### **Algorithmic Beasts** Presents:

# DUKAN - 404



Powered by 3m Far8ali.



#### WHO ARE WE?

#### **Algorithmic Beasts:**

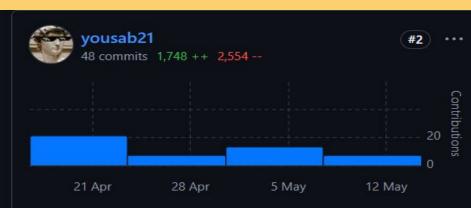
Yousab Nabil Nasrallah
Yassin Khaled El Naggar
Omar Mohamed Raga2i
Yehia El Safty
Mahmoud Saad Helal
Mohamed Sobhi Eltelwy
Mohamed Hamada Gomaa
Omar Mohamed Shehata
Mohamed Elnagar
Mahmoud Samir Saad

section 39
section 39
section 22
section 33
section 29
section 28
section 22
section 30
section 33



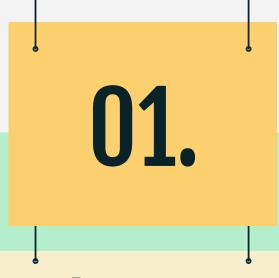
# **Our Aspiring Engineers:**







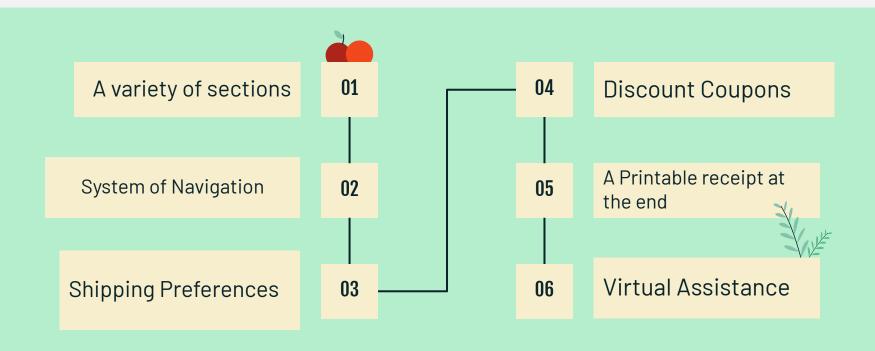




# Product and User Experience

With Yassin Khaled Elnaggar

## **Programs Features**



## **Our Coupons**

5%0FF

Use coupon yousab



10%0FF

Use coupon **Yassin** 



15%0FF

Use coupon
Omar



20%0FF

Use coupon yahia



Secret coupon 99%0FF!! "dr.mohamed"



# Meet 3m far8ali

# **DUKAN-404's**

- -Customer assistant,
- -Insightful Recommendations,
- -Resident comedian,
- -And overall a pretty chill guy!



With (Omar Raga2i & Yousab Nabil)

## Our coding standards



#### NO NESTING

Our code is written in a way to minimize confusing loop nesting

#### **COMMENTS EVERYWHERE**

Every operation in this code is followed by comments that explains it

#### **DESCRIPTIVE NAMING**

All variables in our code have names that make their function clear



#### A LOT OF DECOMPOSING

Our code is broken down into many different functions to maximize readability

### Breakdown of our code



Database of all items ,prices ,and coupons

>./4

product recommendation function



Shipping choice function

Payment selection function



Coupon handling function

Main execution steam

# **Shipping functions**

We offer 3 unique shipping methods

# Customer support function

You could describe the topic of the section here

# **Coupons function**

We have many coupons that gives you a good discounts

# **Payment**

You have many payment methods so you wouldn't find it hard when paying

### **Cart function**

The software shows a modern cart function with the ability to remove items

## **Recommendations**

3m far8ly recommends you many items to buy

# **Shipping Methods**

#### **Fast shipping**



Time:2-3 days Cost:17\$

### Overnight shipping



Time: Next day Cost: 25\$

### **Regular shipping**



Time: 5-7 days Cost: 10\$



#### **Customer Cart**

The customer should be able to remove the items he buyed by mistake

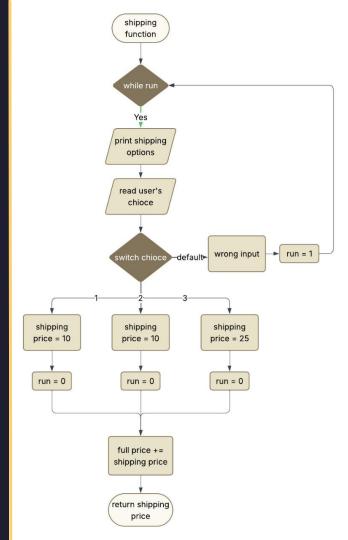
# SOLUTION

So we came up with the idea of an virtual cart that enables the customer to remove and check the things they buyed by rearranging the array so all items are shifted left

