

System acceptance tests

Scenario I.1 – Market Activation

- **Test Route – Positive**
Case Description – The user activates the market system for the first time
Test Data – Initial authentication details (username and password)
Preconditions – System must be off
Expected Result – The user is now the system's owner.
- **Test Route – Negative**
Case Description – The system manager activates the market system but provides invalid authentication details.
Test Data – Invalid authentication details (username and password)
Preconditions – System must be off
Expected Result – The system won't start up and will return an error message

Scenario I.2 – change/switch/add an external service.

- **Test Route – Positive**
Case Description – The system manager adds a new payment system to the market.
Test Data – valid payment system
Preconditions – The system must be on, System Manager must be logged in.
Expected Result – Successfully adding the payment system.
- **Test Route – Positive**
Case Description – The system manager adds a new supply system
Test Data – valid supply system
Preconditions – The system must be on; System Manager must be logged in.
Expected Result – Successfully adding the supply system.
- **Test Route – Negative**
Case Description – The system manager tries to add a new payment system but the system manager is not logged in.

Test Data – payment system

Preconditions – The system must be on.

Expected Result – The payment system is not added, and the system returns an error message.

- **Test Route** – Negative

Case Description – The system manager adds a new payment system but the payment system is Invalid.

Test Data – Invalid payment system

Preconditions – The system must be on; System Manager must be logged in.

Expected Result – The payment system is not added, and the system returns an error message.

- **Test Route** – Negative

Case Description – The system manager adds a new, Invalid supply system

Test Data – Invalid supply system

Preconditions – The system must be on, System Manager must be logged in.

Expected Result – The Supply system is not added, and the system returns an error message.

- **Test Route** – Negative

Case Description – The system manager tries to edit a payment system but enters the wrong details.

Test Data – Invalid payment system

Preconditions – The system must be on, System Manager must be logged in.

Expected Result – The payment system is not edited, and the system returns an error message.

- **Test Route** – Negative

Case Description – The system manager tries to edit a supply system but enters the wrong details.

Test Data – Invalid supply system

Preconditions – The system must be on, System Manager must be

logged in.

Expected Result – The supply system is not edited, and the system returns an error message.

Use Case I.3: Using the services of an external payment system

- **Test Route** – Positive

Case Description – the system contacts a payment system that the market is familiar with and tries to perform payment and receive payment validation.

Test Data – transaction details

Preconditions – The system must be on, and the external payment system should be already added

Expected Result – the payment goes through.

- **Test Route** – Negative

Case Description – the system contacts a payment system that the market is familiar with and tries to perform payment with invalid transaction details.

Test Data – Invalid transaction details

Preconditions – The system must be on, and the external payment system should be already added

Expected Result – the payment must not go through and the system should return an error.

Use Case I.4 -Using the services of an external supply service:

- **Test Route** – Positive

Case Description – The system contacts a supply system that the market is familiar with and asks for approval of a valid supply.

Test Data – supply details

Preconditions – The system must be on, and the external supply system should be already added

Expected Result – the sending of the product goes through.

- **Test Route** – Negative

Case Description – The system contacts a supply system that the market is familiar with and asks for approval of an Invalid supply.

Test Data – Invalid supply details

Preconditions – The system must be on, and the external payment system should be already added

Expected Result – the sending of the package must not go through and the system should return an error.

Use Case I.5.1 real-time notifications to store owner:

- **Test Route** – Positive

Case Description – The system must give real-time notifications to logged-in store owner if a product in one of his stores is bought

Test Data – A product to be bought

Preconditions – The system must be on, the store owner must be logged in and one of his stores must contain the product.

Expected Result – The store owner receives a notification about the item bought.

- **Test Route** – Positive

Case Description – The system must give real-time notifications to the logged-in store owner if one of the store owner's stores is being opened.

Test Data – A store to open

Preconditions – The system must be on, the store owner must be logged in and the store must be closed

Expected Result – The store owner receives a notification about the store being opened

- **Test Route** – Positive

Case Description – The system must give real-time notifications to the logged-in store owner if one of the store owner's stores is being closed.

