

Datatype	Size	Range
int	2 byte (16 bits)	-32768 to 32767
short	2 byte (16 bits)	-32768 to 32767
long	4 byte (32 bits)	-2147483648 to 2147483647
float	4 byte (32 bits)	real constant with min. 6 decimal precision.
double	8 byte (64 bits)	real constant with maximum 10 decimal digit precision.
char	1 byte (8 bits)	-128 to 127, 0 to 255
void	No storage needed.	

Signed integer

Occupy 2 bytes

-32768 to 32767

%d to %i

example `int a = 0;`

Unsigned integer

2 bytes

0 to 65535

%u

Example:-

`unsigned int c;`
`short`

Signed char
 Only 1 byte
 -128 to 127
 %c

example =
 char ch = 'a';

Unsigned char

1 byte
 0 to 255
 %C

example =
 unsigned char = 'a';

Rules for constructing variable:

- (i) A variable range is any combination of 1 to 31 alphabet digit or underscore.
- (ii) The first char in the variable range must be an alphabet or underscore.
- (iii) All succeeding characters consist of letters & digits.
- (iv) No comma's or blanks are allowed within a variable.
- (v) Keywords should not be used as a variable.
- (vi) No special symbol other than an underscore can be used in a variable name.
- (vii) The maximum allowable length of a variable is 31 characters.
- (viii) Always chose an appropriate variable & name that makes proper sense to the user.

Valid
marks

Invalid
Sab

Totalmarks

✓ gross_salary_2001

Total \marks

✗ gross-salary-2001

num[20].

* Rules for forming identifier name:-

- (i) The first character must be an alphabet (uppercase or lower case) ~~or~~ an underscore.
- (ii) All succeeding character must be letters or digits.
- (iii) Upper case and lower case identifiers are different in C.
- (iv) No special character or punctuation symbols are allowed, except the underscore '_'.
- (v) No two successive underscores are allowed.
- (vi) keyword should not be used as identifier.