

Gr. H Raison College of Engineering and Management, Pune

F.Y B.Tech (Engineering)

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Department - Information Technology (IT)

Term/Section - Term I

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Subject Name/Code - Computer Programming (UCOL 101)

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Q3 1) Write and explain the syntax of function?

Answer: Function definition contains some block of code which assigns to perform some specific task.

Syntax of function definition:

```
returnType functionName(type1 argument, type2 argument)
{
    // body of function
}
```

When function is called, the control of the program is transferred to the function definition.

The type of arguments passed to a function and the formal parameters must match, otherwise compiler will show error.

Qut

The function should also return some value. The type of value returned from the function and the return type specified in the function prototype and function definition must match.

(Q3 2) What is pointer. How to declare and initialize it?

Answer: A pointer is a variable whose value is the address of another variable, i.e., direct address of the memory location.

How to declare Pointers:

While initializing the pointer variable, \* indicates that the variable is a pointer.

The address of any variable is given by preceding the variable name with Ampersand &.

To access the value of a certain address stored by a pointer variable \* is used.

Ex:

```
int a=10;  
int *ptr;    // pointer declaration  
ptr = &a;    // pointer initialization.
```

Qul

Q3 3.) Write a program to display sum of two numbers by using concept of function.

Answer: #include <stdio.h>

```
int sum (int num1, int num2);
int main()
```

```
{ int num1, num2, res;
  printf ("\n Enter the two numbers:");
  scanf ("%d %d", &num1, &num2);
```

```
// call function sum with two parameters
```

```
res = num1 + num2;
```

```
printf ("\n Addition of two number is: %d", res);
return (0);
```

```
}
```

```
int sum (int num1, int num2){
```

```
int num3;
```

```
num3 = num1 + num2;
```

```
return (num3);
```

```
}
```

Q4 4.) Explain how to declare and initialize 1-D, 2-D array.

Answer: One-Dimensional array is type of array in which elements are stored one after another.

Ans

Syntax: `datatype array-name [size];`

Eg: `int number[100];` // One-dimensional array.

Initializing Array:

When an array is declared inside a function the elements of the array have garbage value. If an array is global or static, then its elements are automatically initialized to 0.

Syntax:

`datatype array-name [size] = {val1, val2, val3, ..., valN};`

Two-dimensional Array:

In 2-D array, to declare and access elements of 2-D array we use 2 subscripts instead of 1.

Syntax: `datatype array-name [ROW][COL];`

Initializing Array (2D);

There are two ways which are stated below:

`int disp[2][4] {`

`{1, 2, 3, 4},`

`{0, 1, 8, 9}`

`};`

*Def*

OR

```
int disp[2][4] = { 1, 2, 3, 4, 5, 6, 7, 8 };
```

CO4 5.) Write a program to read and display the elements using 1-D array.

Answer:

```
#include <stdio.h>
int main()
{
    int a[100], i, n;

    printf("Enter size of array");
    scanf("%d", &n);

    printf("Enter %d elements in array :", n);

    for(i = 0; i < n; i++)
    {
        scanf("%d", &a[i]);
    }

    printf("\n Elements in array are:");
    for(i = 0; i < n; i++)
    {
        printf("%d", a[i]);
    }

    return 0;
}
```

Ans