# Group A: Game of Strife

Project execution: 1 point is equivalent to 2 people working 1 hour.

Priority: Must have (M), Should have (S), Could have (C), Would have (W).

## Case description

Game of Strife is a board game for 2 to 4 players, where each player’s journey is based on the choices they make and the tiles they land on. Players take turns to roll a die, navigate a board, and draw cards that influence their resources, movement, and turns. The objective is to earn enough money during the game, so you can be the first one to collect the required amount of victory points.

## User stories

### Create players

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| As a player |
| I want to enter how many players will participate |
| So that the number of players in the game corresponds to the number of players. |
| Acceptance criteria:  The input number of players should be able to play the game in turns. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up that shows Number of players with a dropdown menu next to it.  Step 2: Choose your desired amount of players from this dropdown menu.  Step 3: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 4: (optional) Fill in the names and country of each player.  Step 5: Press the “OK” button. The game will now start with your chosen number of players. |

### Assign money/budget

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| As a player |
| I want to start with money |
| So that I can pay potential fines when drawing cards |
| Acceptance criteria:  Each player has a budget with their respective starting money. From this budget, money can be withdrawn or added to. The starting budget is 500 gold. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Look at the left side of the screen, at an unhighlighted player. Under “Gold Reserve”, it should say 500. |

### Select player

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| As a player |
| I want to know if it is my turn. |
| So that I can roll the dice |
| Acceptance criteria:  After entering the number of players, and seeing the board, the first player is selected. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Look at the left side of the screen. The first player should now be highlighted. |

### Create Sequential Turn Order

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| As a player |
| I want there to be turns for everyone |
| So that I can take my own turn and others can take theirs |
| Acceptance criteria:  The game should grant player 1 their turn after game start, then after they earn their money, roll the die, move and draw their card (if possible), player 2’s turn starts. Continue for P3 and P4 until it’s P1’s turn again. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Press the “Roll Die” button on the top right of the screen. Step 5: If any popup shows up, close it. It does not matter how. The next player’s turn should start automatically.  Step 6: Repeat steps 4 and 5 until every player has rolled once. The turn should roll back to the first player. |

### Show the interactive board/UI

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| As a player |
| I want to start the application and to see the board. |
| So that I can see the game board. |
| Acceptance criteria:  I can see the board, I can see the players and their current budget, position, and state. I can see which card I have drawn. I can click on the board to roll the dice. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start and show a board along with the rest of the game UI.  Step 4: Press the “Roll Die” button. If you land on a colored tile, a popup should show up that notifies you of what card you have drawn. |

### Roll the dice, move to correct tile, get a card

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| As a player |
| I want to roll the dice, move my position, and receive a card based on the tile color |
| So the player takes the number of steps rolled and receives a card when on a colored tile to later execute an action |
| Acceptance criteria:  The number of steps that have been rolled are taken, the player location/tileID is updated, the correct card color is given to the player when applicable. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Press the “Roll Die” button on the top right of the screen. The little image that corresponds to the player should move a number of spaces that is equal to the roll result. If you land on a colored tile, a popup should show up that notifies you of what card you have drawn. |

### Execute card

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| As a player |
| I want to be able to execute a card |
| So that I can experience its effect |
| Acceptance criteria:  When the given card is shown on the screen, the player has to click on the “OK” button to execute the card. This will adjust one of many things, such as the resources or position of the player. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Press the “Roll Die” button on the top right of the screen. If you land on a colored tile, a popup should show up that shows the card that is drawn.  Step 5: Press “OK”, or one of the options if a blue card is drawn. The effect that is shown on the card should now be in effect.  Step 6 (optional): Repeat steps 4 and 5 if the card action has a duration. The effect should occur for the duration (= number of your turns) that is mentioned on the card. |

### Have full decks of cards

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| As a player |
| I want to be able to get a different type of card for every different tile color, from different full decks of cards |
| So that I am able to get a different card every time I land on a new tile |
| Acceptance criteria:  When a player lands on a colored tile, a card is drawn from the top of the deck with the corresponding color. Players can receive a range of different cards from the full deck of cards. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Press the “Roll Die” button on the top right of the screen. If you land on a colored tile, a popup should show up that shows the card that is drawn.  Step 5: Press “OK”, or one of the options if a blue card is drawn. The effect that is shown on the card should now be in effect.  Step 6: Press the “Roll Die” button again. When you land on a subsequent colored, a different popup should show up that shows that a different card is drawn from the deck. |

### Give cards differing functionalities so that they warrant subclass use

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| As a player |
| I want to draw cards that do a diverse array of things |
| So that the game stays interesting and subclasses can be used |
| Acceptance criteria:  Cards should be subdivided into at least 2 different card subclasses, each with their own functions for what happens when their card is drawn. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Press the “Roll Die” button on the top right of the screen. If you land on a colored tile, a popup should show up that shows the card that is drawn. The category of the drawn card corresponds to the color of the tile you have landed on.  Step 5: Press “OK”, or one of the options if a blue card is drawn. The effect that is shown on the card should now be in effect. These effects depend on the color of the tile/card. |

### Scaling the GUI

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| As a player |
| I want the GUI to conform to the bounds of the application when I enlarge or shrink it. |
| So that the application can be used at any window size |
| Acceptance criteria:  All elements of the GUI should scale with the size of the GUI panel itself. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Move the boundaries of the application such that the screen becomes larger or smaller. |

