

# Some Imp. Terms

C++ Programming



# Identifiers



Chef



Doctor

vedinesh

ve123

\_vedinesh

ved@inesh

\$academy

123Ve

Identifier is a **name** used to identify a **variable**, **function**, **class**, **module**, or any other **user-defined item**.

Identifier starts with a letter **A to Z** or **a to z** or an **underscore** (**\_**) followed by more **letters** or **digits** (0 to 9)

**NOTE :-** C++ does not allow punctuation characters such as **@**, **\$**, and **%** within identifiers

# Keywords

## The reserved words in C++

asm	else	new	this	
auto	enum	operator	throw	
bool	explicit	private	true	
break	export	protected		try
case	extern	public	typedef	
catch	false	register	typeid	
char	float	typename		
class	for	return	union	
const	friend	short	unsigned	
const_cast		goto	signed	using
continue	if	sizeof	virtual	
default	inline	static	void	
delete	int	static_cast		volatile
do	long	struct	wchar_t	
double	mutable	switch	while	
dynamic_cast		namespace		template

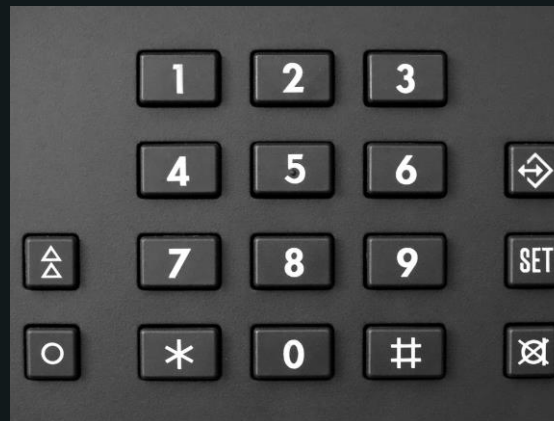


### NOTE :-

Reserved words can't be used as **identifier names**.



# Data Type



# Data Type Size

## Built-in Types

True / False

1 byte

'c' , 'd' , 'D'

1 byte

Type

Boolean

-->

Character

-->

Integer

-->

Floating point

-->

Double floating point

-->

Valueless

-->

Keyword

bool

char

int

float

double

void

9.1111119

8 byte

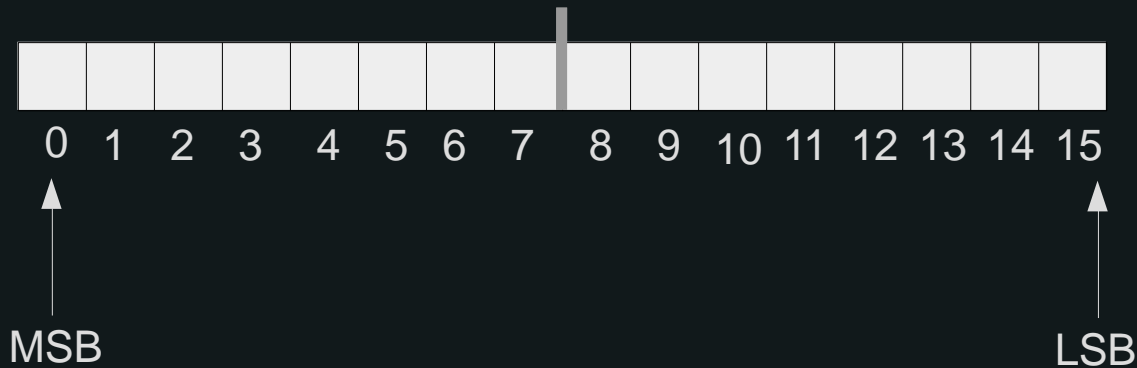
10.6f, 0.01f

4 byte

1000, 56, 1

2 byte

# Data Types



1 means -ve

0 means +ve

$$2^{15} = 32768$$

## Built-in Types

Type		Keyword
Boolean	-->	bool
Character	-->	char
Integer	-->	int
Floating point	-->	float
Double floating point	-->	double
Valueless	-->	void

Type	Size	Range
bool	1 byte	
char	1 byte	-128 to 127
int	2 byte	-32768 to 32767
float	4 byte	$-3.4 * 10^{-38}$ to $3.4 * 10^{38}$
double	8 byte	$-1.7 * 10^{-308}$ to $1.7 * 10^{308}$



# Variable



Variable is a container that are used for storing data values.

