



C PROGRAMING

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Control Statements

- Decision or Selection
 - if-else
 - switch-case
- Iteration (loop)
 - for
 - while
 - do-while
- Jump
 - break
 - continue
 - goto
 - return



Ternary/conditional operator

```
if (condition) {  
    // execute if condition is true  
}  
else {  
    // execute if condition is false  
}
```

- if-else can be nested within each other.
- Condition is any expression.
 - 0 – False condition, 1 – True condition.

condition ? expression1 : expression2

- If condition is true, expression1 is executed; otherwise expression2 is executed.
- Ternary operators can also be nested.
- expression1 & expression2 must be expressions (not statement).
 - expression – evaluate to some value.
 - statement – C statement ends with ;



enum

- enum is user defined data type.
- Used to improve readability of C program (int constants, switch-case constants).
- `enum color { RED, GREEN, BLUE, WHITE, YELLOW };`
- `enum color c1 = BLUE;`
- enum constant values by default start from 0 and assigned sequentially.
- Programmer may choose to modify enum constant to any +ve, 0 or -ve value.
- Enum constants can be duplicated.
- `enum color { RED=-2, GREEN, BLUE, WHITE, YELLOW=0 };`
- Internally enum is integer, so size of enum = size of int.
- The enum constants are replaced by int values.



typedef

- typedef is used to create alias for any data-type.
- These aliases are helpful to
 - increase readability of the code.
 - port same code across multiple architecture/platforms.
 - simplify complex declarations.
- **typedef existing-data-type data-type-alias;**
- Examples:
 - typedef char int8_t;
 - typedef unsigned char uint8_t;
- typedef unsigned int size_t; // declared in C library.





Thank you!

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