Dynamic Memory Allocation

↓

It is a way to allocate memory to a data structure during the runtime.

We need some functions to allocate & free memory dynamically.

Functions for DMA

a. malloc( )

b. calloc( )

c. free( )

d. realloc( )

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malloc( )

memory allocation

takes number of bytes to be allocated & returns a pointer of type void

```
ptr = (*int) malloc(5 * sizeof(int));
```

calloc( )

continuous allocation

initializes with 0

```
ptr = (*int) calloc(5, sizeof(int));
```

free( )

We use it to free memory that is allocated using malloc & calloc

```
free(ptr);
```

realloc( )

reallocate (increase or decrease) memory using the same pointer & size.

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