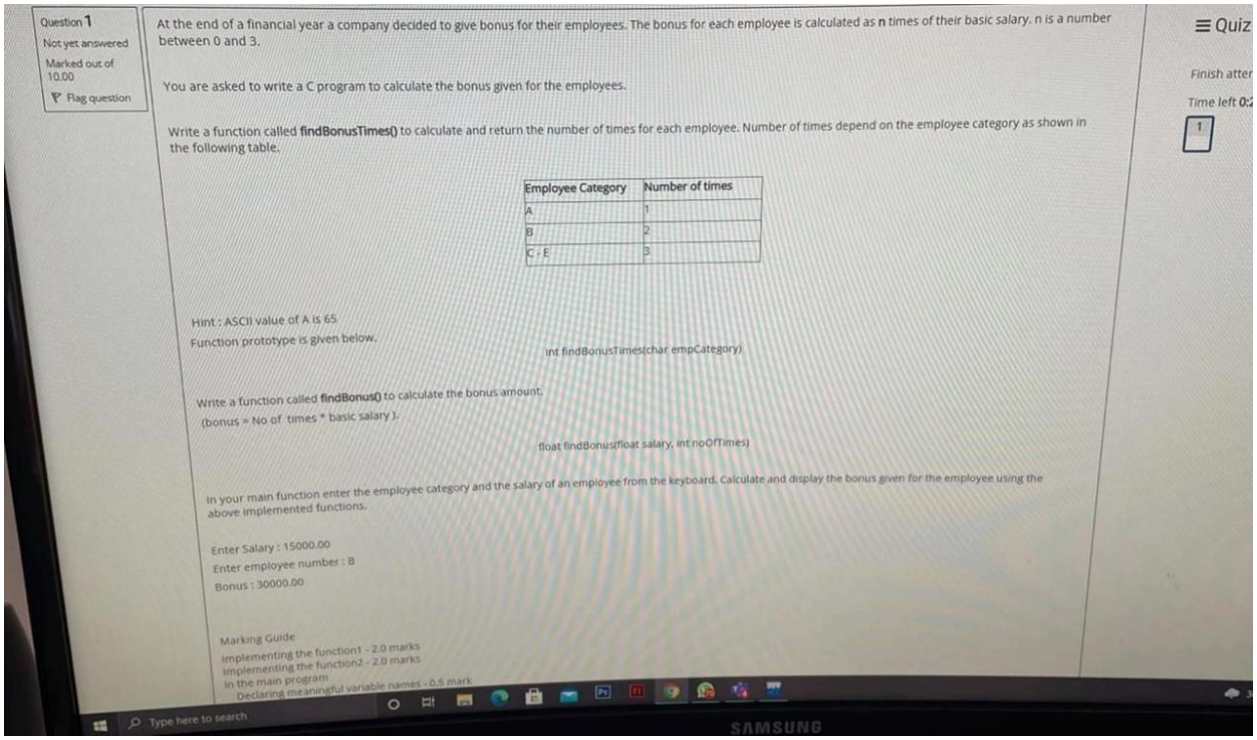
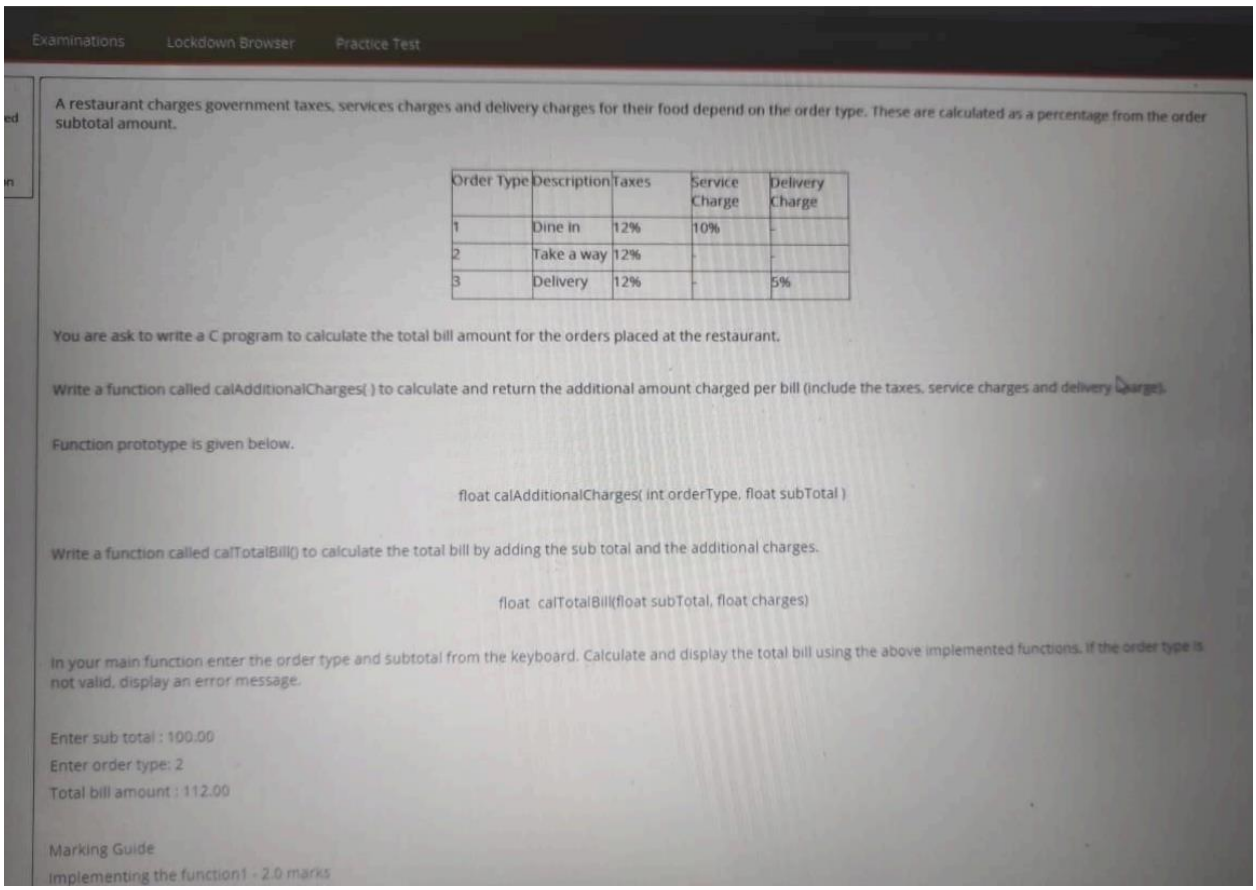



```
#include <stdio.h>

int findBonusTimes( char empCategary);

float findBonus (float salary , int noOfTime);

//function main program execution   int
main (void)
{
        char empCategary ;
        float salary ;
        int noOfTime ;

        printf("Enter Salary : ");
        scanf("%f",&salary );

        printf("Enter Employees categary (A/B/C/D/E):");
        scanf(" %c",&empCategary );

        noOfTime = findBonusTimes( empCategary);

        printf("Bouns : %.2f" , findBonus ( salary , noOfTime) );
```

```
        return 0 ;

} //end function main

int findBonusTimes( char empCategary)
{
        switch (empCategary)
        {
        case 65 :

            return 1 ;
            break ;

        case 66 :
             return 2
break ;

        case 67 ... 69 :
return 3 ;
break ;

default :
            printf("invalid employees Categary!! try again\n");
       }

}

float findBonus (float salary , int noOfTime)
{
        return noOfTime * salary ;
}
```



