

COMPUTER SCIENCE



WORKSHEET-9



STP

A PROJECT BY PUNJAB GROUP

Worksheet-09**CHAPTER-12****while v/s do while Loop
Onwards Complete**

1. In which of the given loop, normally the initialization, condition, and increment/decrement expressions are written at the same place?
 - A. while loop
 - B. for loop
 - C. do while loop
 - D. None of the above
2. In for loop, all expressions are enclosed in:
 - A. ()
 - B. { }
 - C. []
 - D. “ “
3. The body of for loop executes after:
 - A. Initialization expression
 - B. Condition testing
 - C. Increment / Decrement
 - D. None of the above
4. Which of the given expression is optional in a for loop statement?
 - A. Initialization expression
 - B. Condition testing
 - C. Increment / Decrement
 - D. All of the above
5. What is true about the given C statement?


```
for (int x=0; ; x++)
```

 - A. It is infinite loop
 - B. Syntax error will occur
 - C. Condition is always assumed to be true

D. Both A & C

6. Which of the following is a valid nested loop?
 - A. do while- while
 - B. do while - for
 - C. do while- do while
 - D. All of the above
7. The sentinel value is recommended when a programmer:
 - A. Knows exact number of repetitions
 - B. Does not know exact number of repetition
 - C. In all cases
 - D. None of the above
8. To get out of a loop, _____ statement may be used:
 - A. break
 - B. continue
 - C. goto
 - D. Both A & C
9. The named label in given code is _____:


```
int main( )
{
    int x = 10;
    goto locate;
    {
        printf(“%d”,x);
        x --;
    }
    locate:
    return 0;
}
```

 - A. x
 - B. goto
 - C. locate
 - D. return

10. In a C program, the following loop is defined:

```
int i, count = 0;  
for (i = 0; i<=5000; i=100*i)  
    count ++;
```

How many times the test expression will run?

- A. 0
 - B. 100
 - C. 5000
 - D. Infinite
11. What is the value of variable n after executing the following C statements?

```
int n= 0;  
for (int m=0; m<5; m++)  
    n = n+m;  
printf(“%d”,n);
```

- A. 10
- B. 20
- C. 45
- D. 5

ANSWER KEY (Worksheet-09)

1	B	11	A
2	A		
3	B		
4	D		
5	D		
6	D		
7	B		
8	D		
9	C		
10	D		

ANSWERS EXPLAINED

1. (B) The syntax of for loop is as following:
for(initialization ; condition ; increment / decrement)
2. (A) The syntax of for loop is as following:
for(initialization ; condition ; increment / decrement)
3. (B) The body of all loops (except do while loop) are executed after condition testing.
4. (D) In for loop statement all three expressions i.e. initialization, condition testing and increment / decrement, are optional e.g. for (; ;)
5. (D) When condition is skipped from a for loop its condition is always considered to be true i.e. it never becomes false. Hence it will become an infinite loop.
6. (D) The possible nested loops are:
 - a. for – for
 - b. for – while
 - c. for – do while
 - d. while – for
 - e. while – do while
 - f. while – while
 - g. do while – for
 - h. do while – while
 - i. do while – do while
7. (B) We use sentinel value when we don't know exact number of repetitions.
8. (D) Both break and goto statements can transfer control out of loop.
9. (C) The named label is written with colon. In this case it is "locate".
10. (D) The value of i is zero, after execution of each iteration it is being multiplied with 100 which results in again Zero. So, the condition of loop never terminates and the loop executes infinite number of times. i.e. condition expression will execute infinite number of times.
11. (A) The loop executes from $m = 0$ to $m = 4$, also value of m is being added in n so after each iteration the change in values of m and n is given below:
 - i) $m = 0, n = m + n \Rightarrow 0 + 0 \Rightarrow 0$
 - ii) $m = 1, n = m + n \Rightarrow 1 + 0 \Rightarrow 1$
 - iii) $m = 2, n = m + n \Rightarrow 2 + 1 \Rightarrow 3$
 - iv) $m = 3, n = m + n \Rightarrow 3 + 3 \Rightarrow 6$
 - v) $m = 4, n = m + n \Rightarrow 4 + 6 \Rightarrow 10$
 Hence value of n after executing given code will be 10.

STOP

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