# Diplomacy Desktop App - Use Cases

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**Name:** User login

**Identifier:** UC 01

**Description:** Generate a username for a player

**Precondition:** User opens the game application

**Postcondition:** Create a username for the player

**Basic Course of Action:**

1. User should be able to type in a username

2. If username is not in use, continue, else specify a different name

3. Assign a unique color and randomize a country to the user

4. Load the core game elements for the user

5. Show a basic description of game rules

**Alternate Course A:** username is already taken

1. User enter a username that is already taken by another user

2. An error message will be displayed to prompt the user to enter another username


**Name:** Display

**Identifier:** UC 02

**Description:** Displays the game

**Precondition:** Create a user login

**Postcondition:** User can either play the game or spectate it

**Basic Course of Action:**

1. User should be able to view game map (partitioned)

2. User should have a unique name color coded with a legend

3. User country should have a unique color coded with a legend

4. Seasons should be displayed during each turn

5. User should have a view of available orders (move, support, convoy, hold)

6. User should be able to do negotiation through the chat room.

7. Timer should display minutes remaining for each player

8. User can choose to exit out of the game to the main menu


**Name:** User wants to make a Move order.

**Identifier:** UC 03

**Description:** On each turn, each Great Power can order all, some, or none of its units to Move.

**Precondition:** User has an army and/or fleets on the game board.

**Postcondition:** Move orders are submitted.

**Basic Course of Action:**

1. **Course A:** User wants to move their army unit.

   a. User clicks the province with said army unit.

   b. User can order their army to move to an adjacent inland or coastal province by clicking said adjacent province.

   c. If user orders their army to move into a water province, order will be unsuccessful. *Reference resolve orders use case for further info.*

   d. Since no two units can occupy the same province at the same time, an army ordered to move to an adjacent province can end up not moving at all (because of the positions or orders of other units). *Reference resolve orders use case for further info.*

   e. *See Convoy use case to see how an army can move across water provinces from one coastal province to another via Fleets*

2. **Course B:** User wants to move their fleet unit.

   a. User clicks the province with said fleet unit.

   b. User can order their fleet to move to an adjacent water province or coastal province by clicking said province.

   c. If the user orders/clicks to move the Fleet to an inland province, the order will be unsuccessful. *Reference resolve orders use case for further info.*

**Name:** Chat

**Identifier:** UC 04

**Description:** Users can communicate with each other during the game

**Precondition:** Must be logged in

**Postcondition:** Must be playing to communicate. Message is sent to other user/s

**Basic Course of Action:**

1. Players are able to communicate with each other Individually

2. Players are able to communicate with as a group

3. Players are able to mention players in the group chat

**Alternate Course A:** User is a spectator

1. Spectator is able to see the group chat

2. Spectator may not participate in group chat or view individual chat

**Name:** Request draw

**Identifier:** UC 05

**Description:** User no longer wants to continue the game and requests to end the game with the approval of all the remaining players.

**Precondition:** Game has started and request to for draw has not already been made in round.

**Postcondition:** All remaining players either accept or reject the request.

**Basic Course of Action:**

1. All remaining players within the game accept the request for a draw.

2. All remaining users will be notified of the approval.

3. The game ends and the use case ends.

**Alternate Course A:** Players reject the request for a draw.

1. If at least one player rejects the request for the draw, then the request fails.

2. All remaining users will be notified of the rejection.

3. The game continues and the use case ends.

**Name:** Support

**Identifier:** UC 06

**Description:** The army or fleet can support other armys or fleets to increase the strength.

**Precondition:** The army or fleet hasn't supported another army or fleet.

**Postcondition:** successfully support the selected army or fleet resulting in gaining strength.

**Basic Course of Action:**

1. The player selects the army or fleet to support

2. Support has to be a valid order ( you can't support units from far away)

**Name:** End turn

**Identifier:** UC 07

**Description:** Player submits all orders that have been made.

**Precondition:** Player completes its orders.

**Postcondition:** The orders are orders are sent to the resolve orders use case

**Basic Course of Action:**

1. User clicks end turn button.

**Alternate Course A:** Orders issued are invalid.

1. Units are ordered to hold and player gets skipped.


**Name:** Retreat

**Identifier:** UC 08

**Description:** A country has been attacked/invaded, so the player must retreat his/her troops.

**Precondition:** A players country has been attacked/invaded. Retreats can't be convoyed or

supported. The resolve use case has been executed.

**Postcondition:** Player must move his/her troops to another region.

**Basic Course of Action:**

1. Prompt user to move troops in a available province.

2. Troops are moved to the designated region.

3. Use case ends.

**Alternate Case Course A:**

1. If no province is available then unit is automatically disbanded

2. Use case ends.


**Name:** Disband Units

**Identifier:** UC 09

**Description:** The players have to disband their units when the unit is under the attack and has no order to move elsewhere.

**Precondition:** Player must have units available to disband. The resolve use case has been executed.

**Postcondition:** Remove unit from the game map and country

**Basic Course of Action:**

1. If a country has fewer supply centers than units, it must disband the excess number of units.

2. If two or more units are ordered to retreat to the same province, they all must be disbanded.

3. The unit will be immediately disbanded when there is no available province to retreat.

4. A unit can either choose to retreat or disband. The user will be given the option to either retreat or disband the unit.


**Name:** Gain Troops

**Identifier:** UC 10

**Description:** The player selects army or fleet units to build on their original supply centers.

**Precondition:** The season is winter, the country owns more supply centers than units, and the original supply centers are unoccupied.

