C Program to print numbers from 1 to N without using semicolon?

How to print numbers from 1 to N without using any semicolon in C.

```c
#include<stdio.h>
#define N 100

// Add your code here to print numbers from 1
// to N without using any semicolon
```

Run on IDE

What code to add in above snippet such that it doesn't contain semicolon and prints numbers from 1 to N?

We strongly recommend you to minimize your browser and try this yourself first

Method 1 (Recursive)

```c
// A recursive C program to print all numbers from 1
// to N without semicoolon
#include<stdio.h>
#define N 10

int main(int num)
{
    if (num <= N && printf("%d ", num) && main(num + 1))
    {
    }
}
```

Run on IDE

Output:

```
 1 2 3 4 5 6 7 8 9 10
```

See this for complete run. Thanks to Utkarsh Trivedi for suggesting this solution.

Method 2 (Iterative)

```c
// An iterative C program to print all numbers from 1
// to N without semicoolon
#include<stdio.h>
#define N 10

int main(int num, char *argv[])
{
while (num <= N && printf("%d ", num) && num++)
{
}
}
```

Output:

```
1 2 3 4 5 6 7 8 9 10
```

See this for complete run. Thanks to Rahul Huria for suggesting this solution.

How do these solutions work?

main() function can receive arguments. The first argument is argument count whose value is 1 if no argument is passed to it. The first argument is always program name.

```c
#include<stdio.h>

int main(int num, char *argv[])
{
    printf("num = %d\n", num);
    printf("argv[0] = %s ", argv[0]);
}
```
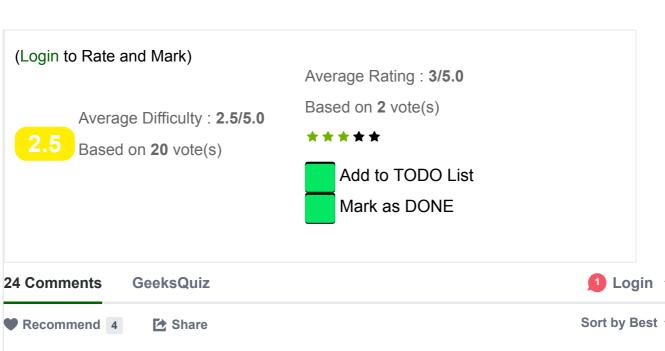
Output:

```
num = 1
argv[0] = <file_name>
```

Please write comments if you find anything incorrect, or you want to share more information about the topic discussed above

See Placement Course for placement preparation, GATE Corner for GATE CS Preparation and Quiz Corner for all Quizzes on GeeksQuiz.

Category: C

Average Rating : **3/5.0**

Based on **2** vote(s)

★ ★ ★ ★ ★

Average Difficulty : **2.5/5.0**

2.5

Based on **20** vote(s)

☐ Add to TODO List

☐ Mark as DONE

---

24 Comments   **GeeksQuiz**   🔴1 Login ▾

♥ Recommend **4**   ↪ Share   Sort by Best ▾

Join the discussion…

Marin Veršić • a year ago

awesome, I would never have thought of recursive main function

4 ⌃ | ⌄ • Reply • Share ›

Harshit Gupta ➜ Marin Veršić • a year ago

Yes exactly! Amazing work!

1 ⌃ | ⌄ • Reply • Share ›

Cosmos • 6 months ago

Why does using 'num++' instead of 'num+1' as argument in main in first program (recursive one) prints 1 infinitely, while 'num+1' works as expected?

2 ⌃ | ⌄ • Reply • Share ›

Ashish Jog ➜ Cosmos • 6 months ago

Have you ever done microprocessor programming like 8085 there two commands for addition like inrt(inceament) which has the function like ++ also add command is there... Now basic answer to your question is intr i . e. ++ has faster processing...

1 ⌃ | ⌄ • Reply • Share ›

Rajesh ➜ Ashish Jog • 5 months ago

@Cosmos

Have you tried ++num instead of num++?
Time to learn Post increment Vs. Pre increment :)
https://en.wikipedia.org/wiki/...

