**First Section - Initialising the game**

- Step One, Step Six, Step 10, Person doing this section would basically lay out how everything will look, including the buttons. Person doing step two will add the functionality to the buttons.

**Second Section - Buttons and Effects**

- Step Two, Step Three, Step Four, Step Seven,

**Third Section - Countdown, Game End, and Game Results**

- Step Five, Step Eight, Step Nine,

**Step One.**

FR-1 The Game environment is set up the same as Figure 2.

FR-1.1 Cards are displayed face-down in a 13 by 4 table.

FR-1.2 The title and time are set on top; three buttons are set on the bottom.

**Step Two.**

FR-2.1 Clicking "Show Cards" button will show up all cards face-up

FR-2.2 When clicking "Show Cards", cards are showing face-up one by one (animation e

ffect).

**Step Three.**

FR-3.1 Clicking "Flip Cards" button will turn all cards, except from those found paired, face-down.

FR-3.2 When click "Flip Cards", the paired cards will stay face-up.

FR-3.3 When click "Flip Cards", cards are turning face-down one-by-one (animation e

ffect).

**Step Four.**

FR-4 Click "Show Cards" or "Flip Cards" shouldn't affect an ongoing game, nor change the cards' order.

**Step Five**

FR-5 The timer ticks down from 60 seconds when a game is loaded, and the game will be terminated when the time runs 0.

FR-5.1 Timer ticks down second by second (animation effect).

FR-5.2 When 60 seconds runs 0, the game stops.

FR-5.3 No concurrent threads (timer) is allowed. The timer is cleared out when a game is terminated.

**Step Six (This would be done with Step One)**

FR-6.1 When a game starts the cards are in random order based on their ranks.

FR-6.2 The randomising function is implemented by using the shuffling plan.

**Step Seven**

FR-7 Each time the player will click two cards. The card will stay face-up if paired, or flip face-down after a few milliseconds.

FR-7.2 The paired (matching rank) cards will be recorded (stored) for presentation of gaming result when finished.

FR-7.3 Paired cards cannot be selected again (clicking it shouldn't invoke any event leading to further tasks).

FR-7.4 After two cards selected, the cards turn back to face-down if unpaired (mismatching ranks).

FR-7.5 The mismatching cards will stay for a few milliseconds before turning face-down (animation effect).

**Step Eight** (Maybe done with the 60 second countdown, ie. 0 seconds = terminate game, so pressing stop could change the countdown to 0 and trigger an end game?)

FR-8 When click "Stop Game" button, an ongoing game is terminated.

**Step Nine**

FR-9 An alert window pops up, presenting the gaming result as Figure 3, when a game is terminated.

FR-9.2 The paired cards are presented in correct format of "suit-rank" and value (using Ace, Jack,Queen, and King), each pair in a separate line.

FR-9.3 The paired cards are listed in ascending order from Ace to King, ignoring suits.

FR-9.4 The sorting function is implemented by Bubble Sort algorithm.

**Step Ten** (Nothing much to do here, would just retrigger the function that starts the game).

FR-10 A new game with timer set to 60 seconds starts automatically when the gaming result window is killed.