Test Data – A store to close

Preconditions – The system must be on, the store owner must be logged in and the store must be opened

Expected Result – The store owner receives a notification about the store being closed

- **Test Route** – Positive

Case Description – The system must give real-time notifications to the logged-in store owner if one of the store appointments as a store owner is being removed.

Test Data – A store and a store owner to remove

Preconditions – The system must be on, the store owner must be logged and there must be another store owner for this store.

Expected Result – The store owner receives a notification about the other store owner being removed

- **Test Route** – Negative

Case Description – The system won't send a notification to the store owner when someone is trying to remove a non-existing appointment.

Test Data – A store and a non-existing store owner to remove

Preconditions – The system must be on, the store owner must be logged and there must be another store owner for this store.

Expected Result – Exception that this member doesn't exist in this context

Use Case I.5.2 real-time notifications to member:

- **Test Route** – Positive

Case Description – The system must give real-time notifications to logged-in members in case of receiving a message

Test Data – message content to be sent to a member, online member

Preconditions – The system must be active, and the member is logged in

Expected Result – the system notifies the member about receiving a message

- **Test Route** – Negative

Case Description – The system must not sendg real-time notifications to a not logged-in members

Test Data – message content to be sent to a member, offline member

Preconditions – The system must be active, and the member is logged in

Expected Result – the system dosent send any notifications, it saves it for the user to show when he logs in.

Use Case I.6 - Member notifications show up when logging in:

- **Test Route** – Positive

Case Description – A member logs in to the system, and the notifications meant for them during the time they were logged off are shown.

Test Data – A member credentials with pending messages

Preconditions – The system must be active, and the member must be logged out but registered

Expected Result – the system notifies the member about all the messages he missed out on and the member stayed logged in

- **Test Route** – Positive

Case Description – A member logs in to the system, and the notifications meant for them during the time they were logged off are shown.

Test Data – A member credentials without pending messages

Preconditions – The system must be active, and the member must be logged out but registered

Expected Result – the member stayed logged in and was shown “There are no new notifications”.

II.1.1 – Guest Entrance

- **Test Route** – Positive

Case Description – A user enters the system as a guest, and the system defines him as a guest and assigns him a new shopping cart.

Test Data – None

Preconditions – The user is connected as a guest.

Expected Result – The user is assigned his own cart.

II.1.2 – Guest Disconnection

- **Test Route** – Positive

Case Description – A guest disconnects the system, and the system removes his assigned shopping cart and remove the user from the system.

Test Data – A user with items in his shopping cart.

Preconditions – The user is connected as a guest and has items in his shopping cart.

Expected Result – The user’s shopping cart is removed and emptied.

- **Test Route** – Positive

Case Description – A guest disconnects the system, and the system removes his assigned shopping cart.

Test Data – A user without items in his shopping cart.

Preconditions – The user is connected as a guest and has items in his shopping cart and the system is on.

Expected Result – Nothing changes

- **Test Route** – Negative

Case Description – The system receives the wrong guest identifier to logout from the system

Test Data – Wrong guest identifier

Preconditions – The user is connected as a guest and has items in his shopping cart.

Expected Result – An error message is given

II.1.3 – Guest Registration

- **Test Route** – Positive

Case Description – A guest registers in the system giving unique authentication details, later the system recognizes him as a member when logging in using these details

Test Data – User credentials.

Preconditions – The user is not registered to the system and the system is on.

Expected Result – The user receives an approval message for his registration.

- **Test Route** – Negative

Case Description – A guest registers in the system giving not unique authentication details meaning give email who already exist in the system, the system will not recognize him as a member.

Test Data – User credentials.

Preconditions – The user is not registered in the system but there is another user with the same credentials

Expected Result – The user receives an error message about those credentials being used.

II.1.4 – Guest Login as a Member

- **Test Route** – Positive

Case Description – A guest who has registered the system as a member, can use his unique authentication details to log into the system as a

member.

Test Data – User credentials.

