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Assignment - 3

Q) What is the difference between malloc and calloc.

Ans)

Malloc	Calloc
Malloc() function will Create a single block of memory of size specified by user	Calloc() function can assign multiple block of memory for a variable.
Malloc function contain garbage value	The memory block allocated by a calloc function is always initialized to zero
Number of argument 2	No of arguments 1
Malloc is faster	Calloc is slower.
Malloc function returns only starting address and does not make it zero	Before allocating the address, calloc() function returns the starting address and make it zero
It does not perform initialization of memory	It performs memory initialization.

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Q)2) State the Keyword which is used to transfer the controls back to a calling function from a function.

Ans) Return Keyword is used to transfer the controls back to a calling function from a function

Q)3) What do you mean by a Nested Structure.

Ans) Nested Structure in C is nothing but Structure within Structure. One Structure can be declared inside the other Structure as we declare Structure member ~~function~~ inside a Structure.

Example

```
Struct Example 1 {
        int a, b, c;
        char Name[100];
    };
```

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```
Struct Example {
        int c, d;
        Struct Example1 E1;
};
```

Q) What is dynamic Memory allocation Mention the Syntax?

(Ans) The concept of dynamic memory allocation in c language enables the C to allocate memory at run time. Dynamic memory allocation in c language is possible by 4 functions of stdlib.h header file.

i) Malloc()
ii) Calloc()
iii) realloc()
iv) free()

Malloc allocates single block of memory

Syntax:- ptr = (cast-type*) malloc(byte-size)

It does not initialize memory at execution time so it has garbage value initially

It return null if memory is not sufficient.

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Calloc function in C

The calloc function allocates multiple block of memory

It initially initialize all bytes to zero

It return null if memory is not sufficient.

ptr = (cast-type*) calloc(no.of bytes, bytes size);

realloc() function in C

If memory is not sufficient on malloc or calloc you can realloc() function. It changes the memory size

ptr = realloc(ptr, new size);

Q) 5) Mention File operation in C language.

Ans) operation which can be performed in file in C language are.

i) open file
ii) file close
iii) Read from file.

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iv) Read from binary file.
v) Write to file
vi) Write to binary file
vii) Append file
viii) Append binary file.

a) Difference between Actual parameter and formal pointer.

Actual parameter	Formal parameter.
When a function is called, the value (expression) that are passed in the function call are called the arguments or actual parameter.	The parameter used in function definition statement which contain data type on its time of declaration is called formal parameter.
These are the variable or expression referenced in the parameter list of a subprogram call	These are the variables or expression referenced in the parameter list of a subprogram specification.
Actual parameters are the parameter which are in calling subprogram	Formal Parameters are the parameters which are in called subprogram