

# Report 11

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## Structures

**In this laboratory work I created some structures and functions, which work with these structures**

**In this programm I created a programm for Online Store Management - I have store, product and customer structures and functions, which can add new products, place some orders and read orders for customers. To solve the problem first of all I have creted structeres, mentioned in the task:**

```
typedef struct {  
    char name[MAX_NAME_LENGTH];  
    float price;  
    int amount;  
} product_t;
```

```
typedef struct {  
    char name[MAX_NAME_LENGTH];  
    int orders[MAX_ORDERS];  
    int ordersAmount;  
} customer_t;
```

```
typedef struct {  
    product_t products[MAX_PRODUCTS];  
    int productsAmount;  
    customer_t customers[MAX_CUSTOMERS];  
    int customerAmount;  
} store_t;
```

**Then I added fields, which are obligated for programm normal work - max amount of products, orders, customers and max name length.**

**After this I created functions - to add poduct to the store, to place order and to list orders with customers. Also I have a function to initialize store as an object.**

**Problems. My main problem was placeOrder function, because it required a lot of different operations depending from conditions. Espeially problematic for me was creating a new customer operations, because for this I needed to create a new object of customer structure and add order coubnt to it. But I have solved it.**

**So here is my output**

```
└─(malex-kali@MA)-[~/Programming/Lab11]  
└─$ gcc -g -O0 main.c -o expr
```

```
└─(malex-kali@MA)-[~/Programming/Lab11]
└─$ gdb ./expr
GNU gdb (Debian 13.2-1+b2) 13.2
Copyright (C) 2023 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later http://gnu.org/licenses/gpl.html
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
Type "show copying" and "show warranty" for details.
This GDB was configured as "x86_64-linux-gnu".
Type "show configuration" for configuration details. For bug reporting instructions, please
see:
https://www.gnu.org/software/gdb/bugs/.
Find the GDB manual and other documentation resources online at:
http://www.gnu.org/software/gdb/documentation/.

For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from ./expr...
(gdb) c
The program is not being run.
(gdb) r
Starting program: /home/malex-kali/Programming/Lab11/expr
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Product 'Computer' added
Product 'Printer' added
Product 'Scanner' added
Order placed: Alice ordered 'Computer'.
Order placed: Alice ordered 'Scanner'.
Order placed: Bob ordered 'Printer'.
Order placed: Bob ordered 'Scanner'.
Customer Angela not found.
Orders by Bob:
-Printer (Price: $250.00)
-Scanner (Price: $123.40)
Orders by Alice:
-Computer (Price: $871.20)
-Scanner (Price: $123.40)
[Inferior 1 (process 13044) exited normally]
(gdb)
```