

FACULTY OF ENGINEERING AND TECHNOLOGY  
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Computer System and Programming in 'C'  
CS-101/201

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DECISION CONTROL STATEMENTS  
Continue...

## switch-case Statement

A switch-case statement is a multi way decision statement that is *simplified version* of an if-else block that evaluates *only one* variable.

## switch-case Statement Syntax

```
switch(variable)
{
case value1: Statement Block1;
           break;
case value2: Statement Block2;
           break;
-----
case valueN: Statement BlockN;
           break;
default: Statement Block of default;
           break;
}
Statement x;
```

## break Statement

- The break statement *must be used at the end of each case* because if it is not used then the case that matched and all the following cases will be executed.

### For example:

- If the value of switch statement matched with that of case 2 (please see previous slide), then all the statements in case 2 as well as rest of the cases including default will be executed.

## break Statement Cont...

- The break statement tells the compiler to jump out of the switch case statement and execute the statement following the switch case construct.
- Thus the keyword *break* is used to break out of the case statements.

### break Statement Example 1

```
int main()
{
    char cvar='X';
    switch(cvar)
    {
        case 'L': printf("I am in case L\n");
                  break;
        case 'U': printf("I am in case U\n");
                  break;
        case 'F': printf("I am in case F\n");
                  break;
        case 'O': printf("I am in case O\n");
                  break;
        case 'E': printf("I am in case E\n");
                  break;
        case 'X': printf("I am in case X\n");
                  break;
        default: printf("I am in default case\n");
                 break;
    }
    return 0;
}
```

### break Statement Example 2

```
int main()
{
    char cvar='L';
    switch(cvar)
    {
        case 'L': printf("L\n");
        case 'U': printf("U\n");
        case 'F': printf("F\n");
        case 'O': printf("O\n");
        case 'E': printf("E\n");
        case 'T': printf("T\n");
        default: printf("I am in default case\n");
    }
    return 0;
}
```

### Analysis

- Dear students execute both the example given in previous slides and analyze the output.
- Examine very carefully the *effect of break statement* and its utility.
- Also, try executing all the cases in both the examples to better understand the working of switch-case statement.

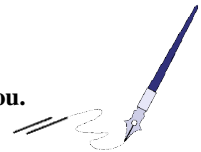
### Programming Exercise

- WAP to determine whether an entered character is a vowel or not.
- WAP that takes two operands and one operator from the user and perform the operation and print the result by using switch-case statement.
- WAP to enter a number from 1-7 and display the corresponding day of the week using switch-case statement.
- WAP that accepts a number from 1 to 10. Print whether the number is even or odd using a switch-case construct.

### Interesting Exercise

- "A switch-case statement is a multi way decision statement that is simplified version of an if-else block that evaluates only one *variable*." Tell me all sort of data types that this *variable* container can hold.
- What is the *maximum cap* on number of cases in switch-case statements?
- Give some *real world* examples of switch-case statement.
- Tell me a problem that can be solved using switch-case statement but not if-else ladder and *vice-versa*.

Thank You.



**BTQ**

*BTQ: Brain Teaser Question*

*How could you rearrange the letters in the words "new door" to make one word?*

