
PPS MINI PROJECT

WITH C

By,

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GUESSING GAME

It's a simple program with while loop and other conditional statements. Generates some random number we have to guess it , we can play again and again at single run or can exit .

Some in-built functions are used here. srand();

- Initializes the randomizer based on the given integer

number time(NULL);

- Returns the current time in seconds srand(time(NULL));

- Initializes the randomizer based on the current time

rand();

- Based on the initialized randomizer it generates a random number between 0 and maximum

Code :

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h> #include
<stdbool.h>
int main()
{    int
randnum,num;
```

```

    bool condit=true;    char ch='y';
printf("\n\t\t\tWelcome to number guessing game\n\n\n");
    srand(time(NULL));    randnum=rand()%1000;
printf("Guess the number between 1 to 1000!!!\n");
while(condit)
{
scanf("%d",&num);
if (randnum == num)
{
    printf("Congratualion You Guessed number
correctly!!!\n");    printf("do you wanna guess again?
(y/n):");    scanf(" %c",&ch);    if (ch=='y')
{
        randnum=rand()%1000;
printf("Guess the number between 1 to 1000!!!\n");
condit=true;
    }    else
if (ch=='n')
{
        printf("Thanks for
playing\n");    condit=false;
    }    }    else
if (randnum > num)
{
    printf("Your Chooosen Number is lower number, Choose
something higher.\n");    }
    else if (randnum < num)
{
    printf("Your Chooosen Number Is Higher number, Choose Something
lower.\n");
    }

