

How to use gcc compiler on Linux to compile C programs

Syntax 1:-

gcc programfilename.c → a.out ✓

gcc program1.c → a.out

Syntax 2.

gcc programfilename -o binaryname → binaryname

gcc program1.c -o program1.out → program1.out

↓
program.bin → program1.bin

↓
program → program

↓
program.a → program.a

Rule:- -o binaryname

gcc -o program1.out program1.c

Nested if with else statement

Syntax -

```

if (condition) {
    // ...
}
else if (condition) {
    // ...
}
else {
    // ...
}

```

Example -

```

int age = 20;
int citizen = 1;
int voter-id = 1;

```

```

if (age > 18) True | 1
{
    printf("In You are 18+"); ✓
    if (citizen == 1) false | 0
    {
        printf("In You are citizen"); ✓
        if (voter-id == 1)
        {
            printf("In You have voter id - You can vote"); ✓
        }
        else
        {
            printf("In You don't have voter id - can't vote");
        }
    }
    else
    {
        printf("In You are not citizen. can't vote");
    }
}
else
{
    printf("In You are under age - can't vote");
}

```

```

int age = 25;
int citizen = 0;
int voter-id = 0;

```

You are 18+

You are not citizen - You can vote

Day #8.2

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Control Statement

1. Selection (Decision making) :

- if
- if else
- if else-if else
- Nested if
- Nested if with else
- Switch

2. Iteration (Looping)

- for
- while
- do while

3. Jump Statement

- break
- continue
- goto
- return

Syntax:-

```
int age = 10;

switch ( value
        condition
        expression )
{
    case value1: =====
                break;

    case value2: =====
                break;

    case value3: =====
                break;

    default: =====
}

```

Switch Statement

↳ Keyword (reserve word)

Example:-

```
- int age = 10;

switch ( age )
{
    case 1: printf("I am 1 years old");
            break;

    - case 2: printf("I am 2 years old");
              break;

    - case 3: printf("I am 3 years old");
              break;

              ...
    - default: printf("I am not in age group (1,2,3)");
}

```

int age = 0;
→ I am not in age group (1,2,3)

int age = -1;
→ I am not in age group (1,2,3)

DAY #8.5

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Switch

variable value
 Switch (Expression)
 {
 case var1: break;
 :
 :
 }

✓	X	✓	X
10	10.5	'a'	"Hello"
int	float	char	string or char array
✓	double	'a'	" "
	long double	'1'	
		'\$'	X
	X	✓	

'A' ≠ 'a'

char ch = 'b';
 ↳ unknown character
 char ch = 'Z';
 ↳ unknown character.

default: break;
 }

Example1:

~~float age = 18.5;~~
~~switch (age)~~ Compilation Error
~~{~~
~~case 10.5: printf("I am 104 half");~~
~~break;~~
~~case 15.8: printf("I am 15 years 4 months");~~
~~break;~~
~~default: break;~~
~~}~~

Example2:- char ch = 'A';

switch (ch)
 {
 ✓ case 'A': printf("Gts A"); break;
 case 'a': printf("Gts a"); break;
 case 'B': printf("Gts B"); break;
 :
 default: printf("I am unknown ch");
 }

Syntax-

Switch (Expression)

{

case val1:

Switch (~~expr~~.val1)

{

case val1: == break;

case val2: == break;

default: ==

}

break;

case val2:

== break;

case val3:

switch (val3)

{

case val1: == break

}

default: ==

}

break;

}