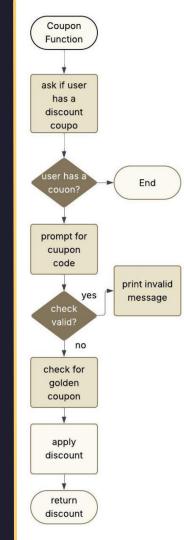


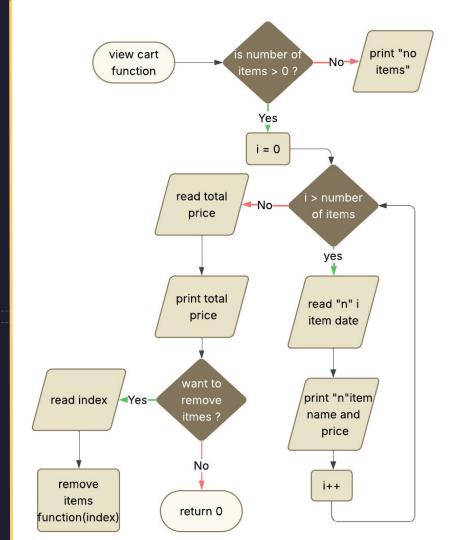
```
int main() {
       bool run = true:
                                                                                                                                                                                                                                                                                                                                                                               start main
       bool checker = true:
       char other_section;
       int section:
       bool run_the_cart_rmoval = true;
                                                                                                                                                                                                                                                                                                                                                                                     user
                                                                                                                                                                                                                                                                                                                                                                                 greeting
               srand(time(NULL));
                int orderNumber = (rand() % 99) + 1: // Generating a Random Number between 1 and 99 for use in order number number between 1 and 99 for use in order number number between 1 and 99 for use in order number number number between 1 and 99 for use in order number nu
                                                                                                                                                                                                                                                                   <1-4>
                int greeting_number = (rand() % 10): // Generating a Random Number between 0 and 9 for use in greeting
                                                                                                                                                                                                                                                                                                                                                                                   section
                                                                                                                                                                                                                                                                    the 4
                                                                                                                                                                                                                                                                                                                                  always shown-
                int farewell_number = (rand() % 10); // Generating a Random Number between 0 and 9 for use in farewell
                                                                                                                                                                                                                                                                                                                                                                                 selection
                                                                                                                                                                                                                                                                                                                                                                                                                    No
                                                                                                                                                                                                                                                          item-sections
                                                                                                                                                                                                                                                                                                                                                                                   screen
       printf("\n\t\t\%\n\n", greetings_3m_far8ali[greeting_number]); // Print out the greeting message
                                                                                                                                                                                                                                                                        <5>
                                                                                                                                                                                                                                                                                                                                                                                   is there
        while (checker) {
                                                                                                                                                                                                                                                                  view cart
                                                                                                                                                                                                                                                                                                                                                                                  items in
               int run = 1:
                                                                                                                                                                                                                                                                                                                                                                                    cart?
                                                                                                                                                                                                                                                                   function
                printf("Choose the section you want: \n\n");
                                                                                                                                                                                                                                                                                                                                                                                   Option
                                                                                                                                                                                                                                                                                                                                                                                                                   yes
                                                                                                                                                                                                                                                                                                                                                                                 the user
                while (run) {
                                                                                                                                                                                                                                                                        <6>
                                                                                                                                                                                                                                                                                                                                                                            enters another
                        printf("For Food Enter \"1\" ≜ \nFor Drinks Enter \"2\" ₹ \nFor Clothes Enter \"3\" ≅ \nFor Medici
                                                                                                                                                                                                                                                                 eustomer
                                                                                                                                                                                                                                                                                                                                                                                 section?
                        if (number_of_items > 0) { // If there are items in the cart then print the payment option
                                                                                                                                                                                                                                                                   support
                                printf("\n\t\t\t\t\Proceed to payment Enter \"8\" m ] \n");
