MOHAK SHARMA
25K-3002

PF LAB 4 TASK

Scenario: Pizza Delivery Order System

You are building a simple C program for a pizza shop to take orders and calculate the total cost.

Github link: https://github.com/mohak-sharma-NU/04-PF-Lab

Question 1:

Ask the user to choose a pizza size: 1. Small, 2. Medium, 3. Large. Print the chosen size. If they choose wrong, print “Invalid size.”

Answer

```c
#include<stdio.h>

int askpizzaslice(){

    printf("Enter pizza size: \n1.Small\n2.Medium.\n3.Large.\n");
    int size;
    scanf("%d",&size);
    if(size<=0||size>=4){
        printf("Enter a valid size.");
    }
    else{
        return size;
    }

}

int main(){

    int result = askpizzaslice();
```

Question 2:

A small pizza costs $8. Ask how many pizzas they want. If they want more than one, print ”Check our multi-pizza deals.”; Otherwise, print “Your total is $8.”;

Answer

```c
float askForDeals(float total){//question 2
    printf("How many pizzas do you want?");
    int amount;
    scanf("%d",&amount);
    if(amount>1){
        printf("Check out our Deals for small pizzas:");
        // showdeals(total);
    }else{
        total+=8;
        return total;
    }
}
```

MOHAK SHARMA
25K-3002

PF LAB 4 TASK

Question 3:

Ask how many pizzas they want (1, 2, or 3). 1 pizza costs $8, 2 pizzas cost $15, and 3 pizzas cost $21. Calculate and print the total cost with number of pizza.

Answer

```
float showdeals(float total,int amount){
    //question 3
    if(amount==1){
        total+=8;
        return total;
    }else if(amount==2){
        total+=15;
        return total;
    }else if(amount ==3){
        total+=21;
        return total;
    }
    else
        printf("Enter an integer between 1 and 3 pizzas");
    return total;
}
```

Question 4:

Ask for crust type and add the cost to the total. Print the new total Cost.

1. Regular crust: $0
2. Thin crust: $1
3. Stuffed crust: $2

Answer

```
#include<stdio.h>

float crustType(float total){
    //Question 4
    char crust[10]="";
    printf("Please enter crust type:\n1.Regular (0$)\n2.Thin ($1)\n3.Stuffed ($2)\n");
    int no;
    scanf("%d",&no);
    if(no==1){
        return 0;
    }
    else if(no==2){
        total+=1;
        return total;
    }
    else if(no==3){
        total+=2;
        return total;
    }
    else{
```

PF LAB 4 TASK

```
        printf("Please Enter a valid crust type.");
        return total;
    }

}

int main(){

    int amount;
    float total=0;
    float result = crustType(total);

    printf("Yout total with crust is: %f",result);

}
```

Question 5:

Ask if they want extra cheese (Y/N). If yes, add $1.50 to the total.

Answer

```
#include<stdio.h>

float extraCheese(float total){

    printf("Do you want extra cheese (y/n)? ");
    char a='z';
    scanf("%c",&a);
    if(a=='y'||a=='Y'){
        total+=1.50;
        return total;
    }
    else if(a=='n'||a=='N'){
        return total;
    }
    else
        printf("Please enter Y/y for Yes or N/n for  no.");
    return total;
}

int main(){
    int amount;
    float total=0;
    float result = extraCheese(total);
    printf("Yout total with cheese is: %f",result);
}
```

Question 6:

Between 11 AM and 2 PM, there's a 10% discount. Ask for the current time (0-23). If the time is between 11 and 14, apply the discount. Print the discounted total.

Answer

```
#include<stdio.h>

float timeDiscount(float total){

    printf("What is the time right now (hh.mm, 24hr clock) ?");
    float time=0;
```

PF LAB 4 TASK

```
    scanf("%f",&time);
    if(time>11&&time<14){
        float discount = total*0.10;
        total+=discount;
        return total;
    }
    else{
        return total;
    }
}

int main(){
    int amount;
    float total=23;
    float result = timeDiscount(total);
    printf("Yout total with time discount is: %f",result);
}
```

Question 7:

Students get $2 off. Ask if they have a student ID (Y/N). If yes, subtract $2 from the total. Print the final cost.

Answer

```
#include<stdio.h>

float studentDiscount(float total){

    printf("Are you a student(y/n)? ");
    char a='z';
    scanf("%c",&a);
    if(a=='y'||a=='Y'){
        total-=2;
        return total;
    }
    else if(a=='n'||a=='N'){
        return total;
    }
    else
        printf("Please enter Y/y for Yes or N/n for  no.");
    return total;
}

int main(){

    int amount;
    float total=23;
    float result = studentDiscount(total);

    printf("Yout total with student discount is: %f",result);
}
```

MOHAK SHARMA
25K-3002

PF LAB 4 TASK

Question 8:

If they order 3 pizzas with stuffed crust, print “You get free garlic bread!”;

Answer

```c
#include<stdio.h>

void freeGarlicBread(int amount,int crust){

    if(amount==3&&crust==2){
        printf("You get free Garlic Bread!");
    }
    else{

    }
}

int main(){

    int amount=0,crust=0;
    printf("Enter the amount (1-3) and crust \n0.Regular, \n1.Thin, \n2.Stuffed.\n");

    scanf("%d",&amount);
    scanf("%d",&crust);

    freeGarlicBread(amount,crust);
}
```

Question 9:

If they want delivery, add $3. Ask if it’s delivery or pickup (1. Pickup, 2. Delivery). Calculate the final cost.

