

Date _____
Page 41

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Subject: C-Programming

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Qno: 1

Answer:

↳ String handling functions are the functions which are used in C-programming by using specific function. Such as;

- * `strlen()` → It gives the length of the characters.
- * `strcpy()` → It copies one string to another.
- * `strcat()` → It is used to concatenate two strings.
- * `strcmp()` → It is used to compare two strings.

Program to check given string is palindrome or not;

```
#include <stdio.h>
#include <conio.h>
#include <string.h>
void main()
{
    char a[30], b[30];
    printf("Enter a string: ");
    gets(a);
    strcpy(b, a);
    strrev(b);
    if(strcmp(a, b) == 0)
```

Date _____
Page 12

```

{
    printf("\n It is palindrome");
}

else
{
    printf("\n It is not palindrome");
}
getch();
}

```

Qno: 3

Answers

↳ loop is the statement used in C programming. It checks every value which the user given upto. until the condition becomes false.

Different loop structure with syntax are;

1) For loop

Syntax;

```

for (initial value; condition; increase or decrease)
{
    statements;
}

```

2) While loop

Syntax;

While (condition)

{

Statements;

}

3) Do-while

Syntax;

do

{

Statements;

}

while (condition)

C - Program to check the given number is Armstrong or not is;


```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
    int n, r, a, sum = 0, temp;
```

```
    printf("Enter a number: ");
```

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

```
    temp = n;
```

```
{
```

```
    while (n > 0)
```

```
{
```

```
        r = n % 10;
```

```
        a = r * r * r;
```

```
        sum = sum + a;
```

```
        n = n / 10;
```

```
}
```

```
    n = temp;
```

```
    if (n == sum)
```

```
{
```

```
        printf("It is a armstrong number");
```

```
}
```

```
else
```

```
{
```

```
    printf("It is not a armstrong number");
```

```
}
```

```
    getch();
```

```
}
```

Qno: 4

Answers.

↳ Different types of operators are;

- *1) Arithmetic operators
- *1) Logical operators
- *1) Assignment operators
- *1) Relational operators
- *1) Conditional operators

*1) Arithmetic operators

↳

Arithmetic operators are the operators which are used to calculate & do expressions. There are many types of Arithmetic operators. Some of them are;

Operators	Description
+	adds two operands
-	Subtract Second number from list
*	Multiply two number 'number'
/	It is used to divide
%	It is used to take out remainder
++	Increment operator (used to increase number).
--	decrement operator (used to decrease number)

*) Relational operation

↳ Relational operations are the operations used in a program to check between two numbers. There are some relational operators. They are;

Operators	Description
==	Check two numbers are equal or not.
!=	Check if two num are not equal.
>	Check that left is greater than right side
<	Check that left is smaller than right side.

*) logical operators

↳ Logical operators are the operators which are used to check the value is logically true or false. Some of the logical operators are;

Operators	Description
& &	Used to combine two variable in one statement
	One maybe true another may not be

Qno: 5

Answer

↳

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
int i, j;
```

```
for (i=0; i<=5; i++)
```

```
{
```

```
for (j=0; j<=4; j++)
```

```
{
```

```
printf(" ");
```

```
}
```

```
for (j=0; j<=1; j++)
```

```
{
```

```
printf("* ");
```

```
}
```

```
printf("\n");
```

```
Space -- ;
```

```
}
```

```
getch();
```

```
}
```

Qno: 6

a. Answer

↳ Difference between compiler and interpreter;

Compiler	Interpreter
① It scans the entire program first and transform into machine code.	① It scans line by line program and transform into machine code.
② Execution time is less.	② Execution time is more.

Qno: 6

b. ans

↳ Multidimensional Array are the Arrays ~~that~~ which is two or more than two.
for e.g; if we are solving matrix.

Syntax;

type name [size1][size2] ... [sizen];

Ques: 8

```
#include <stdio.h>
#include <conio.h>
int main()
{
    int a[10], i=0, j=0, sum=0, temp;
    float avg=0;
    printf("i=0; i<10; i++")
    {
        scanf("%d", &a[i]);
    }
    printf("In the 10 numbers are: ");
    for (i=0; i<10; i++)
    {
        printf("%d", a[i]);
        sum = sum + a[i];
    }
    avg = sum/10;
    for (i=0; i<10; i++)
    {
        for (j=i+1; j<10; j++)
        {
            if (a[i] < a[j])
            {
                temp = a[i];
                a[i] = a[j];
                a[j] = temp;
            }
        }
    }
}
```

```
printf("In the average of 10 numbers  
is '%d'", avg);
```

```
printf("In The Second largest number  
is '%d'", a[1]);
```

```
printf("In the smallest number  
is '%d'", a[9]);
```

```
return 0;
```