

CSE 2025 DATA STRUCTURES

PROJECT #1 E- COMMERCE SYSTEM

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A series of approximately 10-12 thin, parallel diagonal lines in a light blue-grey color, extending from the bottom-left towards the top-right of the page, passing behind the student names and IDs.

DATA STRUCTURES PROJECT 1 E-COMMERCE SYSTEM

FUNCTIONS:

- void insertCustomer (customerPtr *cPtr, int id, char name[50], char surname[50]):

customerPtr *cPtr: pointer that points to the pointer the top of list of customers.

int id: integer that is id of customer.

char name[50]: char array that represents name of customer.

char surname[50]: char array that represents surname of customer.

Purpose: Inserting a customer to the list by using ascending order of their ids.

- void deleteCustomer(customerPtr *cPtr, char name[50],char surname[50]):

customerPtr *cPtr: pointer that points to the pointer of the top of list of customers.

char name[50]: char array that represents name of customer.

char surname[50]: char array that represents surname of customer.

Purpose: Deleting customer according to its name and surname.

- void printCustomers(customerPtr cPtr):

customerPtr cPtr: pointer that points the top of list of customers.

Purpose: Printing customers.

- int controlCustomer(customerPtr cPtr,char name[],char surname[]):

customerPtr cPtr: pointer that points the top of list of customers.

char name[50]: char array that represents name of customer.

char surname[50]: char array that represents surname of customer.

Purpose: Controlling the customer list if given name and surname is in the list or not. If given name and surname is in the list, it returns 1. Otherwise, it returns 0.

- int checkID(customerPtr cPtr):

customerPtr cPtr: pointer that points the top of list of customers.

Purpose: Finding id of last inserted customer and adding 1 to it. It returns id of customer which will be inserted.

- int checkBasketID(customerPtr cPtr,int customerID):

customerPtr cPtr: pointer that points the top of list of customers.

int customerID: integer that represents id of customer.

Purpose: Finding last inserted basket's id and adding 1 to it. If there is no basket on customer than it returns 1. Otherwise, it returns last inserted basket's plus 1.

- basket *AddProducts(int id, int list[],int size,productPtr pPtr,int control):

int id: integer that represents id of basket.

int list[]: integer array that contains id numbers of products.

productPtr pPtr: pointer that points the top of list of products.

int control: integer that controls if the amount of basket will be printed or not.

Purpose: Creating basket and adding given products to the basket. It returns pointer that points basket.

- void addBasket(customerPtr cPtr,basketPtr *bPtr,int customer_id):

customerPtr cPtr: pointer that points the top of list of customers.

basketPtr *bPtr: pointer that points to the pointer of basket.

int customer_id: integer that represents id of customer.

Purpose: Adding basket to given customer by using ascending order for id of baskets.

- void listAmount(customerPtr cPtr):

customerPtr cPtr: pointer that points the top of list of customers.

Purpose: Printing all shopping amounts of all customers.

- void spesificProduct(customerPtr cPtr,int id):

customerPtr cPtr: pointer that points the top of list of customers.

int id: integer that represents id of specific product.

Purpose: Printing the customers that bought specific product by using id of product.

- void insertProduct(productPtr *pPtr, int id, char name[50],char category[50],int price):

productPtr pPtr: pointer that points to the pointer of the top of list of products.

int id: integer that represents id of product.

char name[50]: char array that represents name of product.

char category[50]: char array that represents category of product.

int price: integer that represents price of product.

Purpose: Inserting a product to the list by using ascending order for name.

- void printProducts(productPtr pPtr):

productPtr pPtr: pointer that points the top of list of products.

Purpose: Printing all products.