### Branching tiles on the board

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| As a player |
| I want to be able to choose where I go at certain points on the board |
| So that I have more agency as a player, which makes it more fun to play. |
| Acceptance criteria: At least one tile should have two possible tiles to which the player can move. It should then be possible for the player to choose which path they want to take. Optionally, two tiles should also be able to converge onto one tile. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Press the “Roll Die” button on the top right of the screen and press “OK”, or one of the options if a blue card is drawn. Do this until you reach a branching path.  Step 5: Press “OK”, or one of the options if a blue card is drawn.  Step 6: Repeat steps 4 and 5, until you reach a branching path (and have steps left to move), a popup window appears that asks you which path you want to take.  Step 7: Press on the button for the path you want to take (“Path 1” or “Path 2”). Your icon’s position should be on the correct tile.  Step 8 (optionally): Repeat steps 4 and 5 until you reach a converging path. You should move on the “main” path again automatically. |

### Add Background to Board panel

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| As a player |
| I want to look at a visually beautiful board |
| So that the game becomes more immersive |
| Acceptance criteria: The background of the board should be covered by a .png of an image that is thematically fitting with the game |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start. The background of the game should be visible and should be an image that is thematically fitting to the game. |

### Get Income

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| As a player |
| I want to be able to get income at the start of my turn |
| So that my resources increase and I can use these resources to take actions during my turn. |
| Acceptance criteria:  At the start of a player's turn, their resources increase automatically by their current income amount. The income is added only once per turn and only at the start. If a player’s income changes (e.g., due to upgrades or penalties), the new income value is used on the next turn (for a specified duration). |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Press the “Roll Die” button on the top right of the screen.  Step 5: Press “OK”, or one of the options if a blue card is drawn.  Step 6: Wait until the other players have finished their turn. When your next turn starts, your resources have automatically increased by your current income (before you roll the die again).  Step 7: Repeat steps 4 and 5 until you receive a card that adjusts your income (for a certain duration). You should see that the value of your income changes correspondingly in the player panel of the GUI.  Step 8: Wait until the other players have finished their turn. When your next turn starts, your resources have automatically increased by your updated income.  Step 9: Wait until the duration of the income change has passed. After the duration (= number of your turns), the income should return to your original income.  Step 10: Repeat steps 4 and 5 until you receive a card by which you have an action such as rerolling or drawing a card that makes you move. Your income should not be added to your resources again. |

### Extended path

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| As a player |
| I want to be able to understand the direction of the path through the board’s visuals, to keep walking on the board (e.g., circular board), and to be able to see multiple colored tiles. |
| So that my understanding of the path is sufficient to make decisions about my movements (e.g., choosing branching paths) to get to certain colored tiles. |
| Acceptance criteria:  Paths overlay important objects on the board. Players are informed about their location and can orientate and make decisions based on their locations. Players can see the colors of the tiles and different branches. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start. The path visible on the board should align properly with major objects on the board and should have multiple colored tiles and branching paths. |

### Player names and countries are chosen and displayed

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| As a player |
| I want to be able to choose a country and see which country I am during the game |
| So that I know which player (country) has which resources and position, this way I can compare my resources and position with those of other players. |
| Acceptance criteria:  When the game is started, each player is able to choose a country from the dropdown menu. The name of the country the player has chosen is visible for each player during the game. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Use the empty text boxes to choose each player’s name.  Step 4: Use the dropdown menu to choose each player’s country.  Step 5: Press “OK”. The game will now start and show the correct country for each player. |

### Finishing the game

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| As a player |
| I want to be able to finish the game |
| So that I can win/lose the game and stop playing the game |
| Acceptance criteria:  When one of the players has collected all victory points, they win the game and the game is finished. All players should not be able to roll the die anymore when the game is finished, and a pop-up window should appear that states the winner and losers. On this window there are 2 buttons to either close the game or restart the game. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Choose the amount of victory points needed to win from the dropdown menu.  Step 3: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 4: Press the “OK” button again. The game will now start.  Step 5: Play the game as usual, and when coming across a victory tile, buy the victory point.  Step 6: Play this way until one player has enough victory points to win, as determined at the start of the game. When the turn ends, this player will win and a popup with the winner/losers will show.  Step 7: Either press “Exit” to close the game or “Restart” to start a new game. |

### Buying victory points

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| As a player |
| I want to be able to buy victory points on specific tiles that stop the player |
| So that I can win the game by being the first player to have bought all victory points |
| Acceptance criteria:  The path has a specific tile on which players can buy victory points with their respective budgets. These tiles stop the player from moving to the next tile, so they can decide to buy a victory point. The victory points can only be bought if the player’s budget is high enough. The cost of the victory point should be deducted from the player’s budget and the victory point should be added to the total number of victory points of the player. A specific number of victory points is necessary to win the game (this number can be set in the settings).  The “victory point tile” is placed towards the end of the board. When a player lands on a victory tile and buys a victory point, the tile will move to a different position (which should also be towards the end of the board). The player is then transported to the starting tile of the board. When the player does not buy a victory point, the tile is not moved to a different position and the player can continue moving with its remaining steps. |
| Acceptance test (exact description):  Step 1: Start the application. A screen will show up (Game Settings).  Step 2: Press the “OK” button. A new screen will appear that asks you for each player’s name.  Step 3: Press the “OK” button again. The game will now start.  Step 4: Press the “Roll Die” button on the top right of the screen. Step 5: Press “OK” for any popup that appears if you don’t land on a victory tile, or one of the options if it is a blue card popup.  Step 6: Repeat steps 4 and 5 until you reach a Victory Tile. Once you reach a Victory Tile, a new window will pop up that asks you to buy a Victory Point for 1000 money.  Step 7a: Press “Do not buy a victory point”. Nothing will happen to you or the tile, and you keep moving to the tile you would have moved to if a Victory Tile was not in the way.  Step 7b: Press “Buy a victory point”. This will teleport you to the start, remove your remaining steps and grant you a victory point. It will also move the Victory Tile to a different tile.  Step 8b: This process is repeatable until one player wins. |