

C library function - qsort()

Description

The C library function **void qsort(void *base, size_t nitems, size_t size, int (*compar)(const void *, const void*))** sorts an array.

Declaration

Following is the declaration for qsort() function.

```
void qsort(void *base, size_t nitems, size_t size, int (*compar)(const void *, const void*))
```

Parameters

- **base** – This is the pointer to the first element of the array to be sorted.
- **nitems** – This is the number of elements in the array pointed by base.
- **size** – This is the size in bytes of each element in the array.
- **compar** – This is the function that compares two elements.

Return Value

This function does not return any value.

Example

The following example shows the usage of qsort() function.

```
#include <stdio.h>
#include <stdlib.h>

int values[] = { 88, 56, 100, 2, 25 };

int cmpfunc (const void * a, const void * b) {
    return ( *(int*)a - *(int*)b );
}

int main () {
    int n;

    printf("Before sorting the list is: \n");
```

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```
for( n = 0 ; n < 5; n++ ) {  
    printf("%d ", values[n]);  
}  
  
qsort(values, 5, sizeof(int), cmpfunc);  
  
printf("\nAfter sorting the list is: \n");  
for( n = 0 ; n < 5; n++ ) {  
    printf("%d ", values[n]);  
}  
  
return(0);  
}
```

Let us compile and run the above program that will produce the following result –

```
Before sorting the list is:  
88 56 100 2 25  
After sorting the list is:  
2 25 56 88 100
```