SCREENSHOTS:

1) Adding a Customer:

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe

Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
1
1      Ayhan  Altan
2      Bora   Cakir
3      Cenker Saglam
4      Engin  Altan
5      Guler  Sevimli
6      Mustafa Acar
7      Temel  Aktas
8      Yagmur Ozden

Name Surname: Hasan Senyurt
```

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe

1
1      Ayhan  Altan
2      Bora   Cakir
3      Cenker Saglam
4      Engin  Altan
5      Guler  Sevimli
6      Mustafa Acar
7      Temel  Aktas
8      Yagmur Ozden
9      Hasan  Senyurt

Name Surname: Hasan Senyurt

1      Ayhan  Altan
2      Bora   Cakir
3      Cenker Saglam
4      Engin  Altan
5      Guler  Sevimli
6      Mustafa Acar
7      Temel  Aktas
8      Yagmur Ozden
9      Hasan  Senyurt

Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
```

2) Adding a Basket:

- 1) Listing customers
- 2) Selecting one of the customers

```
Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
2
1      Ayhan  Altan
2      Bora   Cakir
3      Cenker Saglam
4      Engin  Altan
5      Guler  Sevimli
6      Mustafa Acar
7      Temel  Aktas
8      Yagmur Ozden
9      Hasan  Senyurt

Select one customer (id): 9
```

- 3) Listing the products

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe
20      Bread  Food  1
2       Butter Food  10
18      Carrot Food  3
12      Cheese Food  14
14      Chicken Food  22
10      Coffee Food  5
9       Cola   Food  2
27      Deodorant hygiene 12
24      Detergent hygiene 35
11      Egg    Food  10
5       Flour   Food  8
13      Honey   Food  30
19      IceCream Food  12
1       Milk    Food  2
23      Napkin  hygiene 1
7       Pasta   Food  2
16      Potatoes Food  3
3       Rice    Food  15
4       Salt    Food  5
26      Shampoo hygiene 15
25      Soap    hygiene 6
6       Tea     Food  16
15      Tomatoes Food  3
21      ToothBrush hygiene 5
22      ToothPaste hygiene 12
8       Water   Food  1
17      Yoghurt Food  5

Select one product (id), for exit enter -1:
```

- 4)Adding the products

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe

14   Chicken Food 22
10   Coffee Food 5
9    Cola Food 2
27   Deodorant hygiene 12
24   Detergent hygiene 35
11   Egg Food 10
5    Flour Food 8
13   Honey Food 30
19   IceCream Food 12
1    Milk Food 2
23   Napkin hygiene 1
7    Pasta Food 2
16   Potatoes Food 3
3    Rice Food 15
4    Salt Food 5
26   Shampoo hygiene 15
25   Soap hygiene 6
6    Tea Food 16
15   Tomatoes Food 3
21   ToothBrush hygiene 5
22   ToothPaste hygiene 12
8    Water Food 1
17   Yoghurt Food 5

Select one product (id), for exit enter -1: 5
Select one product (id), for exit enter -1: 9
Select one product (id), for exit enter -1: 8
Select one product (id), for exit enter -1: 4
Select one product (id), for exit enter -1: 13
Select one product (id), for exit enter -1: -1
```

- 5)Completing shopping

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe

23   Napkin hygiene 1
7    Pasta Food 2
16   Potatoes Food 3
3    Rice Food 15
4    Salt Food 5
26   Shampoo hygiene 15
25   Soap hygiene 6
6    Tea Food 16
15   Tomatoes Food 3
21   ToothBrush hygiene 5
22   ToothPaste hygiene 12
8    Water Food 1
17   Yoghurt Food 5

Select one product (id), for exit enter -1: 5
Select one product (id), for exit enter -1: 9
Select one product (id), for exit enter -1: 8
Select one product (id), for exit enter -1: 4
Select one product (id), for exit enter -1: 13
Select one product (id), for exit enter -1: -1

Total amount = 46

Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
```

3) Removing a Customer:

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe

17      Yoghurt Food      5

Select one product (id), for exit enter -1: 5
Select one product (id), for exit enter -1: 9
Select one product (id), for exit enter -1: 8
Select one product (id), for exit enter -1: 4
Select one product (id), for exit enter -1: 13
Select one product (id), for exit enter -1: -1

Total amount = 46

Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
3

1      Ayhan      Altan
2      Bora       Cakir
3      Cenkert    Saglam
4      Engin      Altan
5      Guler      Sevimli
6      Mustafa    Acar
7      Temel      Aktas
8      Yagmur     Ozden
9      Hasan      Senyurt

Name Surname: Cenkert Saglam
```

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe

1      Ayhan      Altan
2      Bora       Cakir
3      Cenkert    Saglam
4      Engin      Altan
5      Guler      Sevimli
6      Mustafa    Acar
7      Temel      Aktas
8      Yagmur     Ozden
9      Hasan      Senyurt

Name Surname: Cenkert Saglam

The student '3 Cenkert Saglam' is deleted from the list!