Preconditions – The user is registered to the system and the system is on.

Expected Result – The user receives an approval message for his login.

- **Test Route** – Negative

Case Description – A guest try to use wrong user credentials to login, such wrong email or password.

Test Data – Wrong user credentials.

Preconditions – none.

Expected Result – The user receives an error message about his credentials.

II.2.1.A – Guest Information Receival about Stores

- **Test Route** – Positive

Case Description – A guest can access the information about all the active stores in the system.

Test Data – None

Preconditions – The system is on.

Expected Result – The user receives information about the stores in the system.

II.2.1.B – Guest Information Receival about Products in a Store

- **Test Route** – Positive

Case Description – A guest can access the information about all the products in an active store in the system.

Test Data – Store information

Preconditions – The system is on.

Expected Result – The user receives information about all the items in the store.

- **Test Route** – Negative

Case Description – A guest try to access the information about all the products in an active store in the system while providing the wrong store information.

Test Data – Invalid store information

Preconditions – The system is on.

Expected Result – The user receives an error message about the store not existing.

Use Case II.2.2 -Product search:

- **Test Route** – Positive

Case Description – A user tries to search for a product in the system by provide its name

Test Data – product name

Preconditions – The system must be active, and the user must be a member or guest

Expected Result – the system returns all the products that match the name.

- **Test Route** – Positive

Case Description – A user tries to search for a product in the system by provide category

Test Data – product category

Preconditions – The system must be active, and the user must be a member or guest

Expected Result – the system returns all the products that match the category.

- **Test Route** – Positive

Case Description – A user tries to search for a product using keywords

Test Data – keywords

Preconditions – The system must be active, and the user must be a member or guest

Expected Result – the system returns all the products that relate to the keywords.

- **Test Route** – Negative

Case Description – A user tries to search for a product that exists in the market, but the search phrase is not accurate enough to find the desired product

Test Data – product name (for example)

Preconditions – The system must be active, and the user must be a member or guest

Expected Result – the system returns to the user to try a slightly different search.

Use Case II.2.3 – Guest adds products:

- **Test Route** – Positive

Case Description – A user can add some products to his shopping cart.

Test Data – product

Preconditions – The system must be active, and the user must be a member or guest

Expected Result – the system adds the product to the user's shopping cart.

- **Test Route** – Negative

Case Description – A user tries to add some products that currently are out of stock, to his shopping cart.

Test Data – An out-of-stock product

Preconditions – The system must be active, and the user must be a member or guest

Expected Result – the product will not get added to the user's shopping cart and the system will return the user error message with the specific details.

Use Case II.2.4.A – Guest view cart content:

- **Test Route** – Positive

Case Description – A user can check what is the content of his shopping cart.

Test Data – None

Preconditions – The system must be active, and the user must be a member or guest

Expected Result – the system returns a list of products to the user that described all the products in his shopping cart.

Use Case II.2.4.B – Guest remove a product from his cart:

- **Test Route – Positive**

Case Description – A user can remove the products in his cart, and from the specific store bag.

Test Data – product id, store bag id.

Preconditions – The system must be active, and the user must be a member or guest.

Expected Result – the system finds the product in the specific store bag and removes it.

- **Test Route – Negative**

Case Description – A user tries to remove a non-existing product from a store basket and fails

Test Data – wrong product id, store bag id.

Preconditions – The system must be active, and the user must be a member or guest.

Expected Result – the system searches for the product in the specific store bag but it does not exist, so the system will return an error message with the specific details.

- **Test Route – Negative**

Case Description – A user tries to remove a product from a non-existent store basket

Test Data – product id, wrong store id.

Preconditions – The system must be active, and the user must be a member or guest.

Expected Result – The system won't find the store's basket and will result in an exception.

Use Case II.2.4.C – Guest update product quantity from his cart:

- **Test Route – Positive**

Case Description – A user can update the product quantity in his cart, and from the specific store bag.

Test Data – product id, amount, store id.

Preconditions – The system must be active, and the user must be a

member or guest.

