

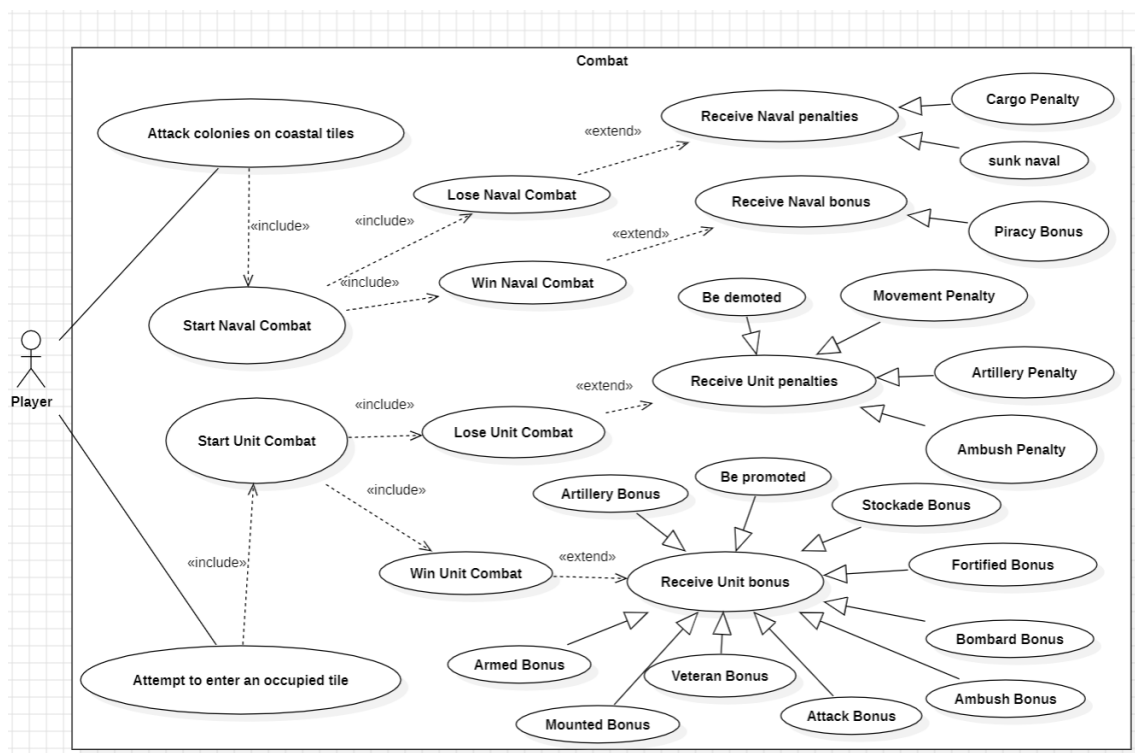
# Software Engineering Project

## Use Case Diagram

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For our use case diagrams, we divided the FreeCol game into six sub-diagrams.

I will be responsible for the relationship between a player and a combat and its interactions.



Now I'll proceed to give a short explanation for each Use Case present on it:

The actor in this use case diagram is the **player**, who can be either human or AI, and plays the game.

**Use case:** Attempt to enter an occupied tile

**ID:** 1

**Description:** If the player attempts to enter an occupied tile, they will start a unit combat. The winner receives Unit benefits such as Armed bonus, attack bonus, or bombard bonus, while the loser receives Unit penalties such as Ambush penalty, Artillery penalty, or movement penalty.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Attack colonies on coastal tiles

**ID:** 2

**Description:** If the player attack colonies on coastal tiles, they will start a unit combat. The winner receives Naval benefits such as Piracy Bonus, while the loser receives Naval penalties such as Cargo Penalty or Sunk Naval.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Start Naval Combat

**ID:** 3

**Description:** A naval combat begins, and the player can either win or lose.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Start Unit Combat

**ID:** 4

**Description:** A Unit combat begins, and the player can either win or lose.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Lose Naval Combat

**ID:** 5

**Description:** The player loses the naval combat and will receive some penalties.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Win Naval Combat

**ID:** 6

**Description:** The player wins the naval combat and will receive some bonuses.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Lose Unit Combat

**ID:** 7

**Description:** The player loses the unit combat and will receive some penalties.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Win Unit Combat

**ID:** 8

**Description:** The player wins the unit combat and will receive some bonuses.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Receive Naval Penalties

**ID:** 9

**Description:** The player who lost the naval combat will receive some penalties, such as Cargo Penalty or Sunk Naval.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Receive Naval Bonuses

**ID:** 10

**Description:** The player who won the naval combat will receive some bonuses, such as Piracy Bonus.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Receive Unit Penalties

**ID:** 11

**Description:** The player who lost the unit combat will receive some penalties, such as Ambush penalty, Artillery penalty, or movement penalty.

**Main actor:** Player

**Secondary actors:** None

**Use case:** Receive Unit Bonuses

**ID:** 12

**Description:** The player who won the naval combat will receive some bonuses, such as Armed bonus, attack bonus, or bombard bonus.

**Main actor:** Player

**Secondary actors:** None