MNNIT COMPUTER CODING CLUB

CLASS-10

BASICS OF C



DYNAMIC MEMORY ALLOCATION

void pointer

- The void pointer in C is a pointer which is not associated with any data types.
- It is a general-purpose pointer.
- It can point to any data type.

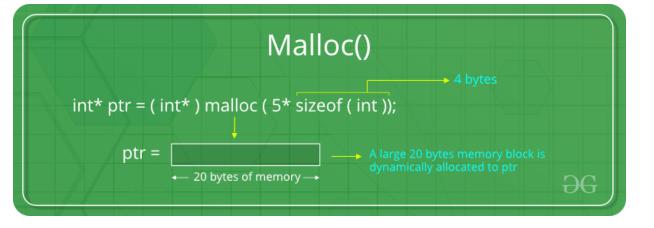
```
int a = 7;
float b = 7.6;
void *p;

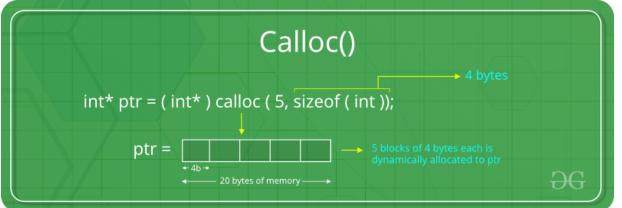
p = &a;
printf("Integer variable is = %d", *( (int*) p) );

p = &b;
printf("\nFloat variable is = %f", *( (float*) p) );
```

DYNAMIC MEMORY ALLOCATION

 Calloc Malloc





src: https://www.geeksforgeeks.org/dynamic-memory-allocation-in-c-using-malloc-calloc-free-and-realloc/

STRUCTURE

A structure is a user-defined data type available in C that allows to combining data items of different kinds. Structures are used to represent a record.

```
Syntax:
                                   struct struct example
struct [structure name]
                                        int integer;
                                        float decimal;
    member definition;
                                        char name[20];
                                   };
    member definition;
                                   Creating an object:
                                   struct struct_example s={10,10.0,"abcdef"};
    member definition;
};
                                   Access(read/write):
                                   s.integer
                                   s.decimal
```

s.name

UNION

A union is a special data type available in C that allows storing different data types in the same memory location. You can define a union with many members, but only one member can contain a value at any given time.

```
Syntax:
union [union name]
   member definition;
                                      };
   member definition;
   member definition;
};
```

```
union union_example
    int integer;
    float decimal;
    char name[20];
Creating an object:
union union_example u;
Access(read/write):
u.integer
u.decimal
u.name
```

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WHAT'S NEXT?

