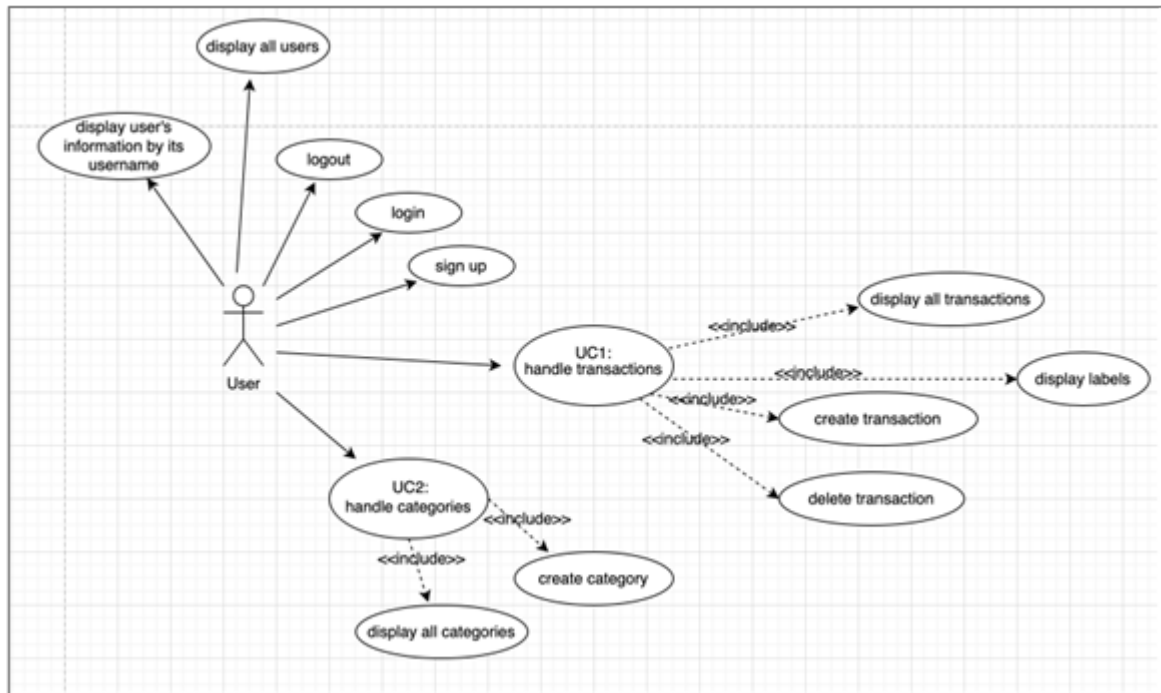


Use Case Diagram And Use Cases

Use Case Diagram



Use Case 1, UC1

handle transactions

Actors Involved	User
Precondition	user must be logged in
Post condition	
Nominal Scenarios	create new transaction, remove transaction, display transactions, display labels

Variants	
Exceptions	unauthorized creation, unauthorized removal, unauthorized display

Scenario 1.1 (Nominal): create new transaction

The user, after making an expenditure on a specific date, wants to insert the amount spent inside the application in a specific category with a small description of the shopping made.

The scenario ends correctly, the transaction is stored in the system.

Step	Description
Precondition	user logged in
Post condition	transaction stored in the system
1	user asks to create a new transaction
2	system checks access token
3	system asks name, type of expense and amount spent
4	user inserts name, type and amount

5	system checks parameters and stores the transaction in the system
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Scenario 1.2 (Nominal): delete transaction

The user, after inserting a new transaction, wants to delete the latter for some reason in order to remove that expenditure from the total of expenses.

The scenario ends correctly, the transaction is removed.

Step	Description
Precondition	user logged in & transaction must be already stored
Post condition	transaction removed from the system
1	user asks to remove a stored transaction
2	system checks access token
3	system asks id transaction
4	user inserts id transaction to remove
5	system delete transaction with id inserted

Scenario 1.3 (Nominal): display transactions

The user wants to visualize all the expenses recorded in the application.

The scenario ends correctly, all the transactions are displayed.

Step	Description
Precondition	user logged in & at least one transaction stored
Post condition	all transactions stored are displayed
1	user asks to display all the transactions stored in the system
2	system checks access token
3	system displays all the transactions stored in the system

Scenario 1.4 (Nominal): display labels

The user wants to visualize all the labels of the categories and the transactions previously inserted.

The scenario ends correctly, all the labels are displayed.

