References

List all the documents and other materials referenced in this document.

Appendix C. Requirements Traceability Matrix

The following trace matrix examples show one possible use of naming standards for deliverables (FunctionalArea-DocType-NN). The number has no other meaning than to keep the documents unique. For example, the Bargaining Unit Assignment Process Flow would be BUA-PF-01.

For example (1):

Business Requirement	Area	Deliverables	Status
BR_LR_01 The system should validate the relationship between Bargaining Unit/Location and Job Class.---Comments: Business Process = "Assigning a Bargaining Unit to an Appointment" (Priority 1)	BUA	BUA-CD-01 Assign BU Conceptual Design	Accepted
		BUA-PF-01 Derive Bargaining Unit-Process Flow Diagram	Accepted
		BUA-PF-01 Derive Bargaining Unit-Process Flow Diagram	Accepted
BR_LR_09 The system should provide the capability for the Labor Relations Office to maintain the job class/union relationship.---Comments: Business Process = "Maintenance" (Priority 1)	BUA	BUA-CD-01 Assign BU Conceptual Design	Accepted
		BUA-PF-02 BU Assignment Rules Maint Process Flow Diagram	ReadyForReview

For example (2):

BizReqID	Pri	Major Area	DevTstItems DelivID	Deliv Name	Status
BR_LR_01	1	BUA	BUA-CD-01	Assign BU Conceptual Design	Accepted
BR_LR_01	1	BUA	BUA-DS-02	Bargaining Unit Assignment DB Modification Description	Accepted

BizReqID	Pri	Major Area	DevTstItems DelivID	Deliv Name	Status
BR_LR_01	1	BUA	BUA-PF-01	Derive Bargaining Unit-Process Flow Diagram	Accepted
BR_LR_01	1	BUA	BUA-UCD-01	BU Assign LR UseCase Diagram	ReadyForReview
BR_LR_01	1	BUA	BUA-UCT-001	BU Assignment by PC UseCase - Add Appointment and Derive UBU	Reviewed
BR_LR_01	1	BUA	BUA-UCT-002	BU Assignment by PC UseCase - Add Appointment (UBU Not Found)	Reviewed
BR_LR_01	1	BUA	BUA-UCT-006	BU Assignment by PC UseCase - Modify Appointment (Removed UBU)	Reviewed
BR_LR_09	1	BUA	BUA-CD-01	Assign BU Conceptual Design	Accepted
BR_LR_09	1	BUA	BUA-DS-02	Bargaining Unit Assignment DB Modification Description	Accepted
BR_LR_09	1	BUA	BUA-PF-02	BU Assignment Rules Maint Process Flow Diagram	Accepted
BR_LR_09	1	BUA	BUA-UCD-03	BU Assign Rules Maint UseCase Diagram	Reviewed
BR_LR_09	1	BUA	BUA-UCT-045	BU Assignment Rules Maint: Successfully Add New Assignment Rule	Reviewed
BR_LR_09	1	BUA	BUA-UCT-051	BU Assignment Rules MaintUseCase: Modify Rule	Reviewed
BR_LR_09	1	BUA	BUA-UCT-053	BU Assignment Rules MaintUseCase - Review Assignment Rules	Reviewed
BR_LR_09	1	BUA	BUA-UCT-057	BU Assignment Rules MaintUseCase: Inactivate Last Rule for a BU	Reviewed
BR_LR_09	1	BUA	BUA-UI-02	BU AssignRules Maint UI Mockups	ReadyForReview
BR_LR_09	1	BUA	BUA-TC-021	BU Assignment Rules Maint TestCase: Add New Rule (Associated Job Class Does Not Exist) - Success	ReadyForReview
BR_LR_09	1	BUA	BUA-TC-027	BU Assignment Rules Maint TestCase: Modify Rule - Success	ReadyForReview
BR_LR_09	1	BUA	BUA-TC-035	BU Assignment Rules Maint TestCase: Add New Rule (Associated Job Class Does Not Exist) - Error Condition	ReadyForReview
BR_LR_09	1	BUA	BUA-TC-049	BU Assignment Rules Maint TestCase: Modify Rule - Error Condition	ReadyForReview

For example (3):

BizReqID	CD01	CD02	CD03	CD04	UI01	UI02	UCT01	UCT02	UCT03	TC01	TC02	TC03	TC04
BR_LR_01			X		X		X			X		X	
BR_LR_09	X			X		X			X		X		X
BR_LR_10	X			X					X		X		
BR_LR_11		X											

Appendix D. Organizing the Requirements

This section is for information only as an aid in preparing the requirements document.

