

**GEBZE TECHNICAL UNIVERSITY**  
**CSE 108 Computer Programming Lab 05**

<b>P1: 2 points</b>	<b>P2: 1 point</b>	<b>P3: 2 points</b>	<b>P4: 1 point</b>	<b>P5: 2 points</b>
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You are going to develop a program which shows menu and user selects food to eat. User has money and food has price and calorie. User spends money choosing food from menu if his/her money is enough to buy, then his/her calorie increases as food's calorie. Also there are three discount types which are read from file as menu file read. Discount file has discount percentages.

**Part 1 (2 point)**

*You are expected to open files in main and send file pointers to functions. Do not forget closing files.*  
 First value is calorie which will be read as integer, second value is price which will be read as double.

Menu.txt	Function Prototype
100 5 150 10 200 20	void read_menu(FILE *fPtr_menu, int *c1, double *p1, int *c2, double *p2, int *c3, double *p3);

Discount file includes discount percentages. If discount type is chosen 1 then you should select 20 and it means 20 % discount. Note that discount type will be asked to user in main part. Than according to discount type you will assign percentage. For example discount type 1 means 20 % , 2 means 10% and 3 means 2 % discount. For now, just read percentages as integer here.

Discount.txt	Function Prototype
20 10 2	void read_discounts(FILE *fPtr_discount, int *d1, int *d2, int *d3);

**Part 2 (1 point)**

You should print output screen below, get choice from user and return user's choice. Assume that user will enter 1,2,3 or 0(to exit from program). Note that printing just 2 digits after decimal point.

Output Screen	Function Prototype
Enter meal: 1 - Soup (100 cal) = 5.00 TL 2 - Beef (150 cal) = 10.00 TL 3 - Cake(200 cal) = 20.00 TL 0 - To exit Enter your choice :	int get_menu_choice(int c1, int c2, int c3, double p1, double p2, double p3);

**Part 3 (2 points)**

*Define macro identifiers TRUE as 1 and FALSE as 0. You are expected to return TRUE or FALSE value.*  
 Order meal function calculates discounted price of food and according to user's money it computes if user can buy meal or not. If user can buy meal then spend discounted price from user's money and increase calorie as meal provides then return TRUE. Otherwise return FALSE.

Function Prototype
int order_meal(double price_of_food, int c_of_food, int d_percentage, double *money, int *cal);

**Part 4 (1 point)**

Implement print\_state function and note that report value while printing.

	Output Screen	Function Prototype
If report equals to zero	Your money is not enough to order that food! Cal: 1000 Money: 10.00	void print_state(int report, int food, double money, int cal);
Otherwise	You ordered cake. Cal: 200 Money: 82.00	

**Part 5 (2 points)**

You are expected to write your main fuction according to functions you have coded before. You should use your functions to finish this part.

1. Open Menu.txt and Discount.txt files to read and call proper functions. Check file pointers if they are NULL return 1 and print error. Do not forget to close files.
2. Get user's money and discount type from console. Note that money will be kept as double and discount type as integer.
3. According to discount type you should determine user's discount percentage. If discount type is 1 then it means first row value, if it is 2 than second row value and if it is 3 than it means third row value. You can use switch case to determine discount percentage here.
4. Code 5, 6 and 7 in a while loop and end loop if user enters 0.
5. Call get\_menu\_choice function. Get its return value.
6. According to user's choice call (you can use switch case here) order\_meal function and get its return value.
7. Call print\_state function to give information to user

Output Screen (1/2)	Output Screen (2/2)
Enter balance:40 Enter discount type:2  Enter meal: 1 - Soup (100 cal) = 5.00 TL 2 - Beef (150 cal) = 10.00 TL 3 - Cake(200 cal) = 20.00 TL 0 - To exit Enter your choice : 3 You ordered cake. Cal: 200 Money: 22.00  Enter meal: 1 - Soup (100 cal) = 5.00 TL 2 - Beef (150 cal) = 10.00 TL 3 - Cake(200 cal) = 20.00 TL 0 - To exit Enter your choice : 1 You ordered soup. Cal: 300 Money: 17.50  Enter meal: 1 - Soup (100 cal) = 5.00 TL 2 - Beef (150 cal) = 10.00 TL 3 - Cake(200 cal) = 20.00 TL 0 - To exit Enter your choice : 2	You ordered beef. Cal: 450 Money: 8.50  Enter meal: 1 - Soup (100 cal) = 5.00 TL 2 - Beef (150 cal) = 10.00 TL 3 - Cake(200 cal) = 20.00 TL 0 - To exit Enter your choice : 3 Your money is not enough to order that food! Cal: 450 Money: 8.50  Enter meal: 1 - Soup (100 cal) = 5.00 TL 2 - Beef (150 cal) = 10.00 TL 3 - Cake(200 cal) = 20.00 TL 0 - To exit Enter your choice : 1 You ordered soup. Cal: 550 Money: 4.00  Enter meal: 1 - Soup (100 cal) = 5.00 TL 2 - Beef (150 cal) = 10.00 TL 3 - Cake(200 cal) = 20.00 TL 0 - To exit Enter your choice : 0