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1. A struct is a collection of variables that can be different data types event a special character with a big size variable in it under a single name. Structures are used to represent a record. Suppose you want to keep track of your score in a student database for example the struct is consist of NPM, Name , Major , and Score .

   References:

   - https://www.geeksforgeeks.org/structures-c/

2. The first step to implement struct is by declaring it outside its main function so the struct can be accessed by another function, below is how to declare the struct

   ```
   struct [structure tag] {
     member definition;
     ...
   } [one or more structure variables];
   ```

   And then can declare the variable in the main function :

   ```
   Struct struct_name variable_name;
   ```

   Last step to access any member of a structure, we use the member access operator (.) for example :

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

   //initialize struct
   struct Student{
           char name[50];
           int npm;
           int score;
   };

   int main(){
   ```

```
    //declare struct
    struct Student myStudent1;

    //assign value
    strcpy(myStudent1.name, "Leo");
    myStudent1.npm = 2106712;
    myStudent1.score =90;

    printf("Student Name : %s \n", myStudent1.name );
    printf("Student NPM : %d \n", myStudent1.npm );
    printf("Student Score : %d \n", myStudent1.score );
}
```

References:

- https://www.programiz.com/c-programming/c-structures

3. In general, struct is used to define a structure. However, in order to use it, we must use the struct keyword in C. If we use the typedef keyword, then we can use the struct by that name without having to write the struct keyword. So there is no difference between 'struct' and 'typedef and how to use the program is the same.

   References:

   - https://www.educative.io/edpresso/how-to-use-the-typedef-struct-in-c

4. The output is 1 2 by printing the value of x and y through p2 variable, we knew that we declare the struct with p1 variable but because we assign p2 is a pointer to structure p1. We accessing members of struct through p2 variable using ' -> ' operator.

   References:

   https://www.educative.io/edpresso/how-to-use-the-typedef-struct-in-c

5. #include<stdio.h>

```
//initialize struct
struct Number{
	float x;
	float y;
};

void divide(float a, float b){
	float result;
	struct Number myNumber;
	myNumber.x = a;
	myNumber.y = b;

	result = myNumber.x / myNumber.y;
	printf("\n Hasil Pembagian : %0.2f ", result );

}

int main(){
	float c,d;
	printf("\n Masukkan X : ");
	scanf("%f", &c);
	printf("\n Masukkan Y : ");
	scanf("%f",&d);

	divide(c,d);


}
```

References:

- https://www.tutorialspoint.com/cprogramming/c_structures.htm