    }return 0;
}

```

Output :

Welcome to number guessing game

Guess the number between 1 to 1000!!!

500

Your Chosen Number Is Higher number, Choose Something lower.

400

Your Chosen Number is lower number, Choose something higher.

450

Your Chosen Number Is Higher number, Choose Something lower.

425

Your Chosen Number is lower number, Choose something higher.

440

Your Chosen Number Is Higher number, Choose Something lower.

430

Your Chosen Number is lower number, Choose something higher.

435

Your Chosen Number Is Higher number, Choose Something lower.

433

Congratualion You Guessed number correctly!!!

do you wanna guess again? (y/n):y

Guess the number between 1 to 1000!!!

300

Your Chosen Number is lower number, Choose something higher.

500

Your Chosen Number is lower number, Choose something higher.

600

Your Chosen Number is lower number, Choose something higher.

700

Your Chosen Number is lower number, Choose something higher.

800

Your Chosen Number Is Higher number, Choose Something lower.

740

Your Chosen Number Is Higher number, Choose Something lower.

720

Your Chosen Number is lower number, Choose something higher.

733

Your Chosen Number Is Higher number, Choose Something lower.

725

Your Chosen Number is lower number, Choose something higher.

727

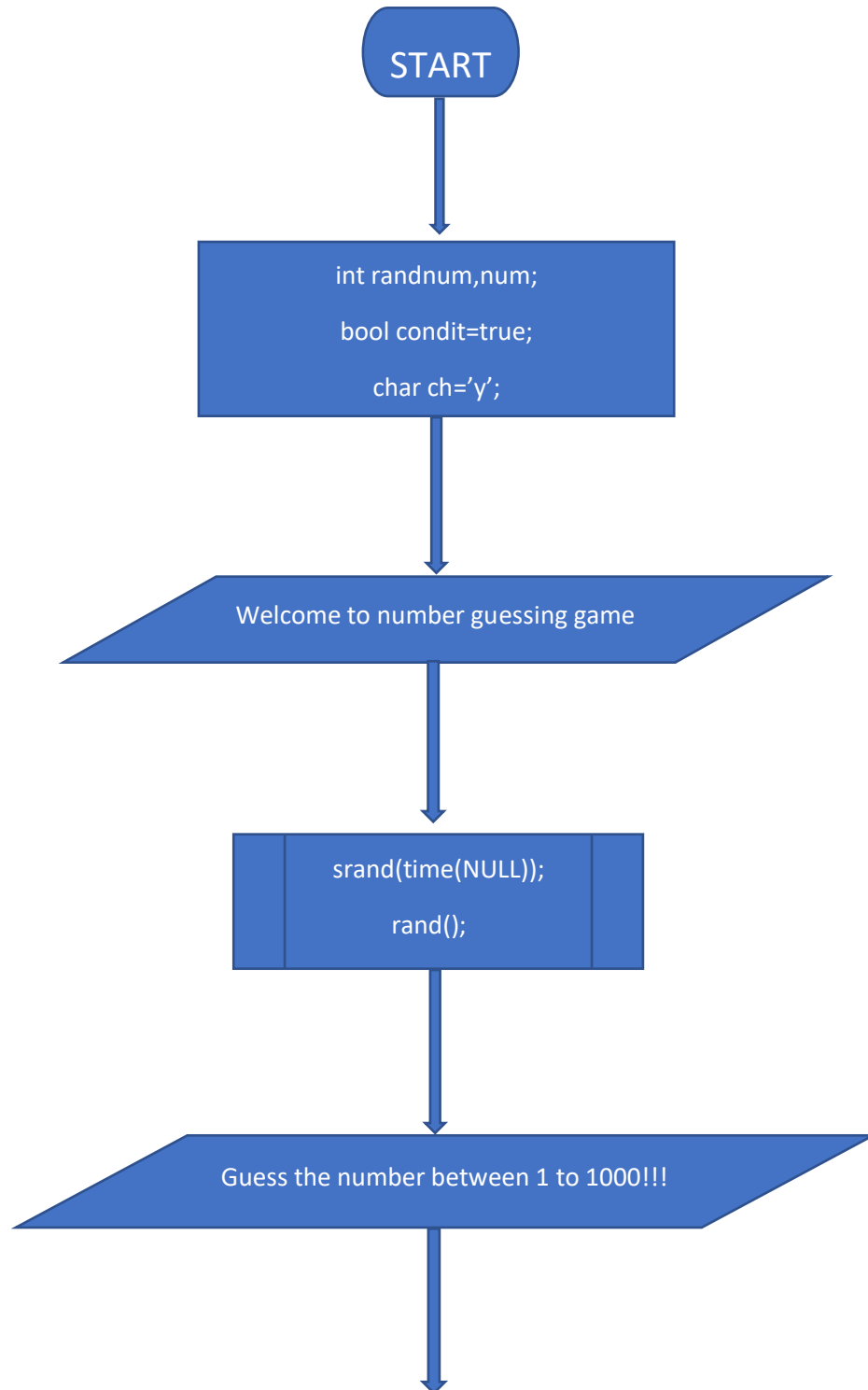
Congratualion You Guessed number correctly!!!

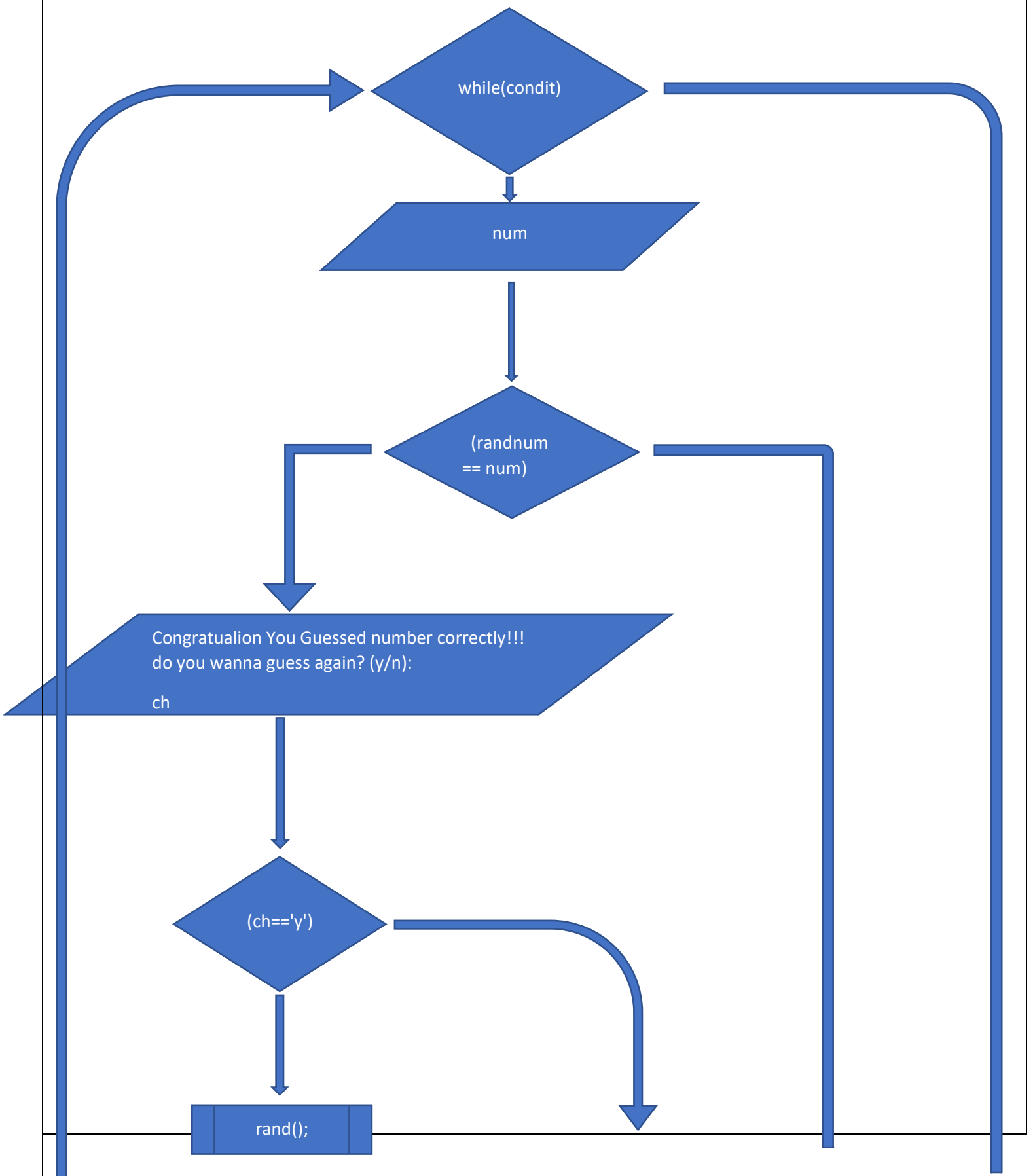
do you wanna guess again? (y/n):n