Examinations Lockdown Browser Practice Test

A restaurant charges government taxes, services charges and delivery charges for their food depend on the order type. These are calculated as a percentage from the order subtotal amount.

Order Type	Description	Taxes	Service Charge	Delivery Charge
1	Dine in	12%	10%	-
2	Take a way	12%	-	-
3	Delivery	12%	-	5%

You are ask to write a C program to calculate the total bill amount for the orders placed at the restaurant.

Write a function called calAdditionalCharges( ) to calculate and return the additional amount charged per bill (include the taxes, service charges and delivery charges).

Function prototype is given below.

float calAdditionalCharges(int orderType, float subTotal)

Write a function called calTotalBill() to calculate the total bill by adding the sub total and the additional charges.

float calTotalBill(float subTotal, float charges)

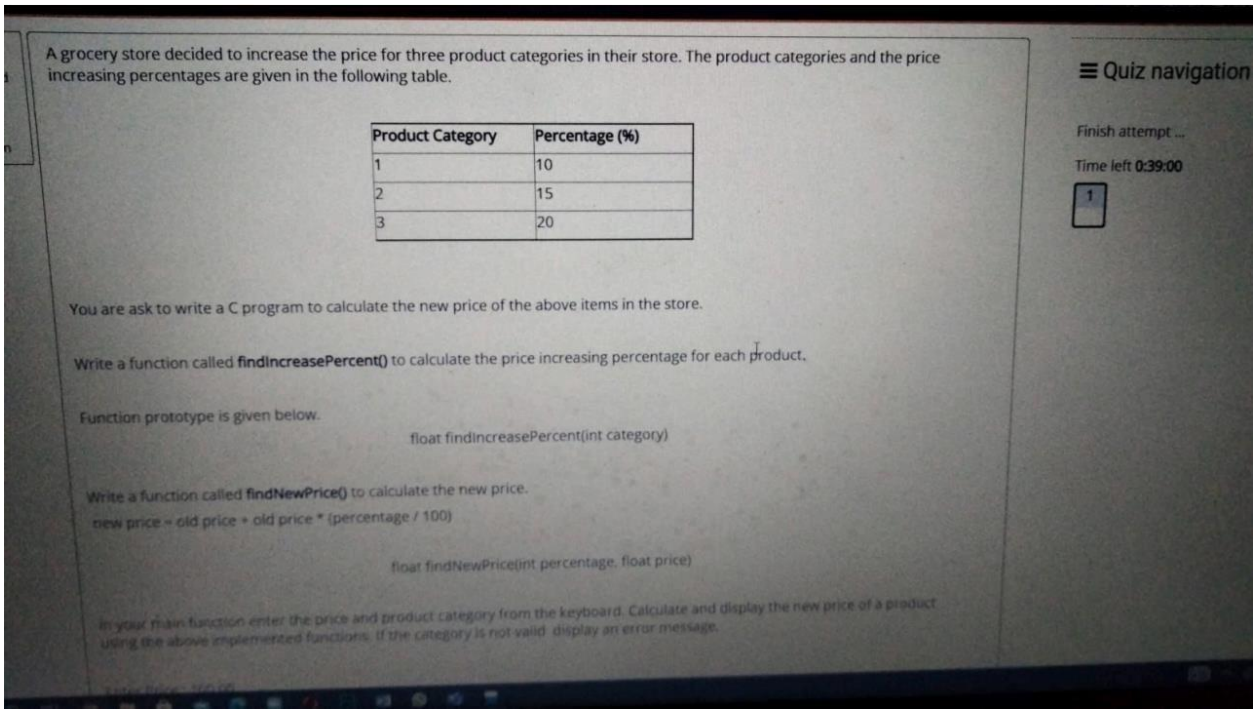
In your main function enter the order type and subtotal from the keyboard. Calculate and display the total bill using the above implemented functions. If the order type is not valid, display an error message.

