**Software Development Process**

Assignment\_2

**Problem Statement:**

1) The program will need to provide an interface that allows users to enter your name, several options and determine how many times to play through the interface.

2) The program needs to generate a random number automatically and give a choice.

3)The game should display pictures of stones, paper and scissors selected by players and computers.

4) If illegal input is detected, the program will should allow users to re-enter it again until the input is correct or the execution of the program terminates.

For example:

* Input is beyond legal limits.
* Did not enter the specified character or number.
* Did not put out the right choice.

**Analysis:**

On Input**:**

First, programmer need to introduce the game message on the screen and print several pieces of information on it so that users can know what data/operation the program needs. Second, Pictures of rock paper scissors need to be printed on the screen.

On Output:

Given a legal input. Users can choose the number of games and one of paper-scissor-rock.

Data structure:

Only single data is involved. Thus, there are no complex data structure issues here.

Algorithm:

Have a single calculation is direct. There is no algorithm here.

**Design:**

This is a game. The first thing is to introduce the game. The content of the game is paper-scissor-rock. It requires users to decide the number of games and choose one of the paper-scissor-rock. (Play several times with for () cycle several times and choose one with switch()-case) Next, rule how to win or lose. (rule with if()) Then, we use Sleep() to pause, allowing players to have time to watch game requests and content. In order to avoid too much screen material, the system() will be used for screen cleaning. Finally, players will be told to win or lose.

**Implementation：**

see the C code “1719177\_2.c” (at the end of this document) with comments.

**Testing：**

**Test 1**

Congratulations, you have entered a game!!!

Please defeat me!!!

(The graph is composed of \*)

(Not convenient to express it)

Paper-Scissor-Rock

Player please enter your name: yoyo

Please enter the number of times you want to play: L

Please enter again the number of times you want to play:F

Please enter again the number of times you want to play:5

Good Luck

-Press the pause-

yoyo, the Game is starting.

We will see who wins more and who wins!!

\*Note that a draw is counted\*

you 0 / computer 0/ dogfall 0

Round 1

Commands: P=Paper, S=Scissor, R=Rock, L=Surrender

Please make your choice: o

Please make your choice: P

\*\*

\*\* \* \* \*\*

\* \* \* \* \* \*

\* \* \* \* \* \*

\* \* \* \* \* \* \*\*

\* \* \* \* \* \* \* \*

\* \* \* \* \* \* \* \*

\* \* \* \* \* \* \* \*

\*\* \* \*\* \*\* \* \*

\* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\* \*

\* \*

\* \* \* \* \* \* \*

This is my choice!!!

\* \*

\* \* \* \* \* \*

\* \* \* \*

\* \*

\* \*

\* \* \* \* \*

\* \* \* \* \* \*

\* \* \* \* \* \*

\* \* \* \* \* \*

\* \* \* \* \* \* \*

\* \* \* \* \* \* \* \*

\* \* \* \*

\* \*

\*

You are Win!!! (just round 1)

you 2 / computer 1/ dogfall 2

Oh no... you defeat me!!! Now, you can leave

Press Enter to return to Quincy...

**Text 2**

Congratulations, you have entered a game!!!

Please defeat me!!!

(The graph is composed of \*)

(Not convenient to express it)

Paper-Scissor-Rock

Player please enter your name: 520

Please enter the number of times you want to play: fff

Please enter again the number of times you want to play: 3

Good Luck

-Press the pause-

520, the Game is starting.

We will see who wins more and who wins!!

\*Note that a draw is counted\*

you 0 / computer 1/ dogfall 0

Round 2

Commands: P=Paper, S=Scissor, R=Rock, L=Surrender

Please make your choice: L

I'm very disappointed. You are Lose!!!

Press Enter to return to Quincy...