IP.1 – ArithmeticSquareApp

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Use Cases

Here is a list of all Use Cases for the ArithmeticSquareApp:

- Select Tile
- Move Tile
- Wins Game
- Loses Game
- Restart Game
- Exit Game

Use Case: Select Tile

- Participating Actor: Initiated by Player
- Entry Condition
    - None
- Exit Criteria
    - Given Tile is selected
- Flow of Events
    1. The Player requests to select a Tile
    2. ArithmeticSquareApp marks this Tile as selected and updates the display

Use Case: Move Tile

- Participating Actor: Initiated by Player
- Entry Condition
  - A Tile has been selected and the Move is valid
- Exit Criteria
  - Move has been performed
- Flow of Events
  1. The Player requests to perform a Move with the selected Tile
  2. ArithmeticSquareApp performs the requested Move and updates the display

Use Case: Wins Game

- Participating Actor: Initiated by Player
- Entry Condition
  - A Tile has been selected and the Move is valid
- Exit Criteria
  - Move has been performed, and a message congratulating the Player is displayed
- Flow of Events
  1. The Player requests to perform a Move with the selected Tile
  2. ArithmeticSquareApp performs the requested Move, updates the display and displays a message congratulating the Player

Use Case: Loses Game

- Participating Actor: Initiated by Player
- Entry Condition
    - A Tile has been selected and the Move is valid
- Exit Criteria
    - Move has been performed and a message telling the Player no more valid moves exist is displayed
- Flow of Events
    1. The Player requests to perform a Move with the selected Tile
    2. ArithmeticSquareApp performs the requested Move, updates the display and displays a message telling the Player no more valid moves exist

Use Case: Restart Game

- Participating Actor: Initiated by Player
- Entry Condition
  - None
- Exit Criteria
  - The original configuration of the Tiles is restored
- Flow of Events
  1. The Player requests to restart the game
  2. ArithmeticSquareApp restores the original configurations of the Tiles and updates the display

Use Case: Exit Game

- Participating Actor: Initiated by Player
- Entry Condition
  - None
- Exit Criteria
  - ArithmeticSquareApp process is terminated
- Flow of Events
  1. The Player requests to exit the game
  2. ArithmeticSquareApp terminates (implying the operating system updates the display)

Mockup Interface
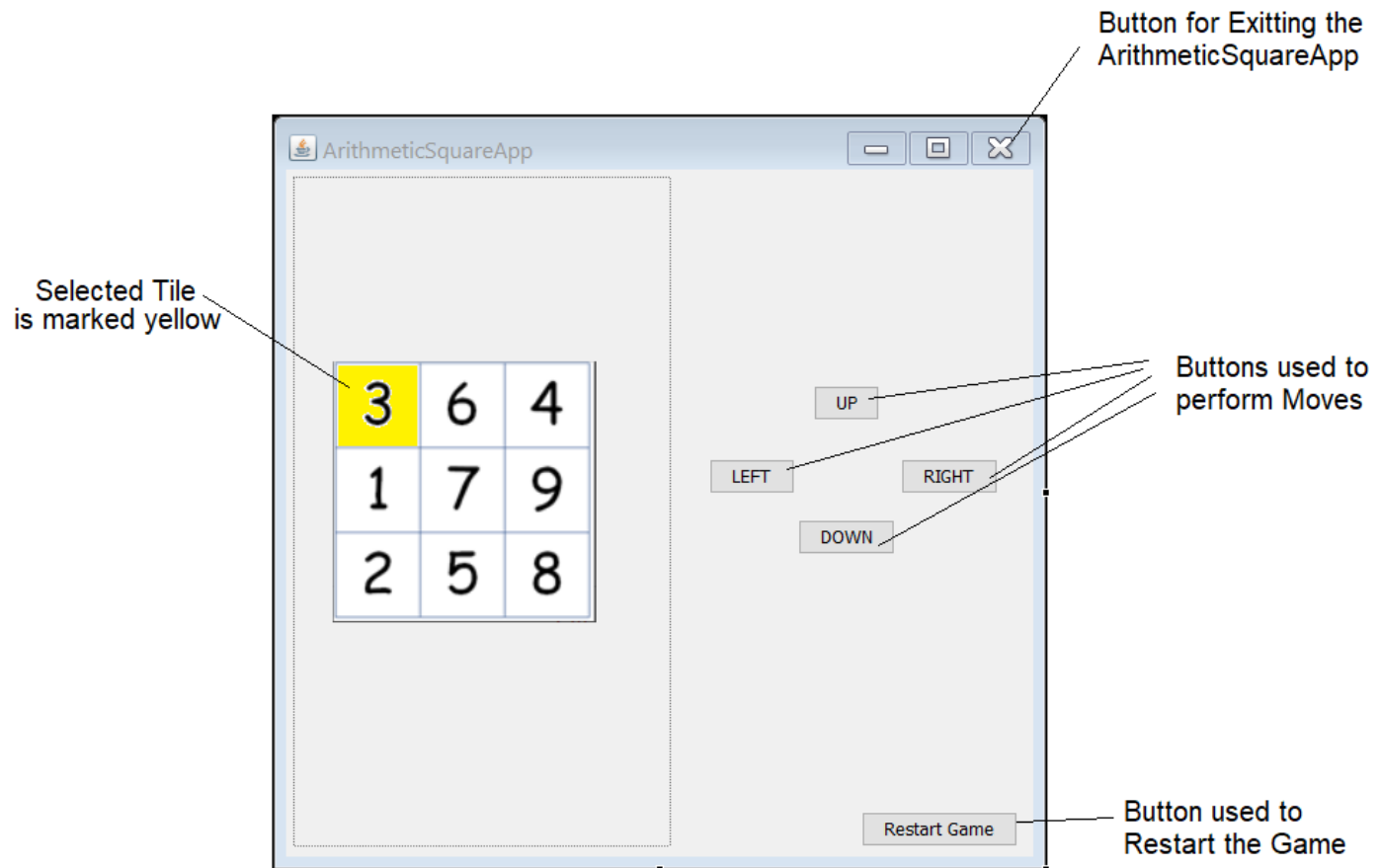
Mockup Interface

- Buttons function as usual, the Player clicks the button and the button performs the expected tasks
- In order to select a Tile the Player simply clicks on it with his mouse cursor and the selected Tile is marked with a yellow color
- In order to perform a Move the Player first selects a Tile and then clicks on one of the movement buttons ("UP", "DOWN", "LEFT", "RIGHT")
- In order to restart the game the Player clicks on the "Restart Game" button
- In order to exit the game the Player clicks on the "X" button in the top right corner