Expected Result – the system finds the product in the specific store bag and exchanges the quantity by the given amount and it still greater equals zero.

- **Test Route – Negative**

Case Description – A user tries to reduce a product amount to less than zero.

Test Data – product id, amount, store id.

Preconditions – The system must be active, and the user must be a member or guest.

Expected Result – the system finds the product in the specific store bag but reduces the quantity by the given amount and if it is lower than zero, the system will return an error message with the specific details.

- **Test Route – Negative**

Case Description – A user tries to reduce the amount of product that doesn't exist in his cart

Test Data – wrong product id, amount, store id.

Preconditions – The system must be active, and the user must be a member or guest.

Expected Result – the system does not find the product in the specific store bag so the system will return an error message with the specific details.

Use Case II.2.5- Guest try to purchase his cart:

- **Test Route – Positive**

Case Description – A user can purchase the products in his cart.

Test Data – payment details, supply details.

Preconditions – The system must be active, and the user must be a member or guest.

Expected Result – the purchase is done with success, so the user's cart now will be empty and he will receive purchase validation.

- **Test Route – Negative**

Case Description – A user tries to purchase his cart with the wrong details.

Test Data – wrong payment details, and supply details.

Preconditions – The system must be active, and the user must be a member or guest.

Expected Result – the purchase failed due to wrong details, so the user's cart will stay the same and he will receive an error message.

- **Test Route – Negative**

Case Description – A user tries to purchase an empty cart.

Test Data – payment details, supply details.

Preconditions – The system must be active, and the user must be a member or guest.

Expected Result – the cart was empty so the system will send an error message.

Use Case II.1.2.2 - Member disconnection:

- **Test Route – Positive**

Case Description – A logged-in member trying to disconnect from the system.

Test Data – A logged-in member

Preconditions – The system must be active, and the member must be logged in.

Expected Result – the member disconnects from the system and the system continues to work as usual.

- **Test Route – Negative**

Case Description – The system receives data of not logged in member to disconnect

Test Data – an offline member

Preconditions – The system must be active, and the member must be logged in.

Expected Result – the system is expected to through an arrow

Use Case II.3.1 - Member logout:

- **Test Route – Positive**

Case Description – A logged-in member trying to log out from the system.

Test Data – A logged-in member

Preconditions – The system must be active, and the member must be logged in.

Expected Result – the member logs out from the system and the system continues to work as usual.

- **Test Route – Negative**

Case Description – A logged-out already member trying to log out from the system.

Test Data – Details of offline member

Preconditions – The system must be active, and the member must be logged in.

Expected Result – An exception about this member not being logged in, or not existing

Use Case II.3.2 - Create a new store:

- **Test Route – Positive**

Case Description – A logged-in member is trying to create a new store

Test Data – New store details

Preconditions – The system must be active, and the member must be logged in.

Expected Result – The new store is created and the member becomes its store owner.

- **Test Route – Negative**

Case Description – A logged-in member is trying to create a new store with invalid details

Test Data – logged-in member, Invalid store details

Preconditions – The system must be active, and the member must be logged in.

Expected Result – The member receives an error about the stored details being invalid

Use Case II.4.1 - Inventory management:

- **Test Route – Positive**

Case Description – A logged-in store owner is trying to add a new product.

Test Data – Store details and product details

Preconditions – The system must be active, and the member must be logged in and own the store.

Expected Result – The new product is created and added to the store's product catalog.

- **Test Route – Negative**

Case Description – A logged-in store owner is trying to add a new product with invalid store details.

Test Data – Invalid store details and valid product details

Preconditions – The system must be active, and the member must be logged in and own the store.

Expected Result – The new product is not added, and the store owner receives an error message.

- **Test Route – Negative**

Case Description – A logged-in store owner is trying to add a new product with invalid product details.

Test Data – Valid store details and invalid product details

Preconditions – The system must be active, and the member must be logged in and own the store.

Expected Result – The new product is not added and the store owner receives an error message.

- **Test Route – Positive**

Case Description – A logged-in store owner is trying to remove a product.

