Virtual Stock Market Game

Use Cases

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Use Case

Use Case 1: Registration

Primary Actor:
User

Stakeholders and interests:
User: wants to trade virtual stocks

Preconditions:
The user is at least 18 years old

Success guarantee:
There is an account for the user in the system's database

Main success scenario:
The user completes a form describing their personal information, username, and password.
The system verifies that the account doesn't already exist, and the password meets security requirements.
The system creates a personal account for the user

Extensions:
The user completes a form describing their personal information, username, and password.
The account already exists in the database
The system suggests for the user to try logging in, or to create a new account

OR

The user completes a form describing their personal information, username, and password.
The password entered does not meet the minimum security requirements
The system suggests for the user to write a more secure password

Special requirements:

None

Technology and data variation risk:
The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Once per user

Use Case 2: Logging in

Primary Actor:
User

Stakeholders and interests:
User: wants to access their account to view or modify their portfolio

Preconditions:
User has an existing account in the database

Success guarantee:
User is logged into their account and can access their portfolio

Main success scenario:
User enters their username and password into a login form on the main page
The system verifies the username and password combination
The user is logged in and redirected to view their portfolio

Extensions:
User enters their username and password into a login form on the main page
The password does not match the corresponding entry in the account
The system notifies the user that their password was incorrect

OR

User enters their username and password into a login form on the main page
The username given does not exist
The system notifies the user that the username was either spelt incorrectly or does not exist

Special requirements:
None

Technology and data variation risk:
The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Every time the user accesses the site, unless they have a recent existing session

Use Case 3: Password Reset

Primary Actor:
User

Stakeholders and interests:
User: Wants to reset the their account password that they forgot.

Preconditions:
User know their account name/email

Success guarantee:
User changes their password to a new password

Main success scenario:
The user clicks forgot password
The user enters their username
The user answers their security question
The user enters a new password and confirms it
The user is sent to the login screen to login using new password

Extensions:
The user clicks forgot password
The user enters an email not associated with an account

Or

The user clicks forgot password
The user enters a valid username
The user fails to answer their security question

Special requirements:
The user must know the security questions answer

Technology and data variation risk:
The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Not very frequently, depending on forgetfulness of user

Use Case 4: Viewing a Stock

Primary Actor:
User

Stakeholders and interests:
User: Wants to view a virtual stock.

Preconditions:
User is logged into their account

Success guarantee:
User is viewing the stock page and sees a graph

Main success scenario:
The user searches for a stock ticker.
The system brings up the page for that stock.

Extensions:
The user searches for a stock ticker.
The stock does not exist.

Special requirements:
The stock market must not be down.

Technology and data variation risk:
The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Very frequently, though not guaranteed upon every access.

Use Case 5: Buying a stock

Primary Actor:
User

Stakeholders and interests:
User: Wants to use game currency to purchase a virtual stock.

Preconditions:
User is logged into their account

Success guarantee:

User has the stock in their account, and has the cost of the stock deducted from the account.

Main success scenario:
The user searches for a stock ticker.
The system brings up the page for that stock.
The user attempts to purchase a stock.
The game puts up a validation screen (Are you sure you want to make this purchase?)
The user selects that they wish to make the purchase.
The game validates that the user has enough funds for the stock.
The transaction is made, with funds being deducted from the account and appropriate numbers of the purchased stock being added.

Extensions:
The user searches for a stock ticker.
The stock does not exist.

     or

The user searches for a stock ticker.
The system brings up the page for that stock.
The user attempts to purchase a stock.
The game puts up a validation screen (Are you sure you want to make this purchase?)
The user selects that they do *not* wish to make the purchase

     or

The user searches for a stock ticker.
The system brings up the page for that stock.
The user attempts to purchase a stock.
The game puts up a validation screen (Are you sure you want to make this purchase?)
The user selects that they wish to make the purchase.
The game validates that the user has enough funds for the stock.
The user does not have the funds necessary to make the purchase, and the transaction is not made.

Special requirements:
The stock market must not be down.

Technology and data variation risk:
The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Very frequently, though not guaranteed upon every access.

Use Case 6: Selling a stock
Primary Actor:
User

Stakeholders and interests:
User: Wants to sell their virtual stock(s) for game currency

Preconditions:
User is logged into their account

Success guarantee:
The stock is removed from the user's account and the corresponding cash equivalent is added

Main success scenario:
The user selects a stock from their portfolio to sell
The user enters a number of stocks to sell
The system verifies the user has sufficient stock to sell
The system displays a validation screen for the user to confirm or reject the transaction
The user confirms the transaction
The stock is removed from the user's account and the corresponding cash equivalent is added

Extensions:
The user selects a stock from their portfolio to sell
The user enters a number of stocks to sell
The system invalidates the transaction because the user does not have enough stock to sell

OR

The user selects a stock from their portfolio to sell
The user enters a number of stocks to sell
The system verifies the user has sufficient stock to sell
The system displays a validation screen for the user to confirm or reject the transaction
The user rejects the transaction

Special requirements:
The stock market must not be down.

Technology and data variation risk:
The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Very frequently, though not guaranteed upon every access.

<center>**Use Case 7: Creating a team**</center>
Primary Actor:

User

Stakeholders and interests:
User: wants to create a team for themselves and their teammates

Preconditions:
User has an existing account

Success guarantee:
A team is created, and the user that created it is the first member

Main success scenario:
User accesses the section to create a team
The system displays a form of the team's information to fill out
The user enters the team name and additional information into the form
The system validates that the team name isn't taken
A team is created, and the user automatically joins that team

Extensions:
User accesses the section to create a team
The system displays a form of the team's information to fill out
The user enters the team name and additional information into the form
The system validates that the team name isn't taken
The team name already exists
The system displays an indication that the user should either join the existing team or choose a different team name.