Detailed requirements tend to be extensive. Give careful consideration to your organization scheme. Some examples of organization schemes are described below:

By System Mode
Some systems behave quite differently depending on the mode of operation. For example, a control system may have different sets of functions depending on its mode: training, normal, or emergency.

By User Class
Some systems provide different sets of functions to different classes of users. For example, an elevator control system presents different capabilities to passengers, maintenance workers, and fire fighters.

By Objects
Objects are real-world entities that have a counterpart within the system. For example, in a patient monitoring system, objects include patients, sensors, nurses, rooms, physicians, medicines, etc. Associated with each object is a set of attributes (of that object) and functions (performed by that object). These functions are also called services, methods, or processes. Note that sets of objects may share attributes and services. These are grouped together as classes.

By Feature
A feature is an externally desired service by the system that may require a sequence of inputs to affect the desired result. For example, in a telephone system, features include local call, call forwarding, and conference call. Each feature is generally described in a sequence of stimulus-response pairs, and may include validity checks on inputs, exact sequencing of operations, responses to abnormal situations, including error handling and recovery, effects of parameters, relationships of inputs to outputs, including input/output sequences and formulas for input to output.

By Stimulus
Some systems can be best organized by describing their functions in terms of stimuli. For example, the functions of an automatic aircraft landing system may be organized into sections for loss of power, wind shear, sudden change in roll, vertical velocity excessive, etc.

By Response
Some systems can be best organized by describing all the functions in support of the generation of a response. For example, the functions of a personnel system may be organized into sections corresponding to all functions associated with generating paychecks, all functions associated with generating a current list of employees, etc.

By Functional Hierarchy
When none of the above organizational schemes prove helpful, the overall functionality can be organized into a hierarchy of functions organized by common inputs, common outputs, or common internal data access. Data flow diagrams and data dictionaries can be used to show the relationships between and among the functions and data.

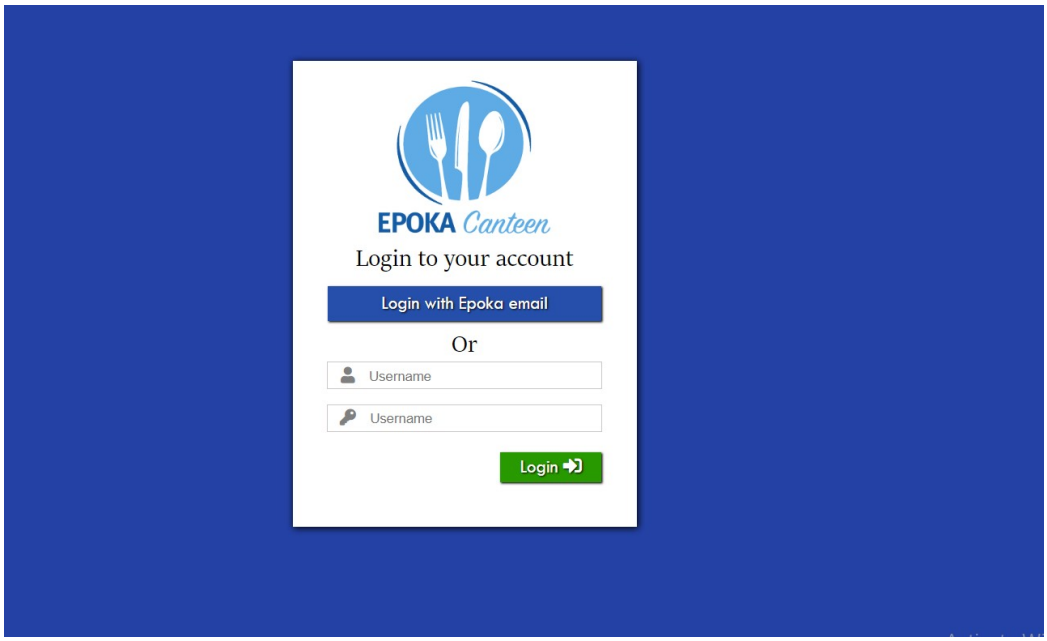
Additional Comments
Whenever a new Requirements Specification is contemplated, more than one of the organizational techniques given above may be appropriate. In such cases, organize the specific requirements for multiple hierarchies tailored to the specific needs of the system under specification.