                                                                                                                                                                                                                                                                   function
                                                                                                                                                                                                                                                                                                                                                                                                            proceed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                         shipping
                                                                                                                                                                                                                                                                                                                                                                                       no-
                                                                                                                                                                                                                                                                                                                                                                                                              payment
                                                                                                                                                                                                                                                                                                                                                                                                                                                         function
                        printf("\nSection [Enter 0 to Exit the Program]: "); // Choossing the section
                        scanf("%d", &section); // Choosing the section
                                                                                                                                                                                                                                                                       <7>
                        fflush(stdin);
                                                                                                                                                                                                                                                                    far8ali
                                                                                                                                                                                                                                                                    recipes
                        if (number_of_items > 0) { // If there are litems in the cart then show the payment option
                                                                                                                                                                                                                                                                   function
                                                                                                                                                                                                                                                                                                                                                                                                                                                          shipiing
                                if (section < 0 || section > 8) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                        locations
                                        printf("\n\t!Wrong Input! \n\t! Try Again ! \n\n");
                                                                                                                                                                                                                                                                                                                                                                                                                                                        function
                                 } else if (section == 8) { // Proceed to paument
                                                checker = false;
                                                run = 0:
                                 } else if (section == 0) { // Exit the program
                                        checker = false;
                                                                                                                                                                                                                                                                                      rating
                                                                                                                                                                                                                                                                                                                                                                                                    payment
                                                                                                                                                                                                                                                                                                                                                                                                                                                        coupons
                                                                                                                                                                                                                                                                                                                                            print recipt
                                        run = 0:
                                                                                                                                                                                                                                                                                   function
                                                                                                                                                                                                                                                                                                                                                                                                    function
                                                                                                                                                                                                                                                                                                                                                                                                                                                        function
                                 } else { // Valid section
                                        run = 0;
                                                                                                                                                                                                                                                                                  end main
```

```
int Shipping() {
    int run = 1;
    int shippingPrice = 0;
    while (run)
        printf("\n1. Standard Shipping\t5-7 Days\t10$\n2. Fast Shipping\t\t2-3 Days\t17$\n3. Overnight Shipping\tNext Day\t25$\n\nchoose shipping option: ");
        scanf("%d", &shipping_method); // Receives The Shipping Option Chose By The User.
        fflush(stdin);
        switch (shipping_method) {
            case 1:
                shippingPrice += 10;
                run = 0;
            break;
            case 2:
                shippingPrice += 17;
                run = 0;
            break:
            case 3:
                shippingPrice += 25;
                run = 0;
            break;
            default:
                printf("\n\t!Wrong Input! \n\t! Try Again ! \n\n"); // The Message if the user entered a wrong value.
                run = 1;
                break;
    return shippingPrice;
```



```
void check_coupon() {
   char coupon_response, coupon_code[20];
   int coupon_index = -1;
   int valid_coupon = 0;
   printf("Do you have a discount coupon [y/n]? ");
   scanf(" %c", &coupon_response);
   fflush(stdin);
   if (coupon_response == 'Y' || coupon_response == 'Y') { // Check for the Availability of a coupon.
      printf("Please enter your coupon code: ");
      scanf("%s", coupon_code);
      fflush(stdin);
      for (coupon_index = 0; coupon_index < 5; coupon_index++) { // Goes into each coupon in the array for valid ones.
          if (strcmp(coupons[coupon_index], coupon_code) == 0) {
              discount_value = full_price * discount[coupon_index];
             valid_coupon = 1;
              if (strcmp("dr.mohamed", coupon_code) == 0) {
                 printf("\n======="");
                 printf("\n!!!!!!!! 00000H THE GOLDEN COUPON [YOU GET 99%% OFF] !!!!!!!\n");
                 printf("-----\n"):
              break;
   if (valid_coupon != 1) { // if the coupon is not valid print out this message.
          printf("\nInvalid coupon code.\n");
```