OR

User accesses the section to create a team
The user is already a member of an existing team
The system indicates to the user that they must leave their team in order to create a new one
The user accepts leaving their team
The user enters the team name and additional information into the form
The system validates that the team name isn't taken
The team name already exists
The system displays an indication that the user should either join the existing team or choose a different team name.

Special requirements:
None

Technology and data variation risk:

The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Infrequently. Some users may do this once, some never, some may create multiple teams over the course of their game.

Use Case 8: Joining a team

Primary Actor: User

Stakeholders and interests:
User: Wants to join a team such as a company, class, or group of friends to compete with a group of people.

Preconditions:
User must have a valid account and must not already be in a team.

Success guarantee:
The user is added into the database with the other team members.

Main success scenario:
The user chooses a team to join
The system validates the team exists
The user is added to the existing team

Extensions:
The user chooses a team to join
The system validates the team exists
The user is added to the existing team
The user makes an independent purchase
The results of the purchase are shown on the leaderboard with the team

OR

The user chooses a team to join
The system does not find the team
The system indicates that the team does not exist, and that the user may want to choose a different team to join or create their own

Special requirements:
None

Technology and data variation risk:
The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Infrequently. Some users may do this once, some never, some may change teams a few times over the course of their game.

Use Case 9: Creating an Advertisement

Primary Actor:
Advertiser

Stakeholders and interests:
Advertiser: Create and submit an ad that will show up in the game.

Preconditions:
User is logged in to their account.

Success guarantee:
Advertisement is placed into the Ad pool.

Main success scenario:
User goes to Advertisement creation and upload view.
User uploads their selected advertisement.
The advertisement is added to the ad pool, and funds are deducted from the advertiser's account

Extensions:
User goes to Advertisement creation and upload view.
User uploads their selected advertisement.
The advertiser does not have sufficient funds, and the ad is not added to the ad pool.

Special requirements:
None.

Technology and data variation risk:
Ad creation will not support a mobile view.

Frequency of occurrence:
Infrequent

Use Case 10: Viewing Your Profile

Primary Actor: User

Stakeholders and interests:

User: Wants to view their personal profile

Preconditions:
User must have a valid account.

Success guarantee:
The user is viewing their account profile.

Main success scenario:
The user selects the "My Profile" link at the top of the page
The user sees their profile

Extensions:
None

Special requirements:
None

Technology and data variation risk:
The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Infrequent

Use Case 11: Editing Your Profile

Primary Actor:
User

Stakeholders and interests:
User: Wants to edit their profile information.

Preconditions:
User is logged in to their account.
User is viewing their profile

Success guarantee:
Intended profile information is changed.

Main success scenario:
User clicks edit profile button
User's profile information presented in form fields
User edits the form of desired information
User clicks submit

Extensions:
User clicks edit profile button
User's profile information presented in form fields
User edits the form of desired information with incorrect form
User is told that information is in incorrect form told to retry

Or

User clicks edit profile button
User's profile information presented in form fields
User edits or doesn't edit information
User hits the cancel button
User information is not changed

Special requirements:
None.

Technology and data variation risk:
Users can falsify information

Frequency of occurrence:
Infrequent

Use Case 12: Viewing Team Profile

Primary Actor: User

Stakeholders and interests:
User: Wants to view their own or another team's profile

Preconditions:
User must have a valid account.

Success guarantee:
The user is viewing a team profile.

Main success scenario:
The user searches for a team
The user is directed to a team profile

Extensions:
The user searches for a team
The team doesn't exist

The user is prompted to search for another team

Special requirements:
None

Technology and data variation risk:
The users are using a browser on a personal computer or mobile phone

Frequency of occurrence:
Infrequent

Use Case 13: Viewing Global Leaderboard

Primary Actor:
User

Stakeholders and interests:
User: Wants to see their standing in the global leaderboard

Preconditions:
None

Success guarantee:
User knows their global rank

Main success scenario:
User clicks global leaderboard
User enter profile name into search bar
User views their global rank

Extensions:
User logs in
User clicks global leaderboard
User immediately views their global rank

Special requirements:
None.

Technology and data variation risk:
None

Frequency of occurrence:
Frequent

Use Case 14: Viewing Team Leaderboard

Primary Actor:
User

Stakeholders and interests:
User: Wants to edit their profile information.

Preconditions:
User is logged in to their account.
User is viewing their profile

Success guarantee:
Intended profile information is changed.

Main success scenario:
User clicks edit profile button
User's profile information presented in form fields
User edits the form of desired information
User clicks submit

Extensions:
User clicks edit profile button
User's profile information presented in form fields
User edits the form of desired information with incorrect form
User is told that information is in incorrect form told to retry

Or

User clicks edit profile button
User's profile information presented in form fields
User edits or doesn't edit information
User hits the cancel button
User information is not changed

Special requirements:
None.

Technology and data variation risk:
Users can falsify information

Frequency of occurrence:
Infrequent

Use Case 15: Mark Stock as Watched

Primary Actor:
User

Stakeholders and interests:
User: Wants to mark a stock to make it easier to visit in the future

Preconditions:
User is logged in
User is looking at a stock

Success guarantee:
User has put a watch on the stock

Main success scenario:
User click watch
User is watching the stock

Extensions:
none

Special requirements:
User believes this will be a stock of interest.

Technology and data variation risk:
None

Frequency of occurrence:
Frequent

Use Case 16: User Views A Recommended Stock

Primary Actor:
User

Stakeholders and interests:
User: Wants to view recommended stocks from their teammates

Preconditions:
User has a team

Success guarantee:
User is shown one or many recommended stocks