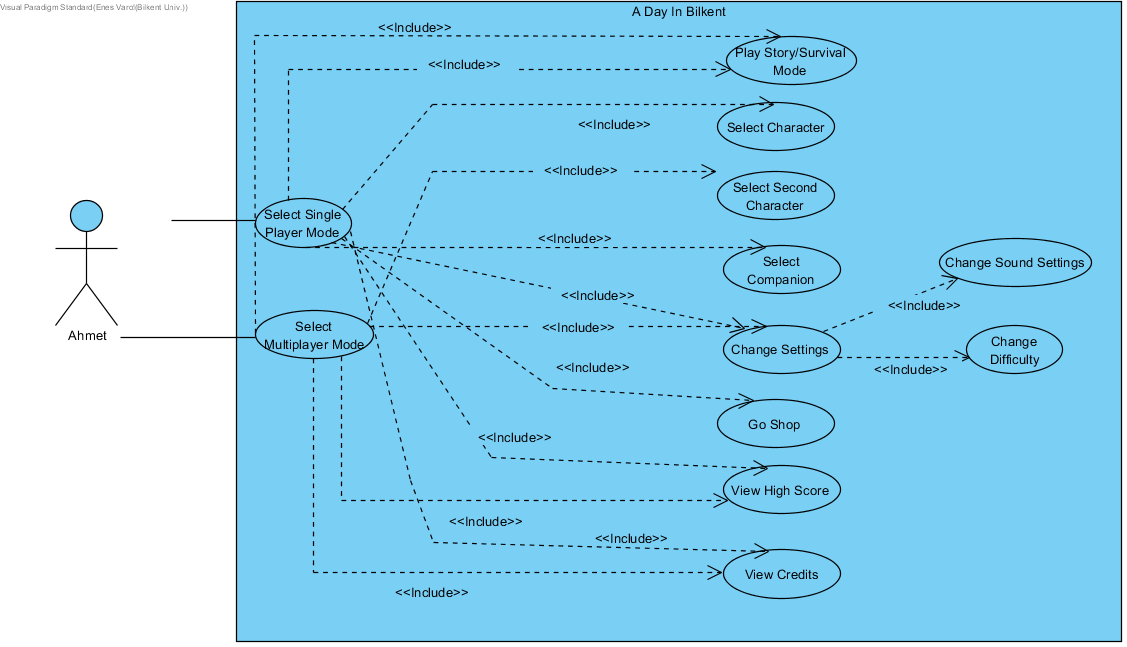
**5. System Models**

**5.1 Use case model**



**Use Case: Select Single Player Mode**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects single player mode.
* System creates the main menu and shows on the screen.

**Pre-conditions:** Ahmet must open the game from his computer.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Single Player" from screen.

**Exit conditions:**

1. Ahmet selects "Go Back" to go back to first screen.

**Success Scenario Event Flow:**

1. Ahmet selects "Single Player" from game screen.

2. System creates the single player main menu and displays it on screen.

**Alternative Event Flow:**

1. If Ahmet want to return to main menu:

a. Ahmet selects "Go Back" from screen.

**Use Case: Select Multiplayer Mode**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects multiplayer mode.
* System creates the main menu and shows on the screen.

**Pre-conditions:** Ahmet must open the game from his computer.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Multiplayer" from screen.

**Exit conditions:**

1. Ahmet selects "Go Back" to go back to first screen.

**Success Scenario Event Flow:**

1. Ahmet selects "Multiplayer" from game screen.

2. System creates the multiplayer main menu and displays it on screen.

**Alternative Event Flow:**

1. If Ahmet want to return to main menu:

a. Ahmet selects "Go Back" from screen.

**Use Case: Play Story Mode**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects play story mode.
* System creates the game and starts it.

**Pre-conditions:** Ahmet must select Single Player mode.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Play Story Mode" from screen.

**Exit conditions:**

1. Ahmet finishes the story mode.
2. Ahmet can’t finish the story mode.

**Success Scenario Event Flow:**

1. Ahmet selects "Single Player" from game screen.

2. System creates the single player main menu and displays it on screen.

3. Ahmet selects “Play Story Mode” from screen.

4. System starts the game.

5.Ahmet moves the character and companions via keyboard.

6.System updates character and companions’ view.

7.Character and companions shoots.

8.System creates bullets and updates it.

9.Bullets hit an enemy.

10.System deallocates bullet and enemy and removes from screen.

11.Ahmet kills all enemies.

12.System finishes the first wave and initializes the next wave.

**Alternative Event Flow:**

1. If character dies:

a. System shows “Game Over” screen and goes back to main menu.

**Use Case: Play Survival Mode**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects play survival mode.
* System creates the game and starts it.

**Pre-conditions:** Ahmet must select Single Player or Multiplayer mode.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Play Survival Mode" from screen.

**Exit conditions:**

1. Ahmet and his friend finishes the story mode.
2. Ahmet and his friend can’t finish the story mode.

**Success Scenario Event Flow:**

1. Ahmet selects “Single Player” or "Multiplayer" from game screen.

2. System creates the multiplayer main menu and displays it on screen.

3. Ahmet selects “Play Survival Mode” from screen.

4. System starts the game.

5.Ahmet moves the character via keyboard.

6.System updates character’s view.

7. Ahmet’s friend moves the character via keyboard.

8. System updates character’s view.

9.Characters shoots.

10.System creates bullets and updates it.

11.Bullets hit an enemy.

12.System deallocates bullet and enemy and removes from screen.

13.Ahmet kills all enemies.

