

Wilson Trading Center is retail center which facilitate buy goods up to 10 costumers from the shop. Every customer gets 5 possibilities to buy goods. Purchase of goods must be purchased according to the "Table 1". Customers also get discounts to billing amount.

Table 1

Item Code	Item Name	Item Quantity	Item Price(Rs.)
01	Rice	90(Kg)	105(1Kg)
02	Salmon Tin	50	275
03	sugar	60(Kg)	120(1Kg)
04	Soap	70	60
05	Cheese	80	340

Table 2

Price(Rs.)	Discount
Price >= 8000	15%
Price >= 5000	10%
Price < 5000	2%

- 1) After Purchasing of goods by the customer, an Invoice must be produced according to the items he/she purchased, and it should be displayed.
- 2) Table 1 should be updated after purchasing of goods from customer to customer and it should be displayed.
- 3) After 10 customers made their purchases from the retail center program will end. At the end of the program it should display the remaining inventory and income from the sales.

By considering the above information write a C program. When executing the program if user inputs wrong data, it should display a error message.

C Program

```
#include <stdio.h>
int main (void)
{
    //assign the variable
    int count1 = 1 ;
    float net_A_total = 0 ;

    int rice_quantity = 90 ,rice_price =105;
    int salmon_quantity = 50 ,salmon_price =275;
    int sugar_quantity = 60 ,sugar_price =120;
    int soap_quantity = 70 ,soap_price =60;
    int cheese_quantity = 80 ,cheese_price =340;

    while(count1<=10)// 1st loop start
    {
        //assign the variable
        int count2 = 1 ;
        int Item_code;
```

```
float Item_quantity = 0 , total =0 , total1 = 0 , total2 = 0 , total3 = 0 , total4 = 0 , total5 = 0 , discount = 0 , amount = 0 ;
```

```
char type, ch = 'Y';
```

```
int rice_qty = 0 , salmon_qty = 0 , sugar_qty = 0 , soap_qty = 0 , cheese_qty = 0 ;
```

```
//print the Table of items
```

```
printf("-----\n");
```

```
printf("      WILSON TRAD CEMTER\n" );
```

```
printf("-----\n\n");
```

```
printf("-----\n");
```

```
printf(" Item_Code | Item_Name | Item_Quantity | Item_Price(Rs.) \n" );
```

```
printf("-----\n");
```

```
printf(" 01  | Rice  | %dKg  | %d(1Kg)\n" , rice_quantity , rice_price );
```

```
printf(" 02  | Salmon tin | %d    | %d\n" , salmon_quantity , salmon_price );
```

```
printf(" 03  | Sugar  | %dKg  | %d(1Kg)\n" , sugar_quantity , sugar_price );
```

```
printf(" 04  | Soap   | %d    | %d\n" , soap_quantity , soap_price );
```

```
printf(" 05  | Cheese | %d    | %d\n\n" , cheese_quantity , cheese_price );
```

```
while(count2<=5)//2nd loop start
```

```
{
```

```
printf("Enter the Item Code:");//prompt for input
```

```
scanf("%d" , &Item_code);//read item_code from user
```

```
printf("Enter the Item Quantity:");//prompt for input
```

```
scanf("%f" , &Item_quantity);//read item_quantity from user
```

```
printf("\n");
```

```
if( Item_code==01 )//check the item code
```

```
{
```

```
    if( Item_quantity < rice_quantity )//check the item quantity
```

```
    {
```

```
        total1 = Item_quantity * rice_price ;//calculate item 1 total
```

```
        total = total + total1 ;//calculate full total
```

```
        rice_quantity = rice_quantity - Item_quantity ;//calculate left items
```

```
        rice_qty = Item_quantity ;//provide new values
```

```
        count2++;
```

```
    }
```

```
    else
```

```
    {
```

```
        printf("-----\n");
```

```
        printf("You can't get this item please check the Item Quantity\n");//print the error message
```

```
        printf("-----\n\n");
```

```

    }
}
else
{
    if( Item_code==02 )//check the item code
    {
        if( Item_quantity < salmon_quantity )//check the item quantity
        {
            total2 = Item_quantity * salmon_price ;//calculate item 2 total

            total = total + total2 ;//calculate full total

            salmon_quantity = salmon_quantity - Item_quantity ;//calculate left items

            salmon_qty = Item_quantity ;//provide new values

            count2++;
        }
        else
        {
            printf("-----\n");
            printf("You can't get this item please check the Item Quantity\n");//print the error message
            printf("-----\n\n");
        }
    }
}
else
{
    if( Item_code==03 )//check the item code
    {
        if( Item_quantity < sugar_quantity )//check the item quantity
        {
            total3 = Item_quantity * sugar_price ;//calculate item 3 total

            total = total + total3 ;//calculate full total

            sugar_quantity = sugar_quantity - Item_quantity ;//calculate left items

            sugar_qty = Item_quantity ;//provide new values

            count2++;
        }
        else
        {
            printf("-----\n");
            printf("You can't get this item please check the Item Quantity\n");//print the error message
            printf("-----\n\n");
        }
    }
}
else

