

BILLING SYSTEM

TEAM MEMBERS

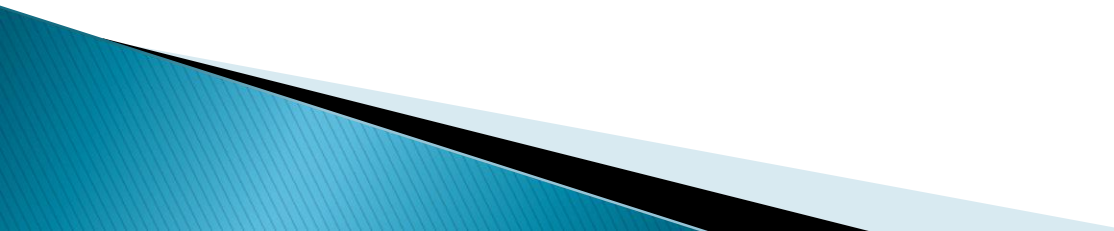
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INTRODUCTION

- ▶ A billing system is a software application designed to handle the process of generating invoices, tracking customer purchases, calculating totals, applying discounts or taxes, and managing payments.
 - ▶ **OBJECTIVE**
 - ▶ To develop and implement an accurate, efficient, and user-friendly billing system that automates invoice generation, tracks payments, manages customer accounts, and ensures timely financial reporting to support business operations and enhance customer satisfaction."
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WHY C AND DSA ?

It's fast and efficient, making it suitable for embedded systems or point-of-sale terminals. It gives low-level access to memory, which is useful for optimized performance.

Arrays or linked lists store product details and invoices. Stacks/Queues can manage billing tasks or order processing. Trees/Hash Tables can be used for fast search (e.g., product lookup by code). Files or structures handle permanent storage and quick data access.



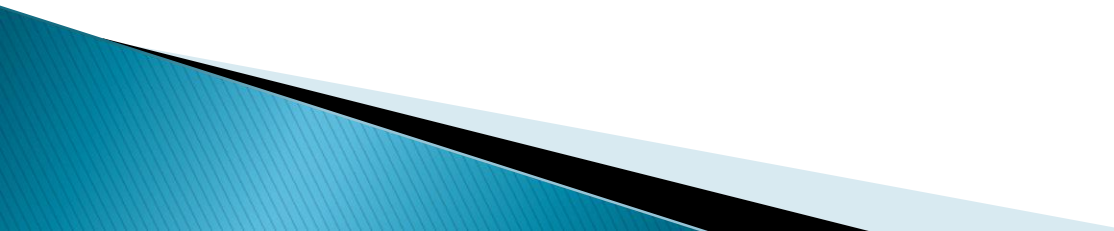
Algorithm

1. Start
2. Initialize Variables
item_name, quantity, price, total,
grand_total
Use arrays if handling multiple items
3. Input Number of Items
4. For each item (loop):
Input item_name
Input price
Input quantity
Calculate total = price * quantity
Add total to grand_total
5. After loop ends:
Optionally apply tax or discount
Calculate final amount
6. Print Bill
List items with quantity, price, and total
Show grand_total, tax/discount if any, and final amount
7. End

SOURCE CODE

<https://onlinegdb.com/y21Dix-uH>

LESSON LEARNT

1. Use of Functions – Makes code organized and reusable.
 2. Structures – Helps group related data like product details.
 3. File Handling – Useful for saving and retrieving bills.
 4. User Input Handling – Important to avoid errors and crashes.
 5. Menu-driven Program – Makes the system user-friendly.
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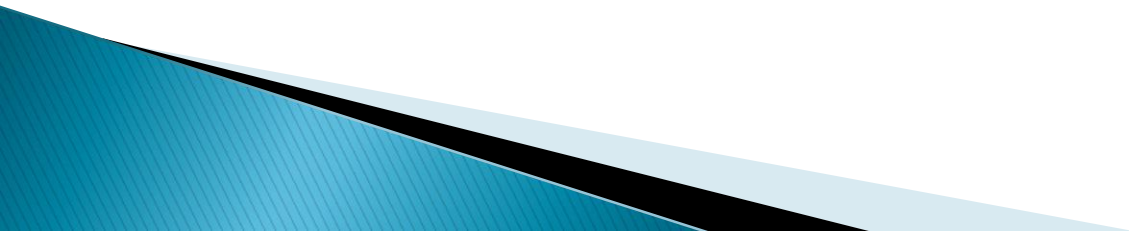
OUT PUT

```
1  ----- Billing System -----
2  1. Add Item
3  2. View Cart
4  3. Generate and Save Bill
5  4. Exit
6  Enter your choice: 1
7
8  Enter item name: Apple
9  Enter quantity: 3
10 Enter price per item: 0.50
11 Item added successfully!
12
13 ----- Billing System -----
14 1. Add Item
15 2. View Cart
16 3. Generate and Save Bill
17 4. Exit
18 Enter your choice: 1
19
20 Enter item name: Banana
21 Enter quantity: 2
22 Enter price per item: 0.30
23 Item added successfully!
24
25 ----- Billing System -----
26 1. Add Item
27 2. View Cart
28 3. Generate and Save Bill
29 4. Exit
30 Enter your choice: 2
31
32 ----- Items in Cart -----
33 Item Name      Quantity  Price  Total
34 Apple          3         0.50   1.50
35 Banana         2         0.30   0.60
```

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37 ----- Billing System -----
38 1. Add Item
39 2. View Cart
40 3. Generate and Save Bill
41 4. Exit
42 Enter your choice: 3
43
44 ----- BILL RECEIPT -----
45 Item Name      Quantity  Price  Total
46 Apple          3         0.50   1.50
47 Banana         2         0.30   0.60
48
49 Subtotal: 2.10
50 Tax (10%): 0.21
51 Grand Total: 2.31
52
53 Receipt saved to 'receipt.txt'
54
55 ----- Billing System -----
56 1. Add Item
57 2. View Cart
58 3. Generate and Save Bill
59 4. Exit
60 Enter your choice: 4
61 Exiting program. Thank you!
```

CONCLUSION

The billing system developed in C successfully demonstrates the essential functionalities required for managing sales transactions efficiently. It allows for accurate recording of items, calculation of totals, application of taxes or discounts, and generation of detailed bills.



THANK YOU