There are many notations, methods, and automated support tools available to aid in the documentation of requirements. For the most part, their usefulness is a function of organization. For example, when organizing by mode, finite state machines or state charts may prove helpful; when organizing by object, object-oriented analysis may prove helpful; when organizing by feature, stimulus-response sequences may prove helpful; and when organizing by functional hierarchy, data flow diagrams and data dictionaries may prove helpful.

Sketches

Sketches are made with Adobe XD.

Log in interface:

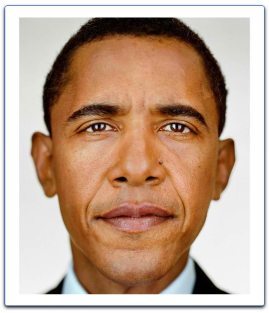


Student/Staff member interfaces

Homepage:

Profile:

EPOKA Canteen Menu



Name: Barack
Surname: Obama
Position: Student
Card ID: 123456789
Department: Computer Engineering
Credit: 500 LEK

My order:

EPOKA Canteen Menu

Your Order

Item	Quantity	Price
Pice	1	150 LEK
Fileto Pule	1	250 LEK
TOTAL		
400 LEK		

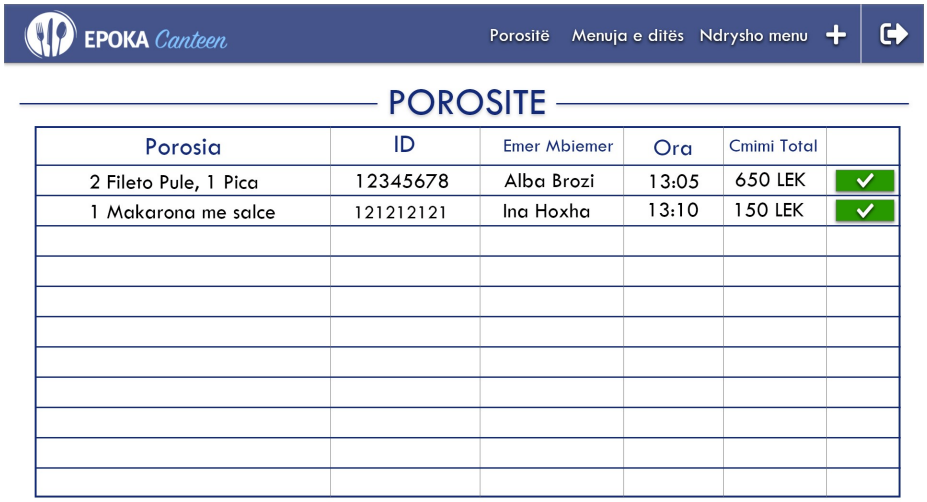
Finalize

HISTORY

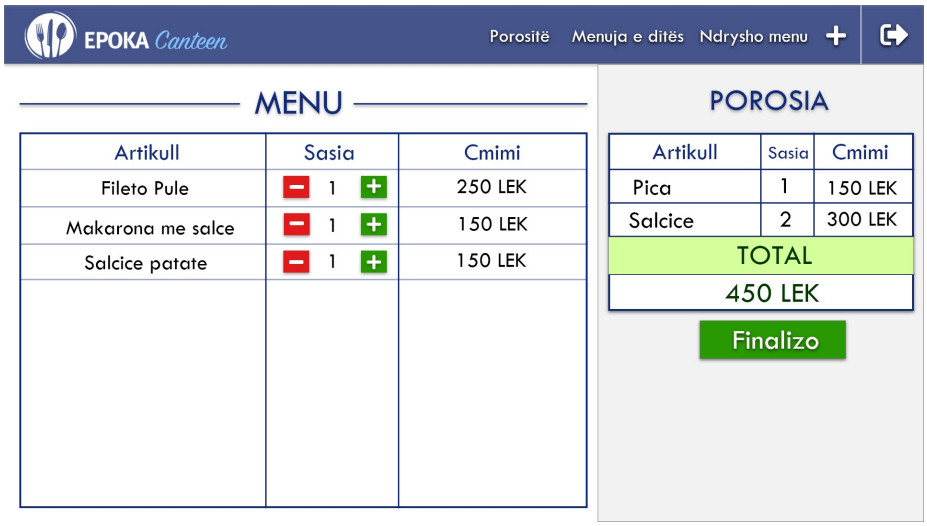
Order	Time	Price
Makarona	12:30	150 LEK
Patate Salcice	13:30	150 LEK