Enter sub total : 100.00
Enter order type: 2
Total bill amount : 112.00

Marking Guide
Implementing the function1 - 2.0 marks

```
#include <stdio.h>

float calAdditinalCharges (int orderType , float subTotal); float  calTotalBill(float
subTotal , float charges);

//function main program execution   int
main (void)
{
        int orderType ;
        float subTotal , charges ;

        printf("Enter sub total : ");
        scanf("%f", &subTotal);

        printf("Enter Order type  : ");
        scanf("%d", &orderType);

       charges = calAdditinalCharges ( orderType , subTotal);
```

```
        printf("\n Total bill amount : %.2f", calTotalBill( subTotal , charges)) ;

   return 0 ;
} // end function main

float calAdditinalCharges (int orderType , float subTotal)
{
  float charge ;    if(orderType == 1
)
        {
                charge =  (subTotal / 100 * 12.0) + (subTotal / 100 * 10.0) ;
                return charge ;
        }
        else if (orderType == 2 )
        {
                charge =  (subTotal / 100 * 12.0) ;
                return charge ;
        }
        else if (orderType == 3 )
        {
                charge =  (subTotal / 100 * 12.0) + (subTotal / 100 * 5.0) ;
                return charge ;
        }
        else
        {
                printf("Oder type invalid!! Try again\n\n'");
        }
}

float calTotalBill(float subTotal , float charges)
{
        return subTotal + charges ;
}
```



A grocery store decided to increase the price for three product categories in their store. The product categories and the price increasing percentages are given in the following table.

Product Category	Percentage (%)
1	10
2	15
3	20

Quiz navigation

Finish attempt ...

Time left 0:39:00

1

You are ask to write a C program to calculate the new price of the above items in the store.

Write a function called **findIncreasePercent()** to calculate the price increasing percentage for each product.

Function prototype is given below.

float findIncreasePercent(int category)

Write a function called **findNewPrice()** to calculate the new price.

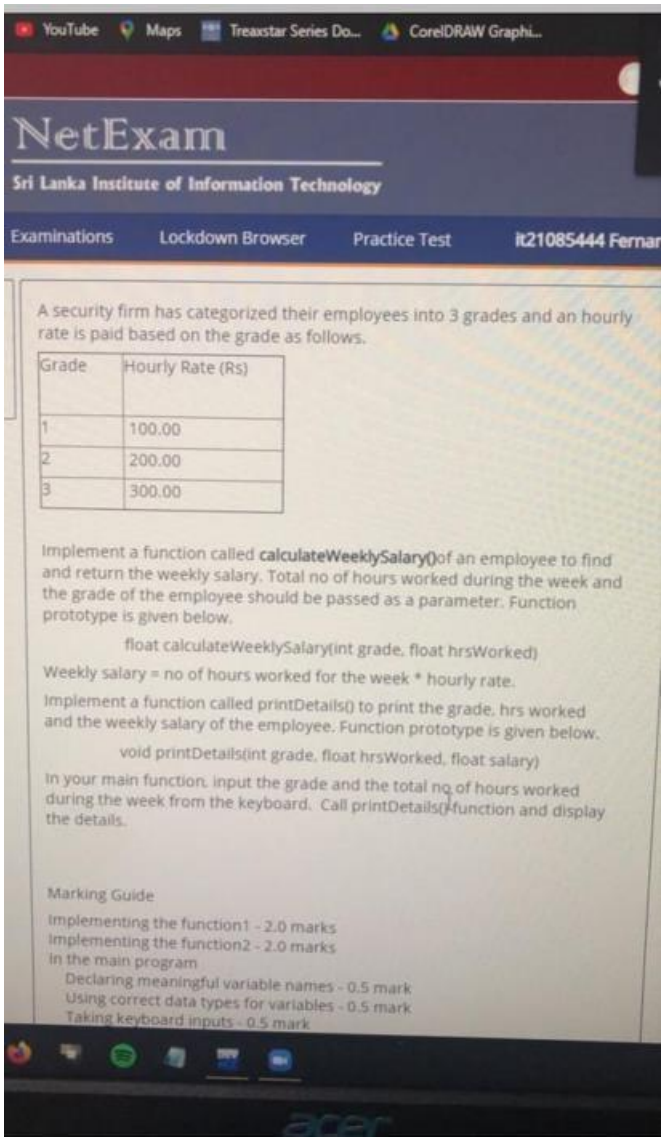
new price = old price + old price * (percentage / 100)

float findNewPrice(int percentage, float price)

In your main function enter the price and product category from the keyboard. Calculate and display the new price of a product using the above implemented functions. If the category is not valid display an error message.

