

<b>gcc program.c # Compiles program.c and generates a default executable named a.out</b> <b>./a.out # Runs the compiled program</b>
<b>gcc program.c -o my_program # Compiles program.c and creates an executable named my_program</b> <b>./my_program # Runs the compiled program</b>
<b>gcc program.c -o input_program # it takes inputs from input1.txt and displays the result in the terminal.</b> <b>./input_program &lt; input.txt</b>
<b>gcc program.c -o io_program</b> <b>./io_program &lt; input.txt &gt; output.txt</b> <b># it takes the inputs from input1.txt and creates the myoutput.txt document and writes the result here.</b>
<b>diff output1.txt myoutput.txt # compares the document output1.txt with the document myoutput.txt.</b>
<b>diff --ignore-all-space output1.txt myoutput.txt</b> <b># compares the document output1.txt with the document myoutput.txt without ignoring the spaces.</b>

## QUESTION 1

A car rental company wants to keep track of the rental information of 3 customers. For each customer, the following information will be provided:

- Customer name (up to 30 characters)
- Number of rental days (int)
- Daily rental fee (float)

You need to define a structure called Rental to store the rental information. Then, for each customer, calculate the total rental fee: ( $\text{total\_fee} = \text{rental\_days} * \text{daily\_fee}$ ).

Next, apply a discount: If the customer rented a vehicle for more than 7 days, a 10% discount will be applied to the total fee.

Finally, display the following for all customers: Customer name, Rental duration, Total fee, Discount amount applied. New discounted total fee. Also, find the customer who received the highest discount (in absolute value) and display their information.

### Input1:

#### Customer 1 Information

Enter Customer Name: Alice

Rental Duration (in days): 5

Enter Daily Rental Fee: 30.0

#### Customer 2 Information

Enter Customer Name: Bob

Rental Duration (in days): 8

Enter Daily Rental Fee: 25.0

### **Customer 3 Information**

Enter Customer Name: Charlie

Rental Duration (in days): 10

Enter Daily Rental Fee: 22.0

### **Output1:**

#### **Rental Information**

Customer: Alice

Rental Duration: 5 days

Total Cost: 150.00

Discount Applied: 0.00

Discounted Total Cost: 150.00

Customer: Bob

Rental Duration: 8 days

Total Cost: 200.00

Discount Applied: 20.00

Discounted Total Cost: 180.00

Customer: Charlie

Rental Duration: 10 days

Total Cost: 220.00

Discount Applied: 22.00

Discounted Total Cost: 198.00

**Customer with the highest discount:** Charlie (Discount: 22.00)