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*(DAY 3 Fore noon)*

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## CHAPTER – 16

### ENUMERATION

#### ENUMERATION CONSTANTS IN C

**Enumerated** types are implemented by associating integer values with the *enumeration constants*, so that the assignment and comparison of values of **enumerated** types can be implemented as integer assignment and comparison. An **enumeration**, introduced by the keyword *enum*, is a set of integer constants represented by identifiers. The **enumeration constants** are, in effect, symbolic constants whose values can be set automatically. The values in an **enum** start with **0**, unless specified otherwise, and incremented by **1**. When the first value in the preceding **enumeration** is explicitly set to **1**, the remaining values will be incremented from **1**.

#### IMPLEMENTATION OF ENUMERATED TYPES

1. An explicitly integer values may be associate with an **enumeration constant** by witting: *enumeration-constant* = *expression* in the type definition. The expression must be a constant expression of integer type, although some compilers may also allow expressions involving previously defined **enumeration constants**.
2. The first **enumeration constant** receives the value 0 if no explicit value is specified.
3. Subsequent **enumeration constants** without explicit associations receive an integer value one greater than the value associated with the previous **enumeration constant**.

Any signed integer value representable as type `int` may be associated with an **enumeration constant**. Positive and negative integers may be chosen at random, and it is even possible to associate the same integer with two different **enumeration constants**.