Test Data – Store details and product details

Preconditions – The system must be active, and the member must be logged in to own the store, the store must contain the product.

Expected Result – The new product is removed from the store's catalog

- **Test Route – Negative**
Case Description – A logged-in store owner is trying to remove an invalid, new product.
Test Data – Store details and invalid product details
Preconditions – The system must be active, and the member must be logged in and own the store.
Expected Result – No product is deleted, and the store manager is getting an error message.
- **Test Route – Positive**
Case Description – A logged-in store owner is trying to edit a product.
Test Data – Store details, product details, and new details to edit
Preconditions – The system must be active, and the member must be logged in to own the store, the store must contain the product.
Expected Result – The product details change accordingly.
- **Test Route – Negative**
Case Description – A logged-in store owner is trying to edit a product with invalid details.
Test Data – Store details, product details, and invalid new details to edit
Preconditions – The system must be active, and the member must be logged in to own the store, the store must contain the product.
Expected Result – The product details don't change, and the store owner receives an error message.

Use Case II.4.2 – Edit Purchase/Discount Policies:

- **Test Route – Positive**
Case Description – A logged-in store owner changes the buying/discount policies.
Test Data – Store id, purchase, and discount policies
Preconditions – The system must be active, and the member must be logged in and own the store.
Expected Result – The purchase and discount policies are updated respectively.
- **Test Route – Negative**
Case Description – A logged-in store owner attempts to change the

buying/discount policies in a way that conflicts with the consistency requirements defined by the founder.

Test Data – Store id, purchase, and discount policies

Preconditions – The system must be active, and the member must be logged in and own the store.

Expected Result – The system does not update the policies and notifies the owner with a proper error message.

Use Case II.4.4 – Appoint Store Owner:

- **Test Route** – Positive

Case Description – A logged-in store owner appoints another member to be also the store owner.

Test Data – member id

Preconditions – The system must be active, the store is active and the member must be logged in and own the store.

Expected Result – The member is set to be another store owner.

- **Test Route** – Negative

Case Description – A logged-in store owner attempts to appoint another member to be also the store owner, but he is already a store owner.

Test Data – member id

Preconditions – The system must be active, the store is active and the member must be logged in and own the store.

Expected Result – The system rejects the action and notifies the appointing owner with a proper error message.

Use Case II.4.6 – Appoint Store Manager:

- **Test Route** – Positive

Case Description – A logged-in store owner appoints another member to be a store manager.

Test Data – member id

Preconditions – The system must be active, the store is active and the attempting member must be logged in and own the store.

Expected Result – The specified member is set to be a manager of the store.

- **Test Route – Negative**

Case Description – A logged-in store owner attempts to appoint another member to be a store manager, but this member is already a manager of an owner of this store.

Test Data – member id

Preconditions – The system must be active, the store is active and the attempting member must be logged in and own the store. **Expected**

Result – The system rejects the action and notifies the appointing owner with a proper error message.

Use Case II.4.7 – Owner edit store manager permissions

- **Test Route – Positive**

Case Description – A logged-in store owner changes the permissions of a store manager he has appointed.

Test Data – member id, store id, new permissions

Preconditions – The system must be active, the store is active, the attempting member must be logged in and own the store, and the specified member appointed by the owner to be a store manager.

Expected Result – The permissions of the specified store manager are updated respectively.

- **Test Route – Negative**

Case Description – A logged-in store owner attempts to change the permissions of a store manager, but the specified member is either not a manager or was not appointed by him.

Test Data – member id, store id, new permissions

Preconditions – The system must be active, the store is active, the attempting member must be logged in and own the store, and the specified member appointed by the owner to be a store manager.

Expected Result – The system rejects the action and notifies the owner with a proper error message.

Use Case II.4.9 – Store Closing (Founder)

- **Test Route – Positive**

Case Description – A logged-in store founder makes his store inactive.

Test Data – founder id, store id

Preconditions – The system must be active, the store is active, and the attempting member must be logged in and be the store's founder.

Expected Result – The store becomes inactive; the store managers and owners are notified about the action.

