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CS 509 - Design of Software Systems

Homework #1 – Use Cases

**Use Case 1: Choose Puzzle Configuration**

Participating Actor: Initiated by User

Entry Condition: None

Exit Criteria: A Puzzle configuration is selected

Flow of events:

1. User requests to select a puzzle configuration
2. App selects the configuration and refreshes display

**Use Case 2: Select A Square**

Participating Actor: Initiated by User

Entry Condition: None

Exit Criteria: Square is selected

Flow of events:

1. User requests to select a square
2. App selects the square, and refreshes display

**Use Case 3: Extend Color**

Participating Actor: Initiated by User

Entry Condition: A Square must be selected

Exit Criteria: Color is extended to Square and assigned a number

Flow of events:

1. User requests to extend color to a square
2. App extends color to square, labels it with a number, and refreshes display

**Use Case 4: Reset Planar Puzzle**

Participating Actor: Initiated by User

Entry Condition: None

Exit Criteria: Puzzle is reset to its original configuration

Flow of events:

1. User requests to reset the puzzle
2. App resets puzzle to its original configuration, and refreshes display

**Use Case 5: Solve Planar Puzzle**

Participating Actor: Initiated by User

Entry Condition: A Square must be selected

Exit Criteria: Puzzle is solved

Flow of events:

1. User requests to extend color to last empty square
2. App extends color to Square, labels it with a number, verifies if current state of puzzle configuration is valid for success, displays congratulations message, and refreshes display

**Storyboard GUI**