14.System finishes the first wave and initializes the next wave.

**Alternative Event Flow:**

1. If characters die:

a. System shows “Game Over” screen and goes back to main menu.

**Use Case: Select Character**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects select character.
* System creates the select character screen and displays it.

**Pre-conditions:** Ahmet must select Single Player or Multiplayer mode.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Select Character" from screen.

**Exit conditions:**

1. Ahmet selects “Go Back” from screen.

**Success Scenario Event Flow:**

1. Ahmet selects “Single Player” or "Multiplayer" from game screen.

2. System creates the corresponding main menu and displays it on screen.

3. Ahmet selects “Select Character” from screen.

4. System creates the select character screen and displays it.

5.Ahmet selects his character.

6.System updates character information.

**Alternative Event Flow:**

1. If Ahmet wants to go back to main menu:

a. Ahmet selects “Go Back” from screen.

b. System creates main menu and displays it.

**Use Case: Select Second Character**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects select second character.
* System creates the select second character screen and displays it.

**Pre-conditions:** Ahmet must select Multiplayer mode.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Select Second Character" from screen.

**Exit conditions:**

1. Ahmet selects “Go Back” from screen.

**Success Scenario Event Flow:**

1. Ahmet selects "Multiplayer" from game screen.

2. System creates the corresponding main menu and displays it on screen.

3. Ahmet selects “Select Second Character” from screen.

4. System creates the select second character screen and displays it.

5.Ahmet selects second character.

6.System updates second character information.

**Alternative Event Flow:**

1. If Ahmet wants to go back to main menu:

a. Ahmet selects “Go Back” from screen.

b. System creates main menu and displays it.

**Use Case: Select Companion**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects select companion.
* System creates the select companion screen and displays it.

**Pre-conditions:** Ahmet must select Single Player mode.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Select Companion" from screen.

**Exit conditions:**

1. Ahmet selects “Go Back” from screen.

**Success Scenario Event Flow:**

1. Ahmet selects “Single Player” from game screen.

2. System creates the corresponding main menu and displays it on screen.

3. Ahmet selects “Select Companion” from screen.

4. System creates the select companion screen and displays it.

5.Ahmet selects his companions.

6.System updates companion information.

**Alternative Event Flow:**

1. If Ahmet wants to go back to main menu:

a. Ahmet selects “Go Back” from screen.

b. System creates main menu and displays it.

**Use Case: Change Settings**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects settings.
* System creates the settings screen and displays it.

**Pre-conditions:** Ahmet must select Single Player or Multiplayer mode.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Settings" from screen.

**Exit conditions:**

1. Ahmet selects “Go Back” from screen.

**Success Scenario Event Flow:**

1. Ahmet selects “Single Player” or "Multiplayer" from game screen.

2. System creates the corresponding main menu and displays it on screen.

3. Ahmet selects “Settings” from screen.

4. System creates the settings screen and displays it.

5.Ahmet changes sound and difficulty settings.

6.System updates sound and difficulty information.

**Alternative Event Flow:**

1. If Ahmet wants to go back to main menu:

a. Ahmet selects “Go Back” from screen.

b. System creates main menu and displays it.

**Use Case: Go Shop**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects shop.
* System creates the shop screen and displays it.

**Pre-conditions:** Ahmet must select Single Player or Multiplayer mode.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Shop" from screen.

**Exit conditions:**

1. Ahmet selects “Go Back” from screen.

**Success Scenario Event Flow:**

1. Ahmet selects “Single Player” or "Multiplayer" from game screen.

2. System creates the corresponding main menu and displays it on screen.

3. Ahmet selects “Shop” from screen.

4. System creates the shop screen and displays it.

5.Ahmet buys items.

6.System updates currency and item information.

**Alternative Event Flow:**

1. If Ahmet wants to go back to main menu:

a. Ahmet selects “Go Back” from screen.

b. System creates main menu and displays it.

**Use Case: View High Score**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects high scores.
* System creates the high scores screen and displays it.

**Pre-conditions:** Ahmet must select Single Player or Multiplayer mode.

**Post-conditions:**

**Entry conditions:** Ahmet should select "High Scores" from screen.

**Exit conditions:**

1. Ahmet selects “Go Back” from screen.

**Success Scenario Event Flow:**

1. Ahmet selects “Single Player” or "Multiplayer" from game screen.

2. System creates the corresponding main menu and displays it on screen.

3. Ahmet selects “High Scores” from screen.

4. System gets high score information.

5. System creates the high scores screen and displays it.

**Alternative Event Flow:**

1. If Ahmet wants to go back to main menu:

a. Ahmet selects “Go Back” from screen.

b. System creates main menu and displays it.

**Use Case: View Credits**

**Primary Actor**: Ahmet

**Stakeholders and Interests:**

* Ahmet selects view credits.
* System creates the credits screen and displays it.

**Pre-conditions:** Ahmet must select Single Player or Multiplayer mode.

**Post-conditions:**

**Entry conditions:** Ahmet should select "Credits" from screen.

**Exit conditions:**

1. Ahmet selects “Go Back” from screen.

**Success Scenario Event Flow:**

1. Ahmet selects “Single Player” or "Multiplayer" from game screen.

2. System creates the corresponding main menu and displays it on screen.

3. Ahmet selects “Credits” from screen.

4. System creates the credits screen and displays it.

**Alternative Event Flow:**

1. If Ahmet wants to go back to main menu:

a. Ahmet selects “Go Back” from screen.

b. System creates main menu and displays it.