Cashier interfaces:

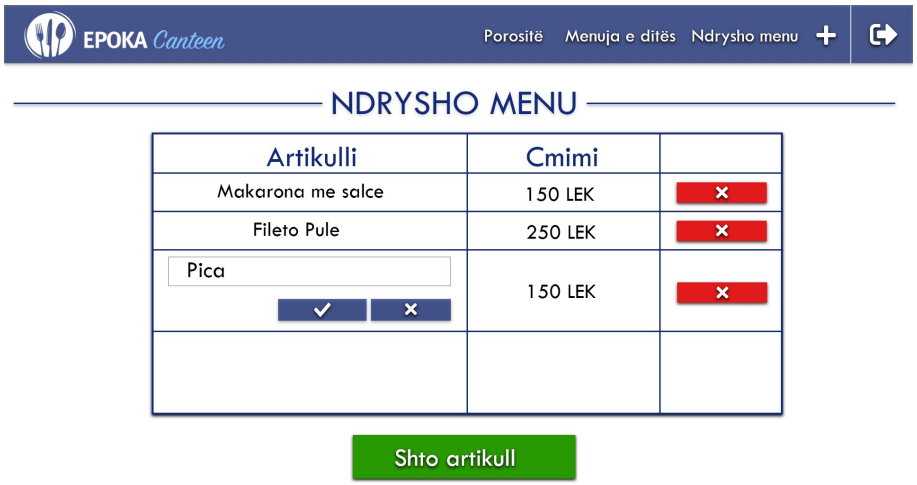
Homepage:



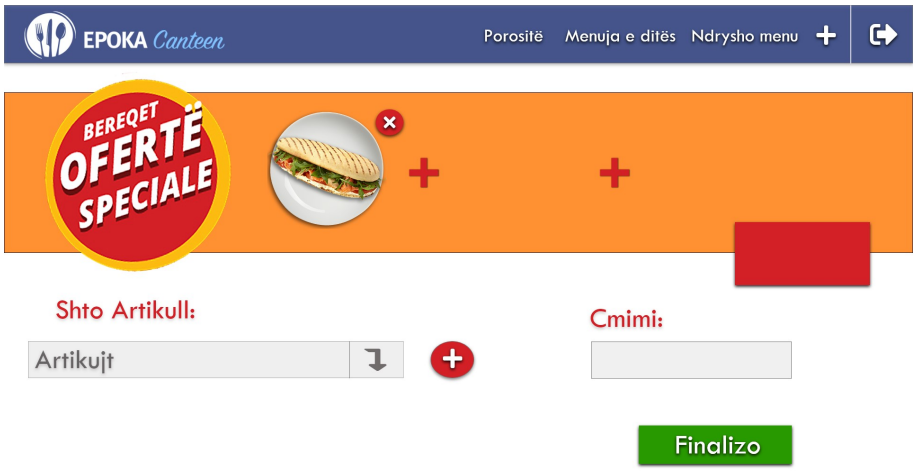
Create order:



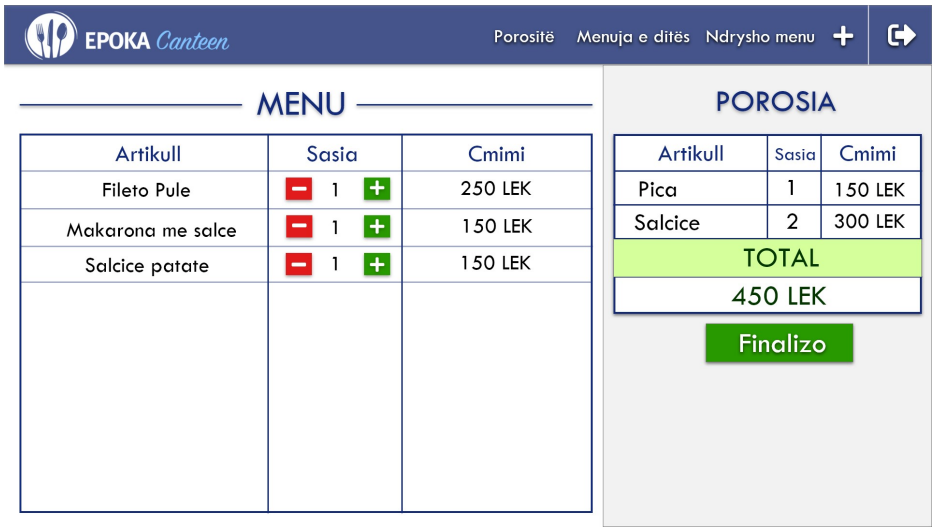
Modify menu:



Daily menu:

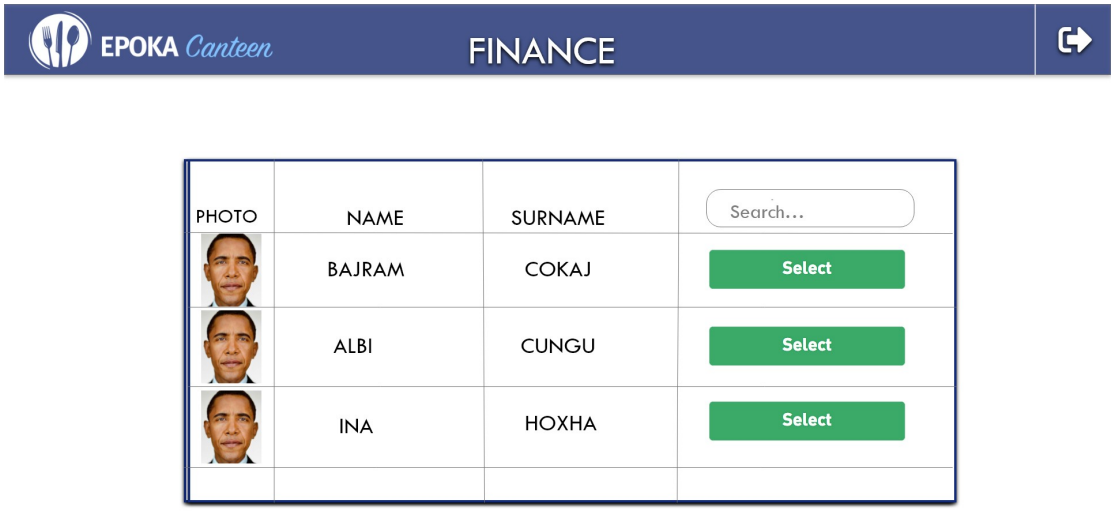


Create order:

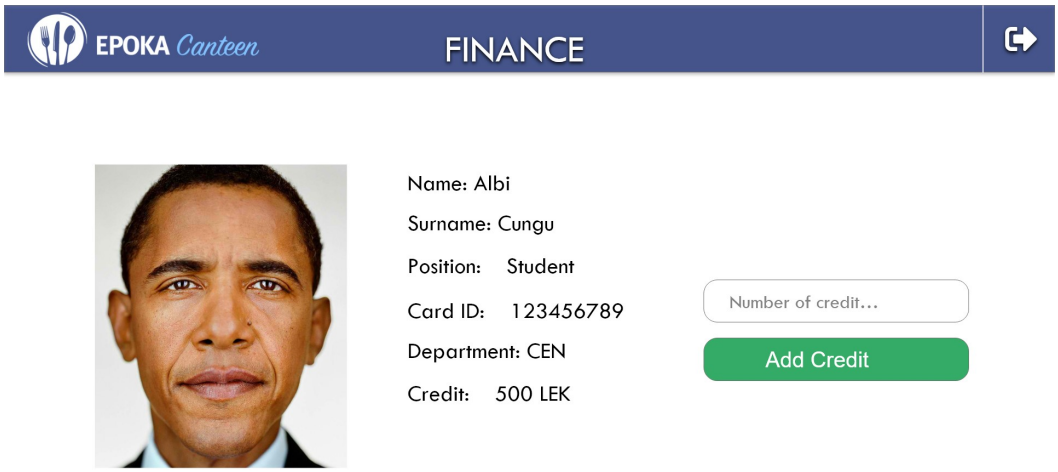


Epoka Finance:

Users:



Add Credit:



Administrator: