**PSAP ASSIGNMENT 3**

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**ASSIGNMENT: I will guess your number**

**Problem** **statement**:

* In this game, the roles are switched as compared to assignment 2.
* In this game, user holds a number in his mind (say between 1 to 100) and computer would guess it
* The computer will prompt its guess and wait for reply from the user.
* User would compare the number prompted by the computer (say g) with number in his mind (say x). The user would reply the following
* ‘L’ if computer’s guess is larger than the number in user’s mind (g > x)
* ‘S’ if computer’s guess is smaller than the number in user’s mind (g < x)
* The above process would continue till your program guesses the correct number. At this point user will respond with ‘E’
* When the user responds ‘E’, computer will tell how many attempts were required to make the guess and then the program would terminate.

**CODE**:

#include<stdio.h>

#include<time.h>

#include<stdlib.h>

int main()

{

    int random,x1=1,x2=100,count=1;

    char user,c;

    srand(time(0));

    random=(rand()%(x2-x1+1))+x1;

    printf("\n Welcome! \n I am going to guess the number in your mind \n");

    printf("Every time I guess Please reply as follows,\n S:If my guess is smaller than the number in your mind, \n L:If my guess is larger than the number in your mind, \n E:If my gues is same as the number in your mind.\n");

    printf("\n Choose a number between 1 and 100 and remember it in your mind. \n ");

    while(user!='E'&& user!=13)

    {

        printf("My Guess is :%d \n Please Reply(L/S/E): \n",random);

        scanf("%c%c",&user,&c);

        if(user=='S')

        {

            x1=random;

            random=(rand()%(x2-x1+1))+x1;

            count++;

        }

        else if(user=='L')

        {

            x2=random;

            random=(rand()%(x2-x1+1))+x1;

            count++;

        }

        else if(user=='E')

        {

            printf("\n Yesss!I guessed your number correctly in %d attempts. \n ",count);

        }

        else

        {

            printf("Invalid Input");

        }

    }

    printf(" \n Thanks for Playing the game. \n");

    return 0;

}

**OUTPUT-**



