CSC780 – Application Development for Mobile Devices

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Application Design:

Application Name: 15 Puzzle Game

High Level description:

The 15-puzzle is a sliding puzzle that consists of 4x4 frame of numbered square tiles in random order with one tile missing. The objective of the puzzle is to place the tiles in order by sliding a tile at a time to the empty space at that move.
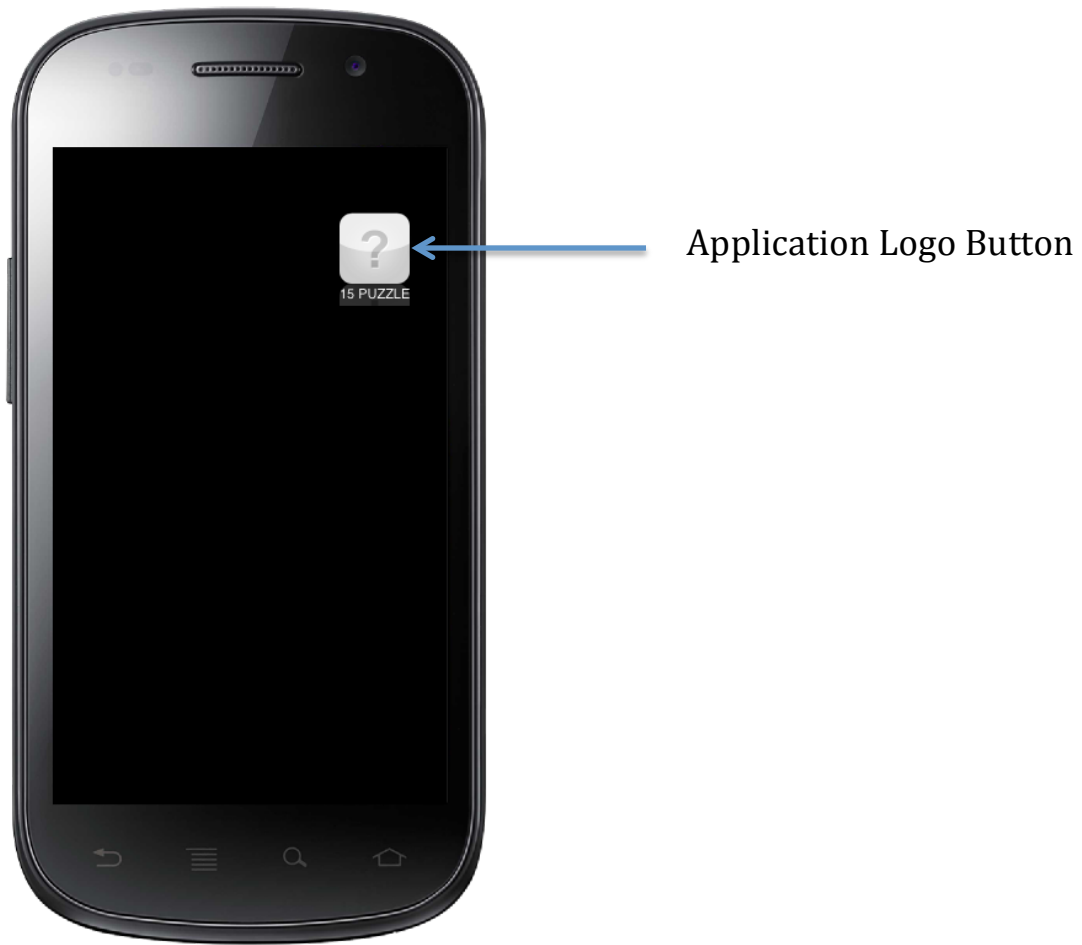
Target Audience:

All ages. Kids already from age of preschool can play the game.

Use Case:

Alex, a student from SFSU wants to play a new brain puzzle game. He downloads the 15 Puzzle game from Google play. The application's 15-puzzle logo appears on his android phone screen.

Application Logo Button

Alex touches the application logo button and the game screen appears

Alex follows the instructions and shakes the phone, the following screen appears

A screen with 15 random order tiles appears.
Alex knows that he needs to use the empty tile to put the numbers in order. But he also knows that he has several options.

15 Puzzle

3		10	15
5	12	4	6
2	7	8	1
11	9	13	14

He can move tile 3 to the right, tile 10 to the left or tile 12 up. He decides to make the first step.

15 Puzzle

3		10	15
5	12	4	6
2	7	8	1
11	9	13	14

He tilts the phone to the right and back and tile 3 slides to the empty spot.

Now that tile 3 moved to the left, Alex needs to think what will be the next move.
He can slide the number 5 tile up or slide tile 3 back to the left.

15 Puzzle

5	3	10	15
12	4	6
2	7	8	1
11	9	13	14

He decides to slide tile 5 up (*), which gets him a new screen layout, where tiles 5,12 or 2 can move.

(*)
He tilts the phone down and back and the tile slides to the empty spot.

Alex makes several moves and finishes the game by placing all fifteen tiles in their correct position.

Alex just solved the puzzle.

The application prompts Alex that he solved the puzzle and now he needs to decide whether he wants to play the game again or quit.