

Use Case Specifications: Milestone 2

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Use Case 1

Title : Set up game

Description: Select number of players and fill in game board.

Primary Actors: Game instance constructor, User

Pre-conditions: There is no game, game prompt is started

Post-conditions: Number of players (1-4) are created with a board filled with 1 jewel and 1 turtle for each player. Game starts.

Main Success Scenario:

- Ask the user the number of players that will play in the game session
- Call game constructor
 - Create a board full of empty tiles
 - Create list of TurtleMasters based on number of players given
 - Add associated Turtle tiles to board
 - Add 1 Jewel tile to board center per TurtleMaster created
- First game round begins

Extensions:

- User exits game menu

Frequency of Use: Once per game session

Use Case 2

Title: Play Round

Description: Game calls upon each TurtleMaster

Primary Actors: TurtleMasters, Game

Pre-conditions: Game instance has been created

Post-conditions: Game is won or repeat

Main Success Scenario:

- For each TurtleMaster:
 - Play turn
 - Execute TurtleMaster instructions
 - Check if TurtleMaster has won – if so remove associated Turtle and Jewel from board
- Repeat Play Round

Extensions:

- All TurtleMaster have won
- Return to game menu

Frequency of Use: Possibly infinite

Use Case 3

Title: Player Turn

Description: Player selects card and confirms end of turn

Primary Actors: TurtleMaster

Pre-conditions: Game is created. TurtleMaster has not won.

Post-conditions: Game executes TurtleMaster's instruction

Main Success Scenario:

- TurtleMaster selects card (Forward, Left, or Right)
- Game checks for confirmation
 - TurtleMaster does not return Bug card

Extensions:

- At confirmation TurtleMaster returns Bug card
 - Repeat Player turn

Frequency of Use: Possibly infinite

Use Case 4

Title: Execute player Instruction

Description: Change board configuration

Primary Actors: Game

Pre-conditions: TurtleMaster sent instruction (Forward, Left, or Right)

Post-conditions: Same board state or new configuration

Main Success Scenario:

- If Forward:
 - Move associated Turtle in direction it is facing by 1 on the board
- If Left:
 - Change associated Turtle direction by rotating it left
- If Right
 - Change associated Turtle direction by rotating it right

Extensions:

- Forward move obstructed by another Turtle or board edge
 - Do nothing

Frequency of Use: Possibly infinite