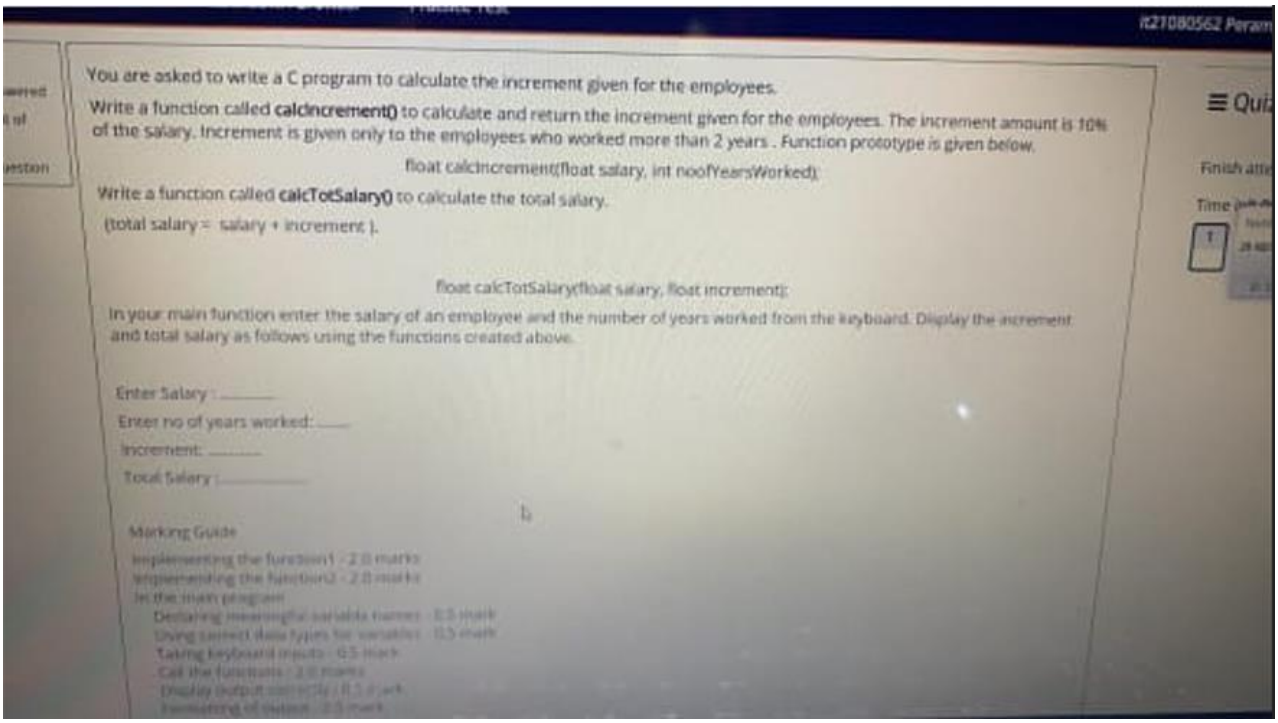
```
#include <stdio.h>

float findincreasePercent (int category); float  findNewPrice
(int percentage , float price);

//function main program execution     int
main ()
{
        int category , percentage ;
        float price ;

        printf("Enter the price : ");
        scanf("%f", &price);

        printf("product category : ");
        scanf("%d", &category);

        percentage = findincreasePercent ( category );

        printf("New price : %.2f", findNewPrice ( percentage , price) );

        return 0 ;
```

```
} //end function main

float findincreasePercent (int category)
{
        switch (category)
        {
        case 1 :
            return  10 ;
             break ;

        case 2 :

            return 15 ;
             break ;

        case 3 :

            return 20 ;
            break ;

        default :
           printf("Category is not valid!! try again\n");
        }
}

float findNewPrice (int percentage , float price)
{
        float n_price ;

        n_price = price + (price * (percentage / 100.0));
        return n_price ;
}
```