```

```

{
    if( Item_code==04 )//check the item code
    {
        if( Item_quantity < soap_quantity )//check the item quantity
        {
            total4 = Item_quantity * soap_price ;//calculate item 4 total

            total = total + total4 ;//calculate full total

            soap_quantity = soap_quantity - Item_quantity ;//calculate left items

            soap_qty = Item_quantity ;//provide new values

            count2++;
        }
        else
        {
            printf("-----\n");
            printf("You can't get this item please check the Item Quantity\n");//print the error message
            printf("-----\n\n");
        }
    }
    else
    {
        if( Item_code==05 )//check the item code
        {

            if( Item_quantity < cheese_quantity )//check the item quantity
            {
                total5 = Item_quantity * cheese_price ;//calculate item 5 total

                total = total + total5 ;//calculate full total

                cheese_quantity = cheese_quantity - Item_quantity ;//calculate left items

                cheese_qty = Item_quantity ;//provide new values

                count2++;
            }
            else
            {
                printf("-----\n");
                printf("You can't get this item please check the Item Quantity\n");//print the error
                printf("-----\n\n");
            }
        }
        else
        {
            printf("-----\n");
            printf("      ITEM CODE IS INCORRECT!!!\n"); //print the error message
            printf("-----\n\n");
        }
    }
}

```

message


```

printf(" Soap %d %d %f\n" , soap_qty , soap_price , total4 );
printf(" Cheese %d %d %f\n" , cheese_qty , cheese_price , total5 );
printf("-----\n");
printf(" FULL AMOUNT %f\n" , total );
printf(" DISCOUNT -%f\n" , discount );
printf("-----\n");
printf(" NET AMOUNT %f\n" , (total - discount) );
printf("-----\n");
printf(" CASH %f\n" , amount );
printf("CASH BALANCE %f\n" , amount - (total - discount) );
printf("-----\n");
printf(" THANK YOU \n" );
printf("-----\n\n");

```

```

net_A_total = net_A_total + (total - discount) ; //calculate net amount total

```

```

count1++;

```

```

}1st loop stop

```

```

//print the item left in shop

```

```

printf("-----\n");
printf(" WE HAVE STOPPED DELIVERING GOODS TODAY\n" );
printf("-----\n");

```

```

printf(" --The number of items left--\n");
printf("-----\n");
printf(" Item_Code | Item_Name | Item_Quantity |\n" );
printf("-----\n");
printf(" 01 | Rice | %dKg |\n" , rice_quantity );
printf(" 02 | Salmon tin | %d |\n" , salmon_quantity );
printf(" 03 | Sugar | %dKg |\n" , sugar_quantity );
printf(" 04 | Soap | %d |\n" , soap_quantity );
printf(" 05 | Cheese | %d |\n\n" , cheese_quantity );

```

```

printf("THE AMOUNT RECEIVED TODAY:%f\n\n" , net_A_total); //print the received amount

```

```

return 0;

```

```

}

```

Test case1: When someone buys goods

WILSON TRAD CENTER

Item_Code | Item_Name | Item_Quantity | Item_Price(Rs.)

01	Rice	90Kg	105(1Kg)
02	Salmon tin	50	275
03	Sugar	60Kg	120(1Kg)
04	Soap	70	60
05	Cheese	40	340

Enter the Item Code:01

Enter the Item Quantity:10

Enter the Item Code:02

Enter the Item Quantity:10

Enter the Item Code:03

Enter the Item Quantity:20

Enter the Item Code:04

Enter the Item Quantity:25

Enter the Item Code:05

Enter the Item Quantity:10

Your NET AMOUNT (Rs.):9435.000000

Enter the AMOUNT YOU PAY(Rs.):10000

INVOICE

ITEM QTY PRICE AMOUNT(Rs.)