**Postcondition:** New unit(s) are created on the supply centers.

**Basic Course of Action:**

1. The season changes to Winter.

2. Countries are assigned ownership of unoccupied or foreign owned supply centers when one of their troops hold on it.

3. The total number of supply centers owned and number of troops owned are checked and compared.

4. The country's original supply centers are checked to see if still owned and unoccupied.

5. The country may choose army and fleet units up until the number of total units equals the number of controlled supply centers but less than or equal to there starting cities.

6. The validity of the selected units are checked.

7. The units are created when the turn ends.

8. Use case ends.

**Alternate Case Course A:** The number of units is greater than or equal to the number of controlled supply centers.

1. The player does not have the option to select units to build during the turn.

2. Use case ends.

**Alternate Case Course B:** The country's original supply centers are occupied.

1. The player does not have the option to select units to build during the turn.

2. Use case ends.

**Alternate Case Course C:** The country's original supply centers are no longer owned.

1. The player does not have the option to select units to build during the turn.

2. Use case ends.

**Alternate Case Course D:** The player chooses to build a fleet unit on a supply center whose land is not adjacent to a coast.

1. The selected fleet is not created at the time the others, if any, are created.

2. Use case continues at step six of the basic course of action.

**Alternate Case Course E:** The player chooses not to build any units.

1. The unit selections are left unpicked.

2. Use case ends.


**Name:** Changing of seasons

**Identifier:** UC 11

**Description:** change from current season to the next season

**Precondition:** Retreat phase and gain phase( in Winter) is completed. All players clicked end turn button.

**Postcondition:** start another turn of game play

**Basic Course of Action:**

1. Game play starts with Spring season 1901

2. After resolving one turn of orders, game move to the retreat phase and gain phase

3. Next turn of game play start in the next season

4. In winter season, players might build troops/fleets or disband a unit. No movement orders in this season.


**Name:** Start game

**Identifier:** UC 12

**Description:** Begin the game session.

**Precondition**: No player is in the game.

**Postcondition:** All players are in the game.

**Basic Course of Action:**

1. Create the game session.

2. Players start joining the game using the game ID

3. Begin the first spring season.

**Name:** Resolve orders

**Identifier:** UC 13

**Description:** resolve all orders submitted by the players at the end of each season

**Precondition:** All players have submitted all their orders. (clicked the end turn button)

**Postcondition:** Players orders are implemented. Use case of change season is executed.

All orders will be resolved at the same time. All orders from all players will be displayed.

Successful and unsuccessful order will be indicated.

**Basic Course of action:**

1. Players submit their orders

2. All orders need to be resolved at the same time

3. Some orders will be successfully executed

4. Some orders will be failed to execute

5. Failed orders will be highlighted and the reason of fail execution will be displayed

**Name:** End Game

**Identifier:** UC 14

**Description:** End the current game when certain conditions are met.

**Precondition:** One country controls eighteen supply centers or all remaining countries agree to end the game.

**Postcondition:** The game ends and the winning country or countries are displayed on the screen.

**Basic Course of Action:**

1. When a country seizes a supply center, the amount of supply centers it controls total is checked.

2. If the number of supply center is greater than or equal to eighteen, the game automatically ends.

3. The winning country is displayed on the screen and the use case ends.

**Alternate Course A:** Players agree to end the game.

1. All remaining countries set their win condition to end game.

2. The selected win conditions on each player are checked at the end of the turn.

3. The game ends at the end of the turn. The remaining countries are displayed on the screen. The use case ends.

**Alternate Course B:** Some but not all players agree to end the game.

1. Some remaining countries set their win condition to end game.

2. The selected win conditions on each player are checked at the end of the turn.

3. The game continues unchanged and the use case ends.

**Name:** Holding position

**Identifier:** UC 15

**Description:** hold the current position of a unit

**Precondition:** the unit does not get a move order

**Postcondition:** the unit successfully hold its position after resolving orders

**Basic Course of Action:**

1. Player should be able to keep units in place

2. Players that don't specify an action will automatically hold at the end of a turn

**Alternate Course A:** The unit was attack

1. A unit might be attacked by another unit of different power

2. If the attack has more strength, the holding unit lose it positions

3. The unit then has to be either retreat or disband


**Name:** Convoy

**Identifier:** UC 16

**Description:** The player uses a fleet unit to carry an army unit over a body of water to another area.

**Precondition:** The army unit is adjacent to the body of water being crossed, and the water convoy is in is adjacent to both the army unit and the target area.

**Postcondition:** The army unit has crossed the body of water and placed on the target area.

**Basic Course of Action:**

1. The army unit is ordered to move to an area across a body of water.

2. A fleet unit within that water is ordered to convoy.

3. The fleet unit selects the army unit to convoy, then selects the target area the army has also targeted.

4. At the end of the turn, the army unit is placed on the new land.

5. Use case ends.

**Alternate Case A:** The targeted land isn't adjacent to the body of water the army is adjacent to.

1. At the end of the turn, the army unit holds in its current area.

2. Use case ends.

**Alternate Case B:** The fleet is not in the body of water being crossed.

1. At the end of the turn, the army unit holds in its current area.

2. Use case ends.

**Alternate Case C:** The fleet selects the wrong army unit or wrong target area.

1. At the end of the turn, the army unit holds in its current area.

2. Use case ends.

**Alternate Case D:** The fleet unit is attacked by a foreign country.

1. At the end of the turn, the army unit holds in its current area.

2. Use case ends.