Step	Description
Precondition	user logged in & at least one transaction and one category stored

Post condition	all labels stored are displayed
1	user asks to display all the labels, common to the categories and to the transactions stored
2	system checks access token
3	system displays all the labels

Scenario 1.5 (Exception): unauthorized creation

The user, after making an expenditure on a specific date, wants to insert the amount spent inside the application in a specific category with a small description of the shopping made.

The scenario ends with an error, the transaction cannot be stored because the user has never logged in.

Step	Description
Precondition	user not logged in
Post condition	system returns error
1	user asks to create a new transaction
2	system checks access token
3	there's no access token, system returns an error

Scenario 1.6 (Exception): unauthorized removal

The user, after inserting a new transaction, wants to delete the latter for some reason in order to not count that expenditure in the total expenses.

The scenario ends with an error, the transaction cannot be removed because the user has never logged in.

Step	Description
Precondition	user not logged in
Post condition	system returns error
1	user asks to remove a stored transaction
2	system checks access token
3	there's no access token, system returns an error

Scenario 1.7 (Exception): unauthorized display

The user wants to visualize all the expenses recorded in the application.

The scenario ends with an error, the transactions cannot be displayed because the user has never logged in.

Step	Description
Precondition	user not logged in
Post condition	system returns error
1	user asks to display all the transactions stored in the system
2	system checks access token
3	there's no access token, system returns an error

Use Case 2, UC2

handle categories

Actors Involved	User
Precondition	user must be logged in
Post condition	
Nominal Scenarios	create new category, display categories

Variants	
Exceptions	unauthorized in creation, unauthorized in display

Scenario 2.1 (Nominal): create new category

The user wants to create a new category in which the expenses can be identified.

The scenario ends correctly, the category is stored in the system.

Step	Description
Precondition	user must be logged in
Post condition	category stored in the system
1	user sends a request for creating a new category
2	system checks session token, user authorized
3	system asks category type and color
4	user inserts the two parameters
5	system stored the category with type and color chosen

Scenario 2.2 (Nominal): display categories

The user wants to display all the categories stored previously in which the expenses can be identified.

The scenario ends correctly, all the categories are displayed.

Step	Description
Precondition	user must be logged in && at least one category stored in the system
Post condition	system shows all categories stored
1	user sends a request to display all the categories
2	system checks the session token, user authorized
3	system displays all the categories found

Scenario 2.3 (Exception): unauthorized in creation

The user wants to create a new category in which the expenses can be identified.

The scenario ends with an error, the category cannot be stored because the user has never logged in.

Step	Description
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Precondition	user not logged in
Post condition	system returns an error
1	user sends a request for creating a new category
2	system checks session token, user unauthorized because session token not valid
3	system returns an error

Scenario 2.4 (Exception): unauthorized in display

The user wants to display all the categories stored previously in which the expenses can be identified.

The scenario ends with an error, the categories cannot be displayed because the user has never logged in.

Step	Description
Precondition	user not logged in
Post condition	system returns an error
1	user sends a request to display all the categories

2	system checks session token, user unauthorized because session token not valid
3	system returns an error

Use Case 3, UC3

sign up

Actors Involved	User
Precondition	user has no account
Post condition	user has an account and it is registered
Nominal Scenarios	in order to register, the user has to insert an email not already used and a password. After this procedure, the system will create and store the account
Variants	
Exceptions	email already used, missing parameters

Scenario 3.1 (Nominal): sign up

The user wants to create an account in order to store and track all the expenses. In order to do so, the user sends a request to sign up with specific parameters (username, email and password).

The scenario ends correctly, the email inserted has not already been used and the account has been stored in the system. The user is now registered.

Step	Description
Precondition	user inserts an email not associated to an account (not already used)
Post condition	user has an account associated to the email he has inserted
1	user asks to sign up
2	system asks username, email and password
3	user inserts username, email and password
4	system check if the email is not already in use, email not used
5	system encrypts password and stores account

Scenario 3.2 (Exception): email already used

The user wants to create an account in order to store and track all the expenses. In order to do so, the user sends a request to sign up with specific parameters (username, email and password).

The scenario ends with an error, the email inserted has already been used and the account cannot be created. The user cannot be registered.

Step	Description
Precondition	user inserts an email already used and associated to an account
Post condition	system returns an error
1	user asks to sign up
2	system asks username, email and password
3	user inserts username, email already associated to an account and password
4	system check if the email is not already in use, email already used
5	system returns an error

Scenario 3.3 (Exception): missing parameters

The user wants to create an account in order to store and track all the expenses. In order to do so, the user sends a request to sign up but with some missing parameters (email or username or both).