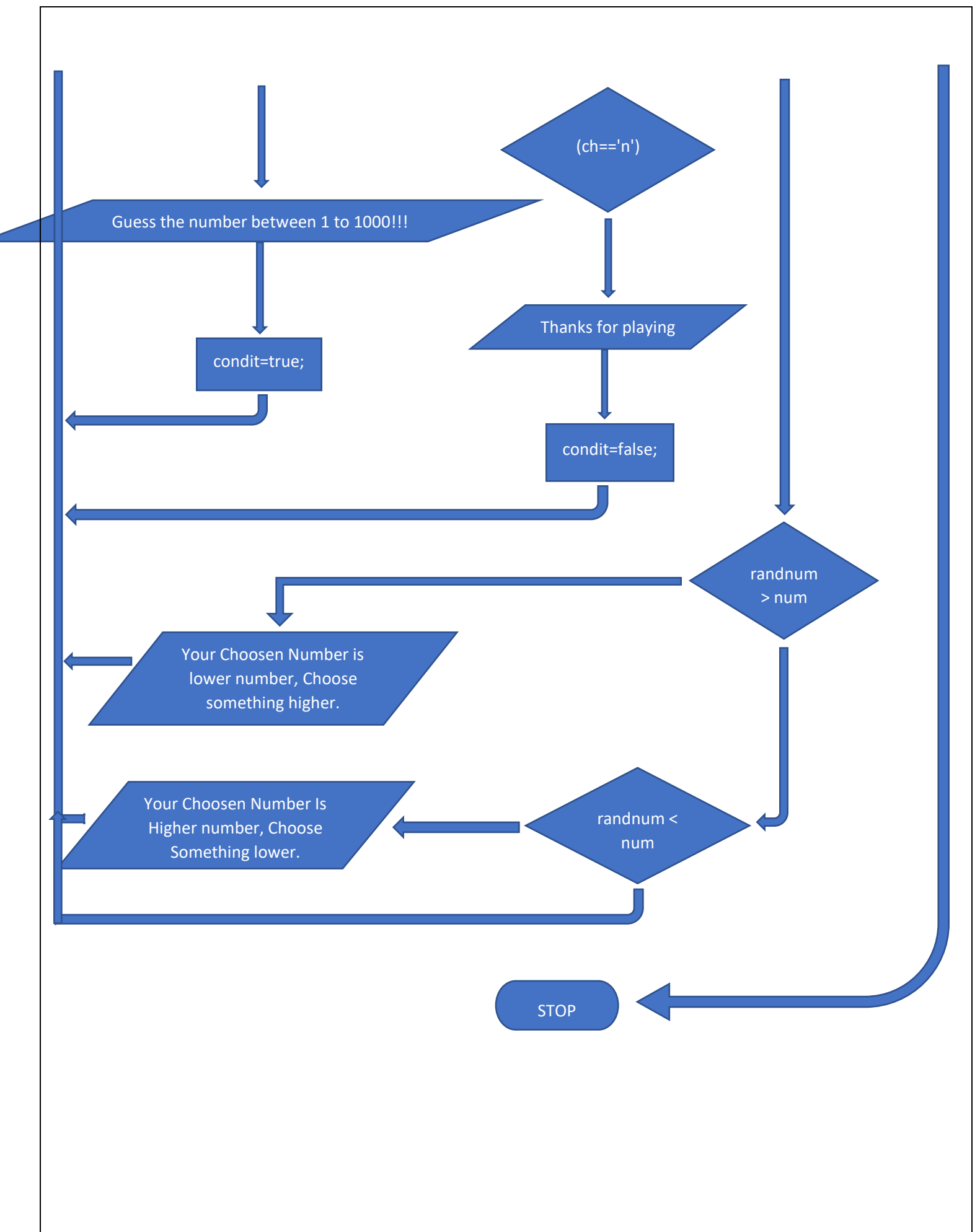
Thanks for playing

PS C:\Users\vibro\Desktop\projects\c mini> █

Flow Chart :







Explanation :

First two variables (randnum,num) declared with int type , next condit variable declared and initialized with (true) value (Bool type) then ch variable with char type . print "Welcome to number guessing game". srand(time(NULL)); inbuilt function which Initializes the randomizer based on the current time , rand(); Based on the initialized randomizer it generates a random number between 0 and maximum (randnum=rand()%1000;) here it generates value between 1 to 1000And assigned to randnum. print "Guess the number between 1 to 1000!!!". Now control enters while loop condition is checked if the condition is true, the loop starts to execute, first it gets input from the user and which is stored in variable num then it's compared with randomly generated value if its true print "Congratualion You Guessed number correctly!!!" "do you wanna guess again? (y/n):" if u want to play again type 'y', if u type 'y' it continues the loop again from first or else if its 'n' it shows this msg 'Thanks for playing' and then condition changes to false, loop terminates program ends. Now if the randomly generated number is not equal to user input, then the control goes to check another condition (randnum > num) if its true it shows "Your Choosen Number is lower number, Choose something higher." Else it goes with another condition (randnum < num) if it's true it shows "Your Choosen Number Is Higher number, Choose Something lower.". Again, the random number is checked with user input like this loop continues until the desired output is printed and the condition becomes false. once the condition becomes false the loop ends and program stops. Simple it just works on "trial and error" method.

Algorithm :

Step 1: Start

Step 2: Create variables (randnum,num,condit,ch)

Step 3: Generates random number between 1 to 1000

Step 4: while loop if the condition is true

Step 5: Get input(number to be guessed)from user

Step 6: The randomly generated number is compared with user input

Step 7: If it is true print "Congratulation You Guessed number correctly!!!" and ask "do you wanna guess again? (y/n):"

Step 8: Type 'y' to play again – once again the same loop happens

Step 9: Type 'n' to exit ,it exits with message "Thanks for playing"

Step 10: If the randomly generated number is not equal to user entered input it checks another two conditions

Step 11: If the randomly generated number is greater than user inputPrint message "Your Chosen Number is lower number, Choose something higher."

Step 12: If the randomly generated number is greater than user inputPrint message "Your Chosen Number is Higher number, Choose something lower."

Step 13: The loop runs once again (The randomly generated number is compared with user input) to check whether it is equal , it runs until user input equals with random number. Loop ends

Step 14: Stop