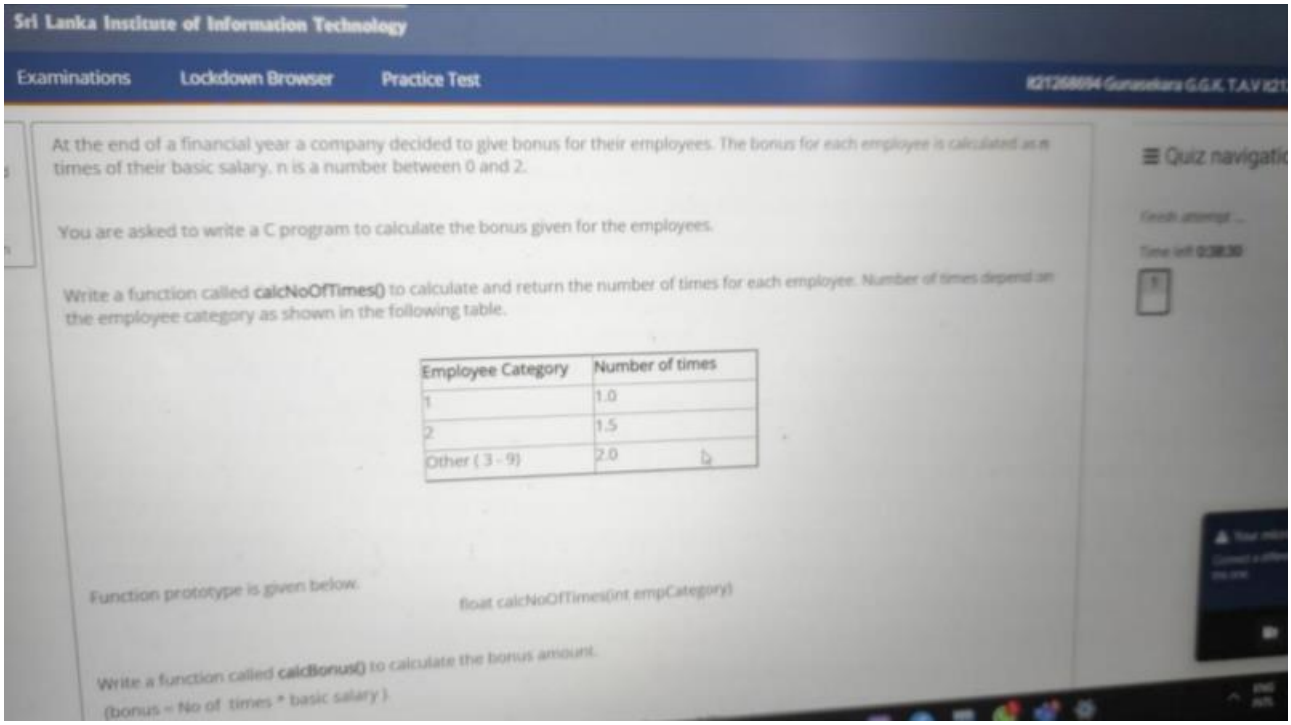

```
#include <stdio.h>

float calculateWeeklySalary (int grade , float hrsWorked); void
printDetails (int grade , float hrsWorked , float salary);

int main (void)
{
        int grade ;         float
hrsWorked , salary ;

 printf("Input the grade : ");   scanf("%d",
&grade);
```

```
        printf("Total no of hours worked : ");
        scanf("%f" , &hrsWorked );

        salary = calculateWeeklySalary ( grade , hrsWorked);

        printDetails ( grade , hrsWorked , salary);

        return 0 ;
}

float calculateWeeklySalary (int grade , float hrsWorked)
{
        float WeeklySalary ;

        switch (grade)
        {
            case 1 :
                return hrsWorked * 100.00 ;
                break ;

            case 2 :
                return hrsWorked * 200.00 ;
                break ;

            case 3 :
                return hrsWorked * 300.00 ;
                break ;

          default :
                printf("Invalid grade!! try again\n");

        }
}

void printDetails (int grade , float hrsWorked , float salary)
{
        printf( "\n grade : %d \n ", grade);
        printf("no of hours worked : %.2f \n ", hrsWorked );
        printf( "Weekly salary : %.2f/=", salary );
}
```