Rice	10Kg	105(1Kg)	1050.000000
Salmon tin	10	275	2750.000000
Sugar	20Kg	120(1Kg)	2400.000000
Soap	25	60	1500.000000
Cheese	10	340	3400.000000

FULL AMOUNT 11100.000000

DISCOUNT -1665.000000

NET AMOUNT 9435.000000

CASH 10000.000000

CASH BALANCE 565.000000

THANK YOU

(This is updated table for next customer)

WILSON TRADCEMTER

Item_Code | Item_Name | Item_Quantity | Item_Price(Rs.)

01	Rice	80Kg	105(1Kg)
02	Salmon tin	40	275
03	Sugar	40Kg	120(1Kg)
04	Soap	45	60
05	Cheese	30	340

Enter the Item Code:

Test case2: When user input wrong **ITEM CODE & TOO MANY GOODS** then program will display error message

WILSON TRAD CEMTER

Item_Code | Item_Name | Item_Quantity | Item_Price(Rs.)

01	Rice	90Kg	105(1Kg)
02	Salmon tin	50	275
03	Sugar	60Kg	120(1Kg)
04	Soap	70	60
05	Cheese	40	340

Enter the Item Code:12

Enter the Item Quantity:10

ITEM CODE IS INCORRECT!!!

Enter the Item Code:01

Enter the Item Quantity:100

You can't get this item please check the Item Quantity

Enter the Item Code:

Test case3: Once everyone has purchased the goods

WE HAVE STOPPED DELIVERING GOODS TODAY

--The number of items left--

Item_Code	Item_Name	Item_Quantity
01	Rice	XKg
02	Salmon tin	X
03	Sugar	XKg
04	Soap	X
05	Cheese	X

THE AMOUNT RECEIVED TODAY(Rs.):xxxxxx.xxx

Test case1

```
C:\Users\kalana\Desktop\IT20151492.exe
-----
WILSON TRADCENTER
-----
Item_Code | Item_Name | Item_Quantity | Item_Price
-----
01 | Rice | 90Kg | 105(1Kg)
02 | Salmon tin | 50 | 275
03 | Sugar | 60Kg | 120(1Kg)
04 | Soap | 70 | 60
05 | Cheese | 40 | 340

Enter the Item Code:01
Enter the Item Quantity:10

Enter the Item Code:02
Enter the Item Quantity:10

Enter the Item Code:03
Enter the Item Quantity:20

Enter the Item Code:04
Enter the Item Quantity:25

Enter the Item Code:05
Enter the Item Quantity:10

Your NET AMOUNT :9435.000000
Enter the AMOUNT YOU PAY:10000
-----
INVOICE
-----
ITEM | QTY | PRICE | AMOUNT
-----
Rice | 10Kg | 105(1Kg) | 1050.000000
Salmon tin | 10 | 275 | 2750.000000
Sugar | 20Kg | 120(1Kg) | 2400.000000
Soap | 25 | 60 | 1500.000000
Cheese | 10 | 340 | 3400.000000
-----
FULL AMOUNT | 11100.000000
DISCOUNT | -1665.000000
-----
NET AMOUNT | 9435.000000
-----
CASH | 10000.000000
CASH BALANCE | 565.000000
-----
THANK YOU
-----
```

Test case2

```
C:\Users\kalana\Desktop\IT20151492.exe

-----
WILSON TRADCENTER
-----

Item_Code | Item_Name | Item_Quantity | Item_Price
-----
01 | Rice | 90Kg | 105(1Kg)
02 | Salmon tin | 50 | 275
03 | Sugar | 60Kg | 120(1Kg)
04 | Soap | 70 | 60
05 | Cheese | 40 | 340

Enter the Item Code:12
Enter the Item Quantity:10

-----
ITEM CODE IS INCORRECT!!!
-----

Enter the Item Code:1
Enter the Item Quantity:100

-----
You can't get this item please check the Item Quantity
-----

Enter the Item Code:
```

Test case3

```
C:\Users\kalana\Desktop\IT20151492.exe

-----
WE HAVE STOPPED DELIVERING GOODS TODAY
-----

--The number of items left--

Item_Code | Item_Name | Item_Quantity |
-----
01 | Rice | 9Kg |
02 | Salmon tin | 5 |
03 | Sugar | 6Kg |
04 | Soap | 7 |
05 | Cheese | 4 |

THE AMOUNT RECEIVED TODAY:37416.398438

Process returned 0 (0x0)   execution time : 105.346 s
Press any key to continue.
```