1      Ayhan      Altan
2      Bora       Cakir
4      Engin      Altan
5      Guler      Sevimli
6      Mustafa    Acar
7      Temel      Aktas
8      Yagmur     Ozden
9      Hasan      Senyurt

Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
```


4) Listing the Customers Who Bought a Specific Product:

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe

4      Engin  Altan
5      Guler  Sevimli
6      Mustafa Acar
7      Temel  Aktas
8      Yagmur  Ozden
9      Hasan  Senyurt

Name Surname: Cenker Saglam

The student '3 Cenker Saglam' is deleted from the list!

1      Ayhan  Altan
2      Bora   Cakir
4      Engin  Altan
5      Guler  Sevimli
6      Mustafa Acar
7      Temel  Aktas
8      Yagmur  Ozden
9      Hasan  Senyurt

Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
4
```

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe

20     Bread  Food    1
2      Butter Food    10
18     Carrot Food    3
12     Cheese Food    14
14     Chicken Food   22
10     Coffee Food    5
9      Cola   Food    2
27     Deodorant hygiene 12
24     Detergent hygiene 35
11     Egg    Food    10
5      Flour  Food    8
13     Honey  Food    30
19     IceCream Food   12
1      Milk   Food    2
23     Napkin hygiene 1
7      Pasta  Food    2
16     Potatoes Food    3
3      Rice   Food    15
4      Salt   Food    5
26     Shampoo hygiene 15
25     Soap   hygiene 6
6      Tea    Food    16
15     Tomatoes Food    3
21     ToothBrush hygiene 5
22     ToothPaste hygiene 12
8      Water  Food    1
17     Yoghurt Food    5

Please enter product id: 5
```

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe
19 IceCream Food 12
1 Milk Food 2
23 Napkin hygiene 1
7 Pasta Food 2
16 Potatoes Food 3
3 Rice Food 15
4 Salt Food 5
26 Shampoo hygiene 15
25 Soap hygiene 6
6 Tea Food 16
15 Tomatoes Food 3
21 ToothBrush hygiene 5
22 ToothPaste hygiene 12
8 Water Food 1
17 Yoghurt Food 5

Please enter product id: 5

1 Ayhan Altan bought that item!
2 Bora Cakir bought that item!
6 Mustafa Acar bought that item!
9 Hasan Senyurt bought that item!

Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
```

5) Listing the Total Shopping Amount of Each Customer:

```
Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
5
```

```
C:\Users\YUSUFSENYURT\Desktop\School Junks\Second Year - Spring\Data Structures\Kod\PROJECT 1\Project1.exe

1 Ayhan Altan bought that item!
2 Bora Cakir bought that item!
6 Mustafa Acar bought that item!
9 Hasan Senyurt bought that item!

Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
5

1 Ayhan Altan's total amount is = 95
2 Bora Cakir's total amount is = 49
4 Engin Altan has no shopping!
5 Guler Sevimli has no shopping!
6 Mustafa Acar's total amount is = 33
7 Temel Aktas's total amount is = 96
8 Yagmur Ozden has no shopping!
9 Hasan Senyurt's total amount is = 46

Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
```

6) Exit:

```
Add a customer : 1
Add basket: 2
Remove Customer: 3
List the customers who bought a specific product: 4
List the total shopping amounts of each customer: 5
Exit: 6
6

-----
Process exited after 362 seconds with return value 0
Press any key to continue . . .
```

COMPLETED AND INCOMPLETE PARTS OF PROJECT:

- Adding a customer completed.
- Adding a basket completed.
- Removing a customer completed.
- Listing the customers who bought a specific product is completed.
- Listing the total shopping amounts of each customer is completed.