

Date:- 19/6/20

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Course:- C programming

USN:- 4AL17EC106

Topic:- Memory management

Sem & Sec:- 6th B.

* When the compiler encounters a sequence enclosed in the double quotation marks, it appends a null character `\0` at the end by default

* There are two ways in which memory can be allocated in C

i) by declaring variables

ii) by explicitly requesting space from C.

* C provides several functions for memory ~~man~~ allocation

- malloc and calloc

- realloc

- free

* The above functions can be found in the `stdlib` library.

Ex:- `#include <stdio.h>`

```
main()
```

```
{
```

```
    char *p;
```

```
    char *q = NULL
```

```
    printf("Address of p = %u\n", p);
```

```
    strcpy(p, "Hello");
```

```
    printf("1. s\n", p);
```

```
    printf("About to copy 'Goodbye' to q\n");
```

```
    strcpy(q, "Goodbye");
```

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

```
    printf("1. s\n", q);
```

```
}
```


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Course:- C programming

Topic:- Structure & Union

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* Structure is a user defined data-type available in C that allows combining data items of different kinds

Syntax:-

```
struct [structure name]
```

```
{  
    member definition;
```

```
    - - -  
    member definition;  
};
```

* Union:-

A union is a special data type available in C that allows storing different data types in the same memory location.

Syntax:- union [union name]

```
{  
    member definition;
```

```
    - - -  
    member definition;  
};
```

* similarities b/w Structure & Union:-

- i) Both are user defined datatypes used to store data of different types as a single unit.
- ii) '.' operator is used for accessing member