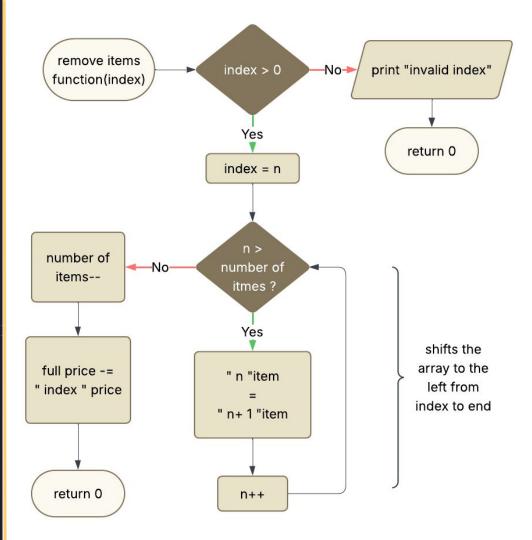




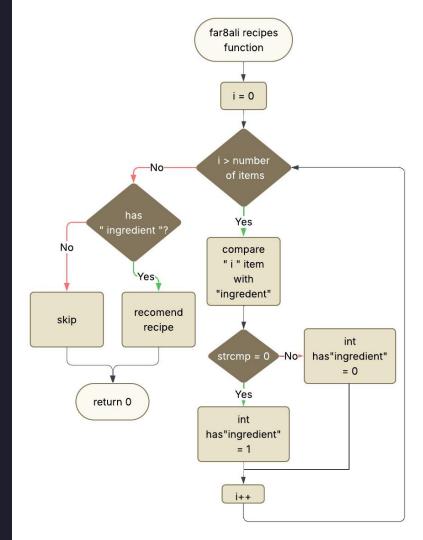
```
// Function for removing items from the cart

void remove_item_from_cart(int item_index) {
    if (item_index < 0 || item_index >= number_of_items) {
        printf("Invalid item index.\n");
        return;
    }

    // Shift items to the left
    for (int i = item_index; i < number_of_items - 1; i++) {
        item[i] = item[i + 1];
    }
    number_of_items---;
    full_price -= item[item_index].price; // Update the total price
    printf("Item removed from cart.\n");
}</pre>
```