- **Test Route – Negative**

Case Description – A logged-in store founder attempts to make his store inactive, but it is already inactive.

Test Data – founder id, store id

Preconditions – The system must be active, the store is active, and the attempting member must be logged in and be the store's founder.

Expected Result – The system rejects the action and notifies the founder with a proper error message.

Use Case II.4.11.A – Get Roles Holders Details (Owner)

- **Test Route – Positive**

Case Description – A logged-in store owner requests information about the role-holders in his store.

Test Data – owner id, store id

Preconditions – The system must be active, and the attempting member must be logged in and be the store's owner.

Expected Result – The owner gets information about the role-holders in his store.

- **Test Route – Negative**

Case Description – A logged-in store owner requests information about the role-holders in a store that is not his.

Test Data – owner id, wrong store id

Preconditions – The system must be active, and the attempting member

must be logged in and be the store's owner.

Expected Result – An error message should appear, saying that the store details are invalid

- **Test Route** – Negative

Case Description – The test receives wrong owner details with store id, the owner is not logged in so it returns an error

Test Data – wrong owner id, store id

Preconditions – The system must be active, and the owner id must be wrong.

Expected Result – An error message should appear, saying that the owner's details are invalid

Use Case II.4.11.B – Get Managers' Permissions (Owner)

- **Test Route** – Positive

Case Description – A logged-in store owner requests the permissions of the managers in his store.

Test Data – owner id, store id

Preconditions – The system must be active, and the attempting member must be logged in and be the store's owner.

Expected Result – The owner gets the information on the permissions of the managers in his store.

- **Test Route** – Negative

Case Description – A logged-in user tries to requests the permissions of the managers in a store that he it not her manager.

Test Data – owner id, store id

Preconditions – The system must be active, and the attempting member must be logged in and be the store's owner.

Expected Result – The user will not get any information about the pre missions and instead he will receive error message from the system.

Use Case II.4.13 – Get Store Purchase History (Owner)

- **Test Route** – Positive

Case Description – A logged-in store owner can requests the purchase history in his store.

Test Data – owner id, store id

Preconditions – The system must be active, and the attempting member must be logged in and be the store's owner.

Expected Result – The owner gets information about all the purchases in his store.

- **Test Route – Negative**

Case Description – A logged-in user who is not the store owner tries to requests the purchase history in the store.

Test Data – owner id, store id

Preconditions – The system must be active, and the attempting member must be logged.

Expected Result – The user will not get any information about all the purchases in his store, instead he will receive an error message .

Use Case II.6.4 – Get the Purchase History of a Store/Buyer (System Manager)

- **Test Route – Positive**

Case Description – A logged-in store system manager requests from the system the purchase history of a specific store by providing it store id.

Test Data – store id

Preconditions – The system must be active, and the attempting member must be logged in and be a system manager.

Expected Result – The system manager gets information about all the purchases of the desired store.

- **Test Route – Positive**

Case Description – A logged-in store system manager requests the system the purchase history of a specific store by providing it user id.

Test Data – buyer id

Preconditions – The system must be active, and the attempting member must be logged in and be a system manager.

Expected Result – The system manager gets information about all the purchases of the desired buyer.

- **Test Route – Negative**

Case Description – A logged-in store system manager try to request from the system the purchase history of a specific store by providing store id of store that dosen't exist.

Test Data – store id

Preconditions – The system must be active, and the attempting member must be logged in and be a system manager.

Expected Result – The system return informative error message to the system manager.

- **Test Route** – Negative

Case Description – A logged-in user, not a manager try to request from the system the purchase history of a specific store by providing store id.

Test Data – store id

Preconditions – The system must be active, and the attempting member must be logged in.

Expected Result – The system return informative error message to the system manager.

- **Test Route** – Negative

Case Description – A logged-in user, not a manager try to request from the system the purchase history of a specific user by providing user id.

Test Data – user id

Preconditions – The system must be active, and the attempting member must be logged in.

Expected Result – The system return informative error message to the system manager.