Answer

```c
#include<stdio.h>

float askForDelivery(float total){
    printf("Do you want 1.Delivery($3) or 2.Pickup?");
    int choice=0;
    scanf("%d",&choice);
    if(choice==1){
        total+=3;
        return total;
    }else{
        return total;
    }
}

int main(){

    float total = 23;
    float result = askForDelivery(total);

    printf("Your total with delivery is: %f",result);
```

PF LAB 4 TASK

```
    return 0;
}
```

Question 10:

Combine all into one program:

- Ask for size, number of pizzas, crust type, extra cheese, time, student status, and delivery
- option.
- Calculate the total cost step by step.
- Print a receipt with the final amount and any free items.

Answer

```
#include<stdio.h>


int main(){

    int size=0;
    int amount=0;
    float total=0;

    float small=8.00;
    float medium=16.00;
    float large=20;

    //Ask for size:
    printf("Enter pizza size: \n1.Small($8)\n2.Medium.($16) \n3.Large.($20)\n");
    scanf("%d",&size);
    printf("\n");
    if(size<=0||size>=4){
        printf("Enter a valid size.");
    }
    else{
    }

    //number of pizzas
    // printf("How many pizzas do you want (1-3) ?");
    // scanf("%d",&amount);
    // printf("\n");

    switch(size){
        case 1:
            printf("Check out our Deals for small pizzas:\n1.One Small ($8)\n2.Two Small($15)\n3.Three Small
(&21)");
                printf("\nHow many pizzas do you want?");
                scanf("%d",&amount);
                printf("\n");
                if(amount==1){
                    total+=8;
                }else if(amount==2){
                    total+=15;
                }else if(amount ==3){
                    total+=21;
                }
                else{
                    printf("Enter an integer between 1 and 3 pizzas");
                }
        break;
```

PF LAB 4 TASK

```
        case 2:
            total+=16;
            break;
        case 3:
            total+=20;
            break;
        default:
            printf("Please enter a valid pizza size.");
            break;
    }

    float justThepizza = total;

    //show deals

    // if(amount==1){
    //     total+=8;
    // }else if(amount==2){
    //     total+=15;
    // }else if(amount ==3){
    //     total+=21;
    // }
    // else{
    //     printf("Enter an integer between 1 and 3 pizzas");
    // }

    //crust type


    printf("Please enter crust type:\n0.Regular (0$)\n1.Thin ($1)\n2.Stuffed ($2)\n");
    int crust;
    scanf("%d",&crust);
    printf("\n");
    if(crust==0){
    }
    else if(crust==1){
        total+=crust;
    }
    else if(crust==2){
        total+=crust;
    }
    else{
        printf("Please Enter a valid crust type.");

    }

    //extra cheese

    printf("\nDo you want extra cheese (y/n)?");
    char a;
    scanf(" %c",&a);//The space is needed to tell scanf to ignore whitespace
    // printf("\n");
    float cheese=1.50;
    if(a=='y'||a=='Y'){
        total+=cheese;
    }
    else if(a=='n'||a=='N'){
    }
    else{
        printf("\nPlease enter Y/y for Yes or N/n for  no.");
    }

    //time discount
```

PF LAB 4 TASK

```
    printf("\nWhat is the time right now (hh.mm, 24hr clock) ?");
    float time=0;
    scanf("%f",&time);
    float timeDiscount;
    printf("\n");

    if(time>11&&time<14){
        timeDiscount = total*0.10;
        total+=timeDiscount;
    }
    else{
        printf("\nNo discount available at this time.");
    }

    //student discount


    printf("\nAre you a student(y/n)? \n");
    char b='z';
    scanf(" %c",&a);//The space is needed to tell scanf to ignore whitespace
    float studentDiscount =-2.00;
    if(b=='y'||b=='Y'){
        total+=studentDiscount;
    }
    else if(b=='n'||b=='N'){
    }
    else{
        printf("\nPlease enter Y/y for Yes or N/n for  no.");
    }

    // garlic Bread

    if(amount==3&&crust==2){
        printf("\nYou get free Garlic Bread!\n");
    }
    else{

    }
    //delivery

    printf("Do you want 1.Delivery($3) or 2.Pickup?");
    int choice=0;
    scanf("%d",&choice);
    printf("\n");
    float delivery=3;
    if(choice==1){
        total+=delivery;
    }else{
    }
    printf("%f Pizzas\n %f Crust.\n %f Cheese.\n%f Time Discount.\n%f studentDiscount.\n%f
Delivery.",justThepizza,crust,cheese,timeDiscount,studentDiscount,delivery);
    printf("Your Grand total is %f",total);
    return 0;
}
```