

BCA 1st Semester, 2025-28

Online Class

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if –else ladder selection construct

- Efficient to obtain appropriate option among more than two available options

- Syntax for multiple statements

```
if(<condition1>) {  
<Condition1statements>;}  
else if(<condition2>) {  
<Condition2statements>;}  
else if(<conditionN>) {  
<ConditionNstatements>;}  
else {  
<>false_statements>;}
```

- Syntax for single statement

```
if(<condition1>)  
<Condition1_Statement>;  
else if(<condition2>)  
<Condition2_Statement>;  
else if(<conditionN>)  
<ConditionN_Statement>;  
else  
<>false_statement>;
```

Example of if-else ladder selection construct

```
#include<stdio.h>
#include<conio.h>
void main()
{ /*using multiple statement syntax*/
char ch;
clrscr();
printf("\n Enter lower case alphabet:\t");
scanf("%c",&ch);
if(ch=='a'){printf("\nVowel");}
else if(ch=='e'){printf("\nVowel");}
else if(ch=='i'){printf("\nVowel");}
else if(ch=='o'){printf("\nVowel");}
else if(ch=='u'){printf("\nVowel");}
else
{printf("\nConsonent");}
}
```

```
#include<stdio.h>
#include<conio.h>
void main()
{ /*using single statement syntax*/
char ch;
clrscr();
printf("\nEnter lower case alphabet:\t");
scanf("%c",&ch);
if(ch=='a') printf("\nVowel");
else if(ch=='e') printf("\nVowel");
else if(ch=='i') printf("\nVowel");
else if(ch=='o') printf("\nVowel");
else if(ch=='u') printf("\nVowel");
else
printf("\nConsonent");
}
```

Nested if –else selection construct

- Efficient to obtain appropriate option among more than two available options

- Syntax for multiple statements

```
if(<condition1>) {  
    <Condition1Truestatements>;  
if(<condition2>) {  
    <Condition2Truestatements>;}  
else {  
    <Condition2Falesestatements>;}  
-----; }
```

```
else{  
    <Condition1FalseStatements>;  
If(<condition3>) {  
    <Condition3TrueStatements>; }  
else {  
    <Condition3FalseStatements>;}  
-----;}
```

Continued

Nested if –else selection construct

- Efficient to obtain appropriate option among more than two available options

•	Syntax for single	statements
if(<condition1>)		else
if(<condition2>)		If(<condition3>)
<statement>;		<statement>;
else		else
<statements>;		<statement>;



Example of Nested if-else selection construct

```
#include<stdio.h>
#include<conio.h>
void main()
{ /*using multiple statement syntax*/
int num1,num2,num3;
clrscr();
printf("\nEnter three numbers:\t");
scanf("%i%i%i",&num1,&num2,&num3);
clrscr();
if(num1>num2) {
    if(num1>num3) { printf("\n%d",num1); }
    else { printf("\n%d",num3); }
} else {
    if(num2>num3) { printf("%d",num2); }
    else { printf("%d",num3); }
} }
```

```
#include<stdio.h>
#include<conio.h>
void main()
{ /*using single statement syntax*/
int num1,num2,num3;
clrscr();
printf("\nEnter three numbers:\t");
scanf("%i%i%i",&num1,&num2,&num3);
clrscr();
if(num1>num2)
    if(num1>num3) printf("\n%d",num1);
    else printf("\n%d",num3);
else
    if(num2>num3) printf("%d",num2);
    else printf("%d",num3);
}
```

switch- case selection construct

Applicable only when exact equality is to be checked with integer or character values.

Syntax of switch-case selection construct

```
switch (<Variable_Name>)  
{  
case <Value1> : { <Statements_for_value1>;  
                -----; break;}  
case <Value2> : { <Statements_for_value2>;  
                -----; break; }  
case <Value3> : { <Statements_for_value3>;  
                -----; break; }  
-----; /*more cases like above*/  
case <ValueN> : { <Statements_for_valueN>;  
                -----; break; }  
default: {  
    <Statement_when_no_case_matches>;  
    -----; break; }  
}
```

```
#include<stdio.h>  
#include<conio.h>  
void main() {  
    char  ch; clrscr();  
    printf("\nEnter lowercase alphabet:\t");  
    scanf("%c",&ch);  
    switch(ch) {  
        case 'a': { printf("Vowel"); break;}  
        case 'e': { printf("Vowel"); break;}  
        case 'i': { printf("Vowel"); break;}  
        case 'o': { printf("Vowel"); break;}  
        case 'u': { printf("Vowel"); break;}  
        default: { printf("Consonant"); break; }  
    } //switch close  
} //main close
```