The scenario ends with an error, the email or the username were not inserted and the account cannot be created. The user cannot be registered.

Step	Description
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Precondition	user inserts an email not associated to an account (not already used)
Post condition	system returns an error
1	user asks to sign up
2	system asks username, email and password
3	user inserts username and password or email and password
4	system check the parameters, but some are missing
5	system returns an error

Use Case 4, UC4

login

Actors Involved	User
Precondition	user has already an account
Post condition	
Nominal Scenarios	In order to login, the user needs to own an account. The user inserts the correct credentials used during the register phase. After this procedure, the

	system will check the correctness of the credentials inserted. If the verification is positive, the system will log the user in.
Variants	
Exceptions	account not found, wrong credentials

Scenario 4.1 (Nominal): login

The user wants to sign in in order to retrieve all past transactions stored and all the categories created. In order to do so, the user sends a request to sign in with specific parameters (email and password).

The scenario ends correctly, the parameters inserted are correct and they have been found in the system. The user is now logged in and the cookie token is set, so the session is established.

Step	Description
Precondition	user must have an account
Post condition	User is logged in := auth token cookie is set in the client browser
1	user sends a request to login
2	system asks email and password
3	user inserts email and password

4	system checks if the credentials are correct, they are
5	system creates an auth token
6	user is logged in, the auth token cookie is set in the response

Scenario 4.2 (Exception): account not found

The user wants to sign in in order to retrieve all past transactions stored and all the categories created. In order to do so, the user sends a request to sign in with specific parameters (email and password).

The scenario ends with an error, the parameters inserted are not correct because they have not been found in the system, therefore the user doesn't have an account. The user cannot be logged in.

Step	Description
Precondition	user doesn't have an account
Post condition	system returns an error
1	user sends a request to login
2	system asks email and password
3	user inserts email (not associated to an account) and password

4	system checks if the credentials are correct, email not stored
5	system returns an error

Scenario 4.3 (Exception): wrong credentials

The user wants to sign in in order to retrieve all the past transactions stored and all the categories created. In order to do so, the user sends a request to sign in with specific parameters (email and password).

The scenario ends with an error, the parameters inserted are not correct because they have been found in the system but one or more parameters are not corresponding. The user cannot be logged in.

Step	Description
Precondition	user must have an account && credentials inserted are not correct (email/password)
Post condition	system returns an error
1	user sends a request to login
2	system asks email and password
3	user inserts email and password (one or both incorrect)
4	system checks if the credentials are correct, they are not

5	system returns an error
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Use Case 5, UC5[1]

handle users

Actors Involved	Admin
Precondition	user logged in
Post condition	
Nominal Scenarios	display all users, get all user information by username
Variants	
Exceptions	

Scenario 5.1 (Nominal): display all users

The logged in user wants to display all the accounts stored in the system, so the user sends a request to the system which, after verifying the session token, displays all the accounts registered.

The scenario ends correctly, the system lists all the accounts found.

Step	Description
Precondition	user logged in
Post condition	system displays all users stored in the system
1	user asks the system to display all users
2	system checks access token
3	system displays all users found in the system

Scenario 5.2 (Nominal): get user by username

The logged in user wants to get all the information stored in the system about one user, so the user sends a request to the system which, after verifying the session token, displays all the information about the account registered.

The scenario ends correctly, the system displays all the information found about the account searched.

Step	Description
Precondition	user logged in
Post condition	system displays all the information found about the account searched

1	user asks the system to get all user's information providing a username, which must be already associated to an account
2	system checks access token and username
3	system displays all user's information found in the system

Use Case 6, UC6

logout

Actors Involved	User
Precondition	user has already an account and user is logged in
Post condition	user is logged out
Nominal Scenarios	user, previously logged in, logs out
Variants	
Exceptions	account not found

Scenario 6.1 (Nominal): logout

The user, previously logged in, wants to log out, so the user sends a request in order to log off.

The scenario ends correctly, the user is logged out.

Step	Description
Precondition	user must have an account and be logged in
Post condition	user is logged out := cookie token is set to empty string
1	user sends a request to log out
2	system checks access token, user is logged in
5	system logs out the user

Scenario 6.2 (Exception): account not found

The user, previously logged in, wants to sign off, so the user sends a request in order to log off.

The scenario ends with an error, the account cannot be found.

Step	Description
Precondition	the access token does not have a user associated

Post condition	system returns an error
1	user sends a request to log out
2	system checks access token
3	system cannot find a user associated to the access token
5	system returns an error