1 ⌃ | ⌄ • Reply • Share ›

Kashif ➜ Cosmos • 3 months ago

If we use num++ then its valiue will be incremented after assigning it to argument in main, but this value is not stored anywhere so it is always num =1.
But whem we pass num+1 value 1+1 is passed as argument to main which is

caught in num and hence its value is updated each time...
If anything wrong please correct me.
Thanks!

⌃ | ⌄ • Reply • Share ›

Ajay Kumbhare • a year ago

#include<stdio.h>

#include<conio.h>

int main(int i)

{

while(i<100)

{

if(printf("\n%d",i++))

{

}

}

}

1 ⌃ | ⌄ • Reply • Share ›

shivanesh • a month ago

Any one can u please explain me what is the purpose of using && in the program?what does it do?

⌃ | ⌄ • Reply • Share ›

Aditya Rai • 2 months ago

```
#include<stdio.h>
int main(int num)
{
while (num <= 10 && printf("%d ", num) && num++){}
}
```

⌃ | ⌄ • Reply • Share ›

Shubham Choudhary • 3 months ago

cool.., main getting called by value 1..completely forgot.....!

⌃ | ⌄ • Reply • Share ›

Gursewak Singh • 3 months ago

// A iterative C program to print all numbers from 1
// to 10 without semicoolon
#include<stdio.h>

int main(int n)

```
int main(int n)
{
while( n<=10)
if(printf("%d ",n++))
{ }
}
```
^ | ∨ • Reply • Share ›

Gaurav Pathak • 4 months ago

C++ solution, Although I am C programmer

```
#include<stdio.h>
#define N 100
int main(void)
{
if(int a = N)
if(int b = 1)
while(a--)
if(printf("%d\n",b++))
{}
}
```
^ | ∨ • Reply • Share ›

Mohit Bansal • 8 months ago

```
int main(int num)
{
printf("%d\n\n",num);
}
//prints 1,
but
int main(int num,int num1)
{
printf("%d\n\n",num);
printf("%d\n\n",num1);
}
```

//prints 1 and Gargage value for num1.
Please tell the reson for this.

^ | ∨ • Reply • Share ›

Yasachandra Bansal ➜ Mohit Bansal • 5 months ago

I am not sure but maybe num1 is behaving like argv i.e. containing the addresses of
the values of num which is behaving like argc

1 ^ | ∨ • Reply • Share ›

priya jain • 9 months ago

Iterative one prints from 2

^ | ∨ • Reply • Share ›

Geeks Team ➜ priya jain • 9 months ago

Thanks for pointing this out. We have updated the code.

1 ∧ | ∨ • Reply • Share ›

Shivani Agrawal • 9 months ago

Can you please explain both the methods?

∧ | ∨ • Reply • Share ›

Bapan Biswas • a year ago

```
#include<stdio.h>
#define N 10
int main(int num)
{
if(num=1)
{
}
while(printf("%d",num)&&num<=N-1)
{
if(num=num+1)
{
}
}

}
```

∧ | ∨ • Reply • Share ›

Rohit • a year ago

Well, the first method would not work as when we're using this main(num+1) again we don't give any value for that char declared earlier, so all we need to do is delete that "char *argv[]" part. After that it would work fine.

∧ | ∨ • Reply • Share ›

GeeksforGeeks Mod ➔ Rohit • a year ago

Thanks for pointing this out. We have updated the code.

∧ | ∨ • Reply • Share ›

DD • a year ago

@geeksforgeeks : Iterative logic is not correct, please correct it.
It should be
while (num < N && printf("%d ", num++))

∧ | ∨ • Reply • Share ›

Aminul H. Khan • a year ago

the recursive one is not printing...

∧ | ∨ • Reply • Share ›

Adnan Khan • a year ago

Yeah it really works.

∧ | ∨ • Reply • Share ›

Harshit Jain • a year ago

Nice one

∧ | ∨ • Reply • Share ›