

DAILY ASSESSMENT FORMAT

Date:	19-06-2020	Name:	PREETHAM S RAI
Course:	C Programming	USN:	4AL18EC040
Topic:	<ul style="list-style-type: none">Structures and UnionsMemory Management	Semester & Section:	4 th sem 'A' sec
GitHub Repository:	Psraipreetham		

FORENOON SESSION DETAILS

Image of session

CERTIFICATE

SOLOLEARN

Issued 19 June, 2020

This is to certify that

Preetham S Rai

has successfully completed the
C Tutorial course



Yeva Hyusyan
Chief Executive Officer

Certificate #1089-18857847



Edit with WPS Office

Memory Management
Working With Memory

XP 17

1/2

←

▶

?

▶

?

Memory Management

Understanding memory is an important aspect of C programming. When you declare a variable using a basic data type, C automatically allocates space for the variable in an area of memory called the **stack**.

An **int** variable, for example, is typically allocated 4 bytes when declared. We know this by using the **sizeof** operator:

```
int x;
printf("%d", sizeof(x)); /* output: 4 */
```

Try It Yourself

As another example, an **array** with a specified size is allocated **contiguous blocks** of memory with each block the size for one element:

```
int arr[10];
printf("%d", sizeof(arr)); /* output: 40 */
```

© 2020 SoloLearn Inc.

Structures and Unions

Structures: In C programming language a struct is a collection of variables .

Syntax of struct:

```
struct structurename
{
    datatype member 1;
    datatype member
};
```

Unions: A Union is a special datatype available in C that allows to store different datatypes in the same memory locations.

Syntax of Union:

```
union unionname
{
    datatype member 1;
```



Edit with WPS Office

```
datatype member 2;
```

```
};
```

Memory Management

In C programming, the library function malloc is used to allocate a block of memory on the heap

The Malloc function: malloc or memory allocation method in C is used to dynamically allocate a single large block of memory with the specified size

Syntax of malloc function:

```
ptr = (cast-type*) malloc(byte-size);
```

Calloc and Realloc:

Syntax of calloc:

```
ptr = (cast-type*) calloc(n, element-size);
```

This statement allocates contiguous space in memory for 25 elements each with the size of the float.

Realloc: Realloc or re-allocation method in C is used to dynamically change the memory allocation of a previously allocated memory.

Syntax of Realloc:

```
ptr = realloc(ptr, newsize);
```

Dynamic Strings and array



Edit with WPS Office