A variable is a name which is associated with a value that can be changed.

```
bool fan = true;
```

```
char gender = 'M';
```

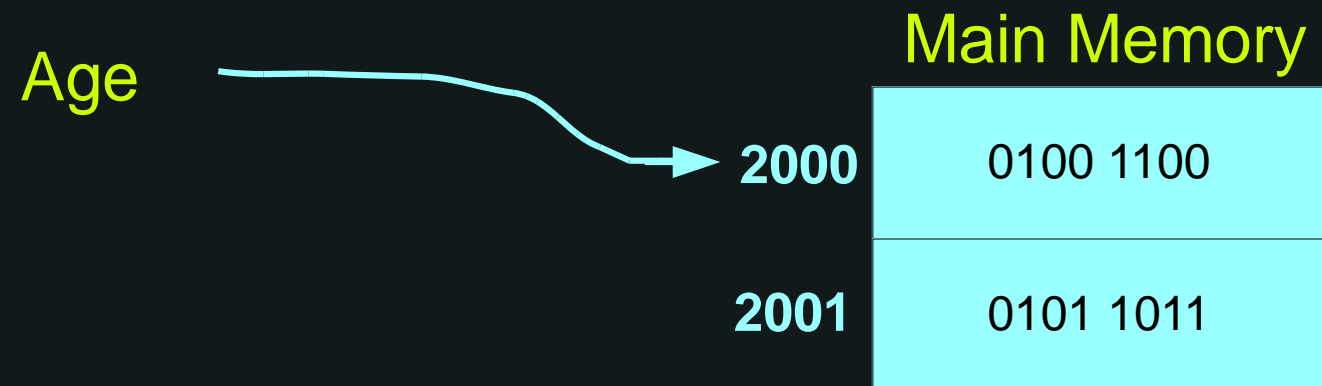
```
int age = 45;
```

```
float height = 5.10f;
```

```
double salary = 51000.99191;
```

# Variable

```
int Age = 45;
```





# Variable Scope

**Local**

```
{  
  
    int age;  
  
}
```

**Inside Block**

**Global**

```
int age = 25  
  
int main( )  
{  
  
}
```

**Not inside any Block**

# Operators

```
int marks1 = 95;
```

```
int marks2 = 89;
```

```
float percentage;  
percentage = ((marks1 + marks2) / 200) * 100;
```

marks



2000

2001

Main Memory

0100 1100

0101 1011

Operators are used to perform operations on values referred by variables.

# Operators

## Arithmetic

Operator	Example
+	$x + y$
-	$x - y$
*	$x * y$
/	$x / y$
%	$x \% y$
++	++x    x++
--	--x    x--

## Assignment

Ope.	Example	Same As
=	$x = 5$	$x = 5$
+=	$x += 5$	$x = x + 5$
-=	$x -= 5$	$x = x - 5$
*=	$x *= 5$	$x = x * 5$
/=	$x /= 5$	$x = x / 5$
%=	$x \% = 5$	$x = x \% 5$

# Operators

## Logical

Operator	Example	Description
&&	<code>x &lt; 5 &amp;&amp; x &lt; 10</code>	Returns <b>true</b> if <b>both</b> statements are <b>true</b>
	<code>x &lt; 5    x &lt; 4</code>	Returns <b>true</b> if, <b>one</b> of the statements is true
!	Reverse the result	<code>( !True ) = False</code>

## Comparison

Operator	Example
==	<code>x == y</code>
!=	<code>x != y</code>
>	<code>x &gt; y</code>
<	<code>x &lt; y</code>
>=	<code>x &gt;= y</code>
<=	<code>x &lt;= y</code>