

Daily Assessment journal

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Topic: structure unions
memory management

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Report

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

Defining a structure to define a structure, you must use the struct statement. The struct statement defines a new data type with more than or equal to one member.

Syntax

struct (structure name)

- { member definition;
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. You can define a union with many members, but only one member can contain a value at any given time.

Defining a union: To define a union, you must use the union statement in the same way as you did while defining a structure. The union statement defines a new data type with more than one member for your program.

struct

- 1. member definition
- 2. member definition
- 3. member definition

Similarities between structures & unions

- Both are user-defined data types used to store data of different types at a single unit
- Both members can be objects of any type, including other structures & unions or arrays. A member can also contain a bit field
- Both structures & unions support only assignment & size of operators. The two structures or unions in the assignment must have the same members & member type

Error handling

Error handling features are not supported by C programming which is known as exception handling in all other C++ languages. However there are few methods of variable available in C header file error.h that is used to locate errors using return values of the fun call in C. The fun returns null or -1.

Is divided by zero error i.e. exception

```
#include <stdio.h>
#include <stdlib.h>
void main() {
    int dden = 60;
    int dden = 0;
    int q;
    if (dden == 0)
        printf("Division by zero! calling 'm'");
}
```

```

    getch();
    exit(-1);
}
q = ddend / dcor;
printf("divisor by the value of quotient: %d\n",
    q);
getch();
exit(0);
}

```

File handling in C

So far the operations using C program are done on a prompt / terminal which is not stored anywhere, but in the software industry, most of the programs are written to store the information fetched from the program one such way is to store the fetched information in a file different operations that can be performed on a file are:

1. creation of new file (fopen with attributes as "a" or "at" or "w" or "w++")
2. opening an existing file (fopen)
3. Reading from file (fscanf fgets)
4. writing to a file (fprintf or fputs)
5. moving to a specific location in a file (fseek, rewind)
6. closing a file (fclose)