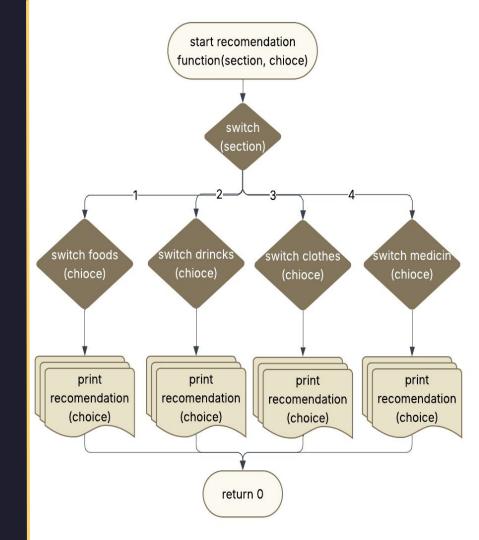


```
void suggestRecipeFromFood() {
    int hasBananas = 0, hasRice = 0, hasBread = 0, hasEggs = 0, hasMilk = 0, hasCheese = 0, hasButter = 0, hasChicken = 0, hasApples = 0;
    for (int i = 0; i < number_of_items; i++) {
        if (strcmp(item[i].name, "Bananas (1kg)
                                                      ") == 0) hasBananas = 1;
        if (strcmp(item[i].name, "Rice (1kg)
                                                      ") == 0) hasRice = 1:
       if (strcmp(item[i].name, "Bread (loaf) if (strcmp(item[i].name, "Eggs (dozen) if (strcmp(item[i].name, "Milk (1L)
                                                     ") == 0) hasBread = 1:
                                                      ") == 0) hasEggs = 1;
                                                     ") == 0) hasMilk = 1;
       if (strcmp(item[i].name, "Cheese (200g)
if (strcmp(item[i].name, "Butter (250g)
                                                      ") == 0) hasCheese = 1:
                                                     ") == 0) hasButter = 1;
        if (stromp(item[i].name, "Chicken (1kg)
                                                      ") == 0) hasChicken = 1;
        if (strcmp(item[i].name, "Apples (1kg)
                                                      ") == 0) hasApples = 1;
    int all_of_them = hasApples + hasBananas + hasRice + hasBread + hasEqqs + hasMilk + hasCheese + hasButter + hasChicken;
    if (all_of_them > 0) {
        printf("\n3m Far8ali@: 7abibi, el akl elly 3andak fi el cart da 7aga 7elw awi! \n");
    if (hasBananas && hasMilk) {
        printf("Bananas + Milk = Smoothie farqhali, ya 7abibi * \n");
    if (hasChicken && hasRice) {
        printf("Chicken + Rice = Farghali's Special Chicken & Rice > \ \ \n");
    if (hasEggs && hasCheese && hasBread) {
        printf("Eggs + Cheese + Bread = Sandwich farghali style! ("A");
    if (hasApples && hasCheese) {
        printf("Apples + Cheese = Salata farghali, ba7ebeh 	 "\n");
    if (hasBananas && hasEggs) {
        printf("Bananas + Eggs = Pancakes farghali style! () k \n");
    if (hasChicken && hasCheese && hasBread) {
        printf("Chicken + Cheese + Bread = Sandwich ala Farghali! > 1 | n");
    if (hasRice && hasMilk) {
        printf("Rice + Milk = Rice pudding, ya 7abibi! - "\n");
    if (hasBananas && hasApples && hasMilk) {
        printf("Bananas + Apples + Milk = Smoothie farghali style, ya m3alem \ 0 0 0 \ \n");
    if (hasEggs && hasCheese) {
        printf("Eggs + Cheese = Omelette farghali! ( 1);
    if (hasBananas && hasEggs && hasButter) {
        printf("Bananas + Eggs + Butter = Banana bread, farghali style! 📐 🔳 \n");
    if (all of them == 0) {
        printf("\nMafish Akl kifayah 3shan elwasfah fi Al salah ya m3lem. @\n\n");
```



```
int Payment_Function(double total) { // Choosing out the payment method
                                                                                                                                                                                                                                                                          payment
   int paymentMethod;
                                                                                                                                                                                                                                                                        function(total)
   floot paidAmount;
   printf("\n----- Payment ----\n");
   printf("Select payment method:\n");
   printf("1. Cash 5 \n");
   printf("2. Credit Card = \n");
printf("3. Vodefone Cash \\ Fawary # \n");
                                                                                                                                                                                                                                                                        read payment
                                                                                                                                                                                                                                                                           method
   printf("\n\nChoice: ");
scanf("Md", &paymentMethod);
   fflush(stdin);
   switch (paymentMethod) {
                                                                                                                                                                                                                                                                                                           print invalid
           printf("Total Price [98.2f EGP]: ", full_price - discount_value);
                                                                                                                                                                                                                                                                          switch coice
                                                                                                                                                                                                                                                                                              default→
           scanf("%f", &paidAmount);
                                                                                                                                                                                                                                                                                                              option
           fflush(stdin):
           if (paidAmount < total) {
               printf("\nInsufficient encunt! Please pay at least [80.2f EGP]\n\n\n", total);
Payment_Function(total); // Re-prompt recursively
                                                                                                                                                                                                                                                           -1 (cash)-
                                                                                                                                                                                                                                                                                         -3 (online wallet)-
                                                                                                                                                                                                                                                                          2 (credit)
           else [
               printf("\n\t\tPayment accepted. Change: #.2f EGP\n\n\n", paidAmount - total);
                                                                                                                                                                                                                           print total
           break;
                                                                                                                                                                                                                              price
                                                                                                                                                                                                                                                                        print operatoin
       case 2:
           printf("\n\t\t\t======"");
                                                                                                                                                                                                                                                                           sucsesful
