

# ELEMENTARY DATATYPE

## Variables and Constants

CONSTANT : A data object with a name that is bound to a value (or values) permanently during its life time.

The constant value can only be a number, string or identifier which denotes constant.

A constant definition in Pascal introduces an identifier as a synonym for the constant value.

\* Pascal uses the reserved word **const** to begin a constant declaration.

```
Const PI = 3.1415;
```

\*\* In ALGOL 68 we can define constant by

```
real root2 = 1.4142135;
```

This was much acceptable that time.

\*\* In Ada, provides a uniform notation for setting constants to initial values and for initializing variables:

```
X: constant INTEGER := 17;
```

\*\* In C language :- **const** is used to initialize the constant value

```
Const int MAX = 80;
```

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The Constant **MAX** is a programmer-defined Constant because the programmer explicitly defines the name for value 30.

In C, there is macro definitions which is used for control the execution of program; and can be used for Declaring constant

Eg

```
#define MAX 30
```

It is a compile-time operation that causes all references to MAX in program to be changed to the constant 30.

In this 30 has two names, the programmer defined MAX and literal name 30. both of which may be used to refer to a data object containing the value 30.

\* `#define MAX 30` is a command, which the translator uses to equate **MAX** with the value 30, where as the **const** attribute in C is a translator directive stating that MAX will always contain the value 30.

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