

CS & IT ENGINEERING



Control Statements

Control Statements - 3

Lecture No.- 03

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Recap of Previous Lecture



- Nested if
- Nested if-else
- if-else-if ladder
- Switch



Topics to be Covered



- Switch - Case
- Iterative Control Statements
 - do-while
 - while
 - for





Topic : Iterative Control Statements - 1



Example

```
int i;  
scanf("%d", &i);  
  
switch(i)  
{  
    case 21 : printf(" BLUE");  
    ( ASCII == Case 97 : printf(" PURPLE");  
    character='a')  
    default : printf(" BLACK");  
  
    case 30 :  
    case 41 : printf(" ORANGE");  
    case -7 : printf(" YELLOW"); break;  
    case 'E' : printf(" WHITE");  
}  
(ASCII Value==69)
```

i

90

97

97

-7

69

'a'

30

Output

BLACK ORANGE YELLOW

BLACK ORANGE YELLOW

PURPLE BLACK ORANGE YELLOW

YELLOW

WHITE

PURPLE BLACK ORANGE YELLOW

ORANGE YELLOW



Topic : Iterative Control Statements - 1



Example - 2

```
int i, j;  
scanf("%d", &i);  
j = printf("%d", i);  
switch(j){  
    case 0: printf("A");  
    case 1: printf("B");  
        printf("C");  
    case 4: printf("F"); break;  
    default: break;  
    case 3: printf("D");  
}  
Case 2: printf("E");
```

<u>j</u>	<u>i</u>
1	0
2	72
1	5
2	-9
3	423
4	5697
	1 — 3

<u>O/P</u>	
OBCE	
72 E	
5BCF	
-9 E	
423 DE	
5697 F	
3BCF	



Topic : Iterative Control Statements - 1



- When one or multiple statements to execute repeatedly for finite number of times.
Iterative Control Statements are used.

- There are 3 types of Control Statements in 'C':

- 1) do - while loop
- 2) while loop
- 3) for loop



Topic : Iterative Control Statements - 1



do-while Loop

Syntax:

```
do
{
    Stmt;
}
while( Expression);
```

- do-while is also known as Exit-Control loop
or Post-test loop.

- Minimum Number of times, do-while execute == 1 time

: If a task (or) multiple need to happen at least once at all times,
Then, do-while will be Preferred.

Ex: int i=1; 2 3 4 5 6

```
do
{
    printf("%d", i);
    i++;
}
```

while(i<=5);

$2 \leq 5, 3 \leq 5, 4 \leq 5, 5 \leq 5,$

$6 \leq 5$ False.

O/p: 1 2 3 4 5



Topic : Iterative Control Statements - 1



while loop :

Syntax :

```
while( Expression )
{
    Statement;
    ;
}
```

- Until the given expression is TRUE, while block execute

Ex: int i=1; ~~4~~ ~~3~~ ~~4~~ ~~5~~ 6

while(i<=5)

```
{  
    printf("%d", i);  
    i++;  
}
```

O/P: 1 2 3 4 5



Topic : Iterative Control Statements - 1



Example-1

```
int i;
```

```
scanf("%d", &i);
```

```
while( i--)
```

```
{   printf("%d", i),
```

```
}
```

Input : 7

Output : 6 5 4 3 2 1 0

i
7 6 5 4 3 2 1 0

while(7) TRUE

while(6) TRUE

while(5) TRUE

:

while(1) TRUE

while(0) False



Topic : Iterative Control Statements - 1

H/W

Example - 2

```
int i=4, j=-3;  
while( i-- <= j++ )  
    printf("BYE");
```

O/p:



2 mins Summary



- Switch-Case
- do-while loop
- while loop-



THANK - YOU