           printf("\n\t\t\Processing credit card payment of #8.2f EGP...", total);
           printf("\n\t\t\t\t\tPyment successful!");
printf("\n\t\t\t----------\n\n\n");
                                                                                                                                                                                                                           read paid
                                                                                                                                                                                                                                                                                                                  Yes
           break:
                                                                                                                                                                                                                            amount
        case 3:
                                                                                                                                                                                                                                                                                                             read mobile
           int len, not_valid=1;
                                                                                                                                                                                                                                                                                                               number
           char mobile number[11]:
                                                                                                                                                                                                                                                                                                             (as a srting)
           char check number:
                                                                                                                                                                                                                                                        change =
           printf("\n\t\t\t====="");
                                                                                                                                                                                                                          paid amou
                                                                                                                                                                                                                                              -Yes
                                                                                                                                                                                                                                                      paid amount
           printf("\n\t\t\tPaying via digital services #.2f EGP...", total);
                                                                                                                                                                                                                                                          - total
           while(not_valid){
               printf("\n\t\t\tPlease Enter your mobile number: ");
                                                                                                                                                                                                                                                                                                        string leanth = 11? or
                                                                                                                                                                                                                                No
               scanf("Ms", mobile_number);
                                                                                                                                                                                                                                                                                                                                       -No► not_valid=1 --
                fflush(stdin);
                                                                                                                                                                                                                                                                                                       second charecter = 1? or
                                                                                                                                                                                                                                                           print
               len = strlen(mobile_number);
                                                                                                                                                                                                                          print operation
                                                                                                                                                                                                                                                        operation
               if ( (len !=11) || (mobile_number[0] != '8') || (mobile_number[1] != '1' ) ){
    printf("\n\t\tInvalid mobile number. Please try again.\n");
                                                                                                                                                                                                                           unsucsesful
                                                                                                                                                                                                                                                        sucsseful
                                                                                                                                                                                                                                                        & change
                   not_valid = 1;
                                                                                                                                                                                                                                                                                                                  Yes
                else{
                 printf("\n\t\t confirm this is your mobile number: %s ? [Y/n] \n", mobile_number);
scanf(" %c", &check_number);
                   fflush(stdin);
                   if (check number == 'Y' || check number == 'v') {
                                                                                                                                                                                                                                                                                                                                     No not_valid=1
                       printf("\t\t\t\tPayment Successfully Processed!");
                       printf("\n\t\t\t========
                   } else {
                      not_valid = 1;
                                                                                                                                                                                                                                                                                                                  Yes
                                                                                                                                                                                                                                                                                                             not_valid=0
           break;
printf("\nInvalid choice. Try again.\n");
                                                                                                                                                                                                                                                                                                                 print
                                                                                                                                                                                                                                                                       return payment
Payment_Function(total);
                                                                                                                                                                                                                                                                                                              operation
                                                                                                                                                                                                                                                                            methon
                                                                                                                                                                                                                                                                                                              sucsseful
   return paymentMethod;
```

```
void recommend_items(int section_number, int choice) {
    switch (section_number)
           if (choice == 1)
               printf("\t\t[3m Far8ali@: Mawgood Mawgood! El Mooz Lesah Gai Gdeed!]\n");
            else if (choice == 2)
               printf("\t\t[3m Far8ali@: 3andak Toffa7 w 7leeb. Momken Te3mel Behom Milkshake Lazeez]\n");
            } else if (choice == 3)
                printf("\t\t[3m Far8ali@: El 3eesh Tazah lesah Gai Embar7! Law tgeeb gebna aw zebda yb2a 3al El 3al]\n");
            else if (choice == 4)
           printf("\t\t[3m Far6ali 0: El beid yeb2e gemeel law 3meltoh m3 Gbnah, Shakshookah Ya M3len!]\n");
} else if (choice == 5) {
               printf("\t\t[3m Far8al@: El laban dayman mofeed!]\n");
            else if (choice == 6)
                printf("\t\t[3m Far8ali@: 3endek Sbneh w Zbdeh lw 3eyz.]\n");
            else if (choice = 7)
               printf("\t\t[3m Far8ali@: El Zebda m3 el toast We El 3asal teb2a 7ekaya.]\n");
            } else if (choice == 8)
               printf("\t\t[3m Far8ali@: 3andak Laban w Gbnah fi El Tlagah Eli Odam!]\n");
            } else if (choice == 9) {
                printf("\t\t[3m Far8ali@: Yeb2e smoothie ye fa5eem.]\n");
       break;
       case 2: // Drinks Section Recommendations
  if (choice == 1) {
               printf("\t\t[3m Far8ali@: El Laban El Raveb de momtaz!]\n"):
           } else if (choice == 2) {
    printf("\t\t[3m Far8ali@: T7eb Smoothie wla Milkshake kman?]\n");
               printf("\t\t[3m Far8ali@: El Cola Sa23ah bas me tensash El Maya... El Gaw 7ar Elmahardah.]\n");
            } else if (choice == 4)
                printf("\t\t[3m Far8ali@: Fi Energy Drink we Iced Tee fi el freezer]\n");
               printf("\t\t[3m Far8ali@: El Energy Drink de yenfa3 ma3 el sahra.]\n");
            else if (choice = 6)
               printf("\t\t[3m Far8ali@: Zo2ak Hayel fi el 2hwe!]\n");
            } else if (choice == 7)
           printf("\t\t[3m far8ali : 2hwa we 7sleeb, a7ls nescafe!]\n");
} else if (choice == 8) {
               printf("\t\t[3m FarSali 20: El Milkshake de fatkerny b sob7 el elgome3e... lw 3endek smoothie taman!]\n");
           } else if (choice == 9) {
   printf("\t\t[3m Far8eli@: Smoothie? De y3edy el sob7 b nefs taybe. 7ct me3sh laben w toffa7.]\n");
            else if (choice == 18)
                printf("\t\t[3m Far8ali@: Iced Tea da 3ashan el gaw. W lw shay sokh, ana 3andy bard.]\n");
       case 3: // Clothes Section Recommendations
if (choice == 1) {
               printf("\t\t[3m Far8ali@: El I-Shirt de yelzemlo Shorts 3leek.]\n");
           } else if (choice == 2) {
    printf("\t\t[3m Far8ali : Jeans? Samed! El Sneakers haykamlak el style.]\n");
            } else if (choice == 3)
               printf("\t\t[3m Far8ali@: El Jacket deh to7feh 3leek!]\n");
            else if (choice == 4)
                printf("\t\t[3m Far8ali@: El Hoodie dah m3 el jeans el sodah damassar]\n");
           } else if (choice == 5) {
    printf("\t\t[3m Far8ali@: Shorts Lel sa7el! Ragel Betfham.]\n");
            } else if (choice == 6)
            printf("\t\t[3m Far8ali : El Sneekers dol lesah nazleen gdeed!]\n");
} else if (choice == 7) {
                printf("\t\t[3m Far8ali@: Law el gaw 7ar, geeb Shorts w T-Shirts.]\n");
               printf("\t\t[3m Far8eli@: 1w 3andak 7asasia 5od dwa ko7a kman e7tveti.]\n"):
           printf("\t\t[3m Far8ali@: dah momtaz le el soda3 !]\n");
} else if (choice == 3) {
               printf("\t\t[3m Far8ali@: dah 4alklo bard mata5odlak Vitamin C kman]\n");
               printf("\t\t[3m Far8eli@: lw el ko7a 4ededa 5od paracetamol 314an lw sada3t kman]\n");
          } else if (choice = 5) {
    printf("\t\t\3m Far8ali : yesh moded Tayavil alef salema ye Tebibi]\n");
} else if (choice = 6) {
               printf("\t\t[3m Far8ali@: agiblek kilo borto2en knam ?]\n");
            else if (choice == 7)
               printf("\t\t[3m Far8eli@: el tofe7 byse3ed fi 3osr el hadm 3le fekra agebla kilo ?]\n");
       break
```



```
void Rating ()
   int presentation_rating,costumerSupport_rating,readabilty_rating,CodeEfficiency_rating,full_rating,precentage;
   printf("
                  ||----||\n");
                        Please rate our online shop! |\n");
   printf("
                        3shan 3m far8ali ⊕ m4 rady ydf3 ||\n");
   printf("
                  ||-----||\n");
   printf("
                     costumer support? (out of 10): ");
   scanf("%d",&costumerSupport_rating);
                  ||-----||\n");
   printf("
   printf("
                     Code readabilty? (out of 10): ");
   scanf("%d",&readabilty_rating);
                 ||-----||\n"):
   printf("
                      Code Efficiency ? (out of 10): ");
   scanf("%d",&CodeEfficiency_rating);
                  ||-----||\n");
   printf("
   printf("
                      presentation? (out of 10):
   scanf("%d", &presentation_rating);
                  ||-----||\n\n\n");
   printf("
   full_rating=presentation_rating+costumerSupport_rating+readabilty_rating+CodeEfficiency_rating;
   precentage= (full_rating/40)*100;
   if(precentage>=90)
      printf("3m far8ali @: bainy keda lazm a7asb el 3yal di begad!");
   else if(precentage>=75)
      printf("3m far8ali @: El eyal te3bt fe3lan h7asb b 25\mathbb{m} discount");
   else if (precentage>=50)
      printf("3m far8ali @: El 3yal e4t8lt w shrt brdo hdf3 50%% mn el mabl8");
   else if (precentage<=50)
       printf("3m far8ali @: bernamg 3la el kd khals hdf3 305% 3shan mz3lhm4");
```

start rating function read customer suport rating read readablty rating read efficiency rating read presentation rating total rating = "sum"/40\*100 print massage acording to total rating return 0