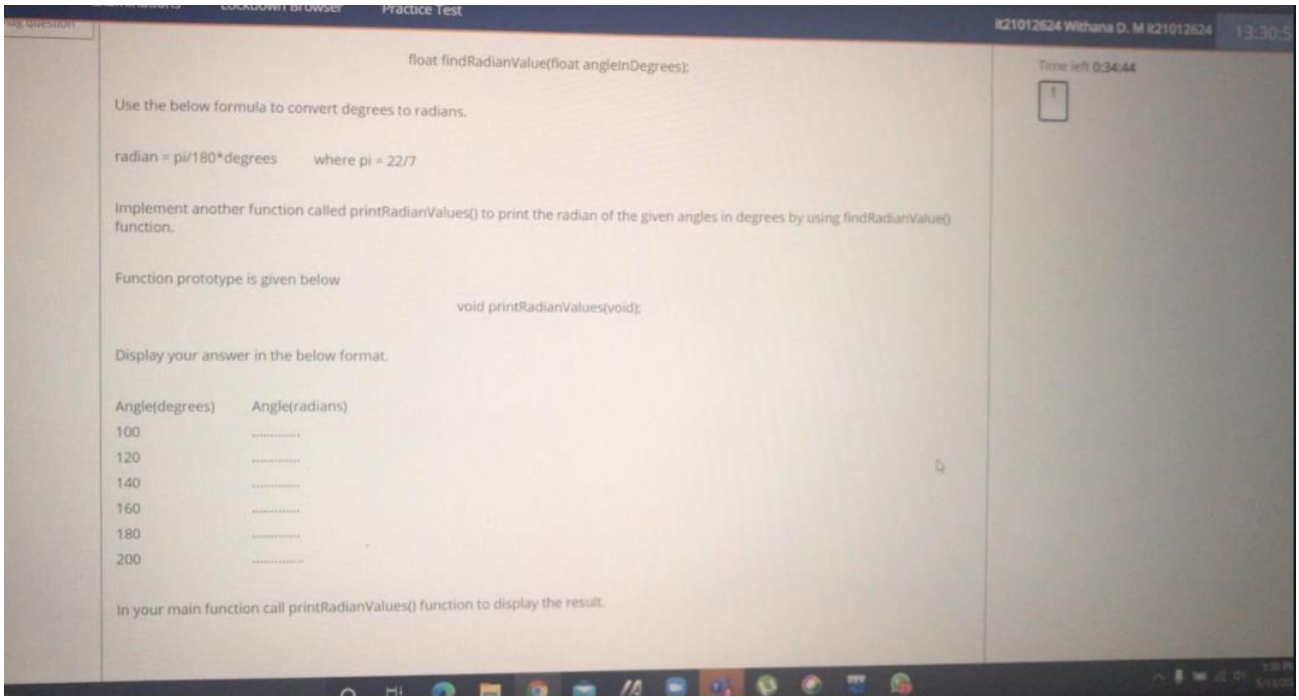

```
#include <stdio.h>

float calcIncrement ( float salary , int noOfYearWorked ); float
calcTotalSalary ( float salary , float increment );

int main (void)
{
        float salary , increment , t_salalry ;
        int noOfYearWorked ;

        printf("Enter salary : ");
        scanf("%f",&salary);


        printf("Enter no of years worked :");
        scanf("%d", &noOfYearWorked);

        increment = calcIncrement ( salary , noOfYearWorked );

        t_salalry = calcTotalSalary ( salary , increment );
```

```
        printf("Increment : %.2f/=\n" , increment);
        printf("Total salary : %.2f/=" , t_salalry);
        return 0 ;
}
float calcIncrement ( float salary , int noOfYearWorked )
{
        if (noOfYearWorked > 2)
        {
             return salary / 100 * 10.0 ;
        }
        else
        {
            return 0 ;
        }
}

float calcTotalSalary ( float salary , float increment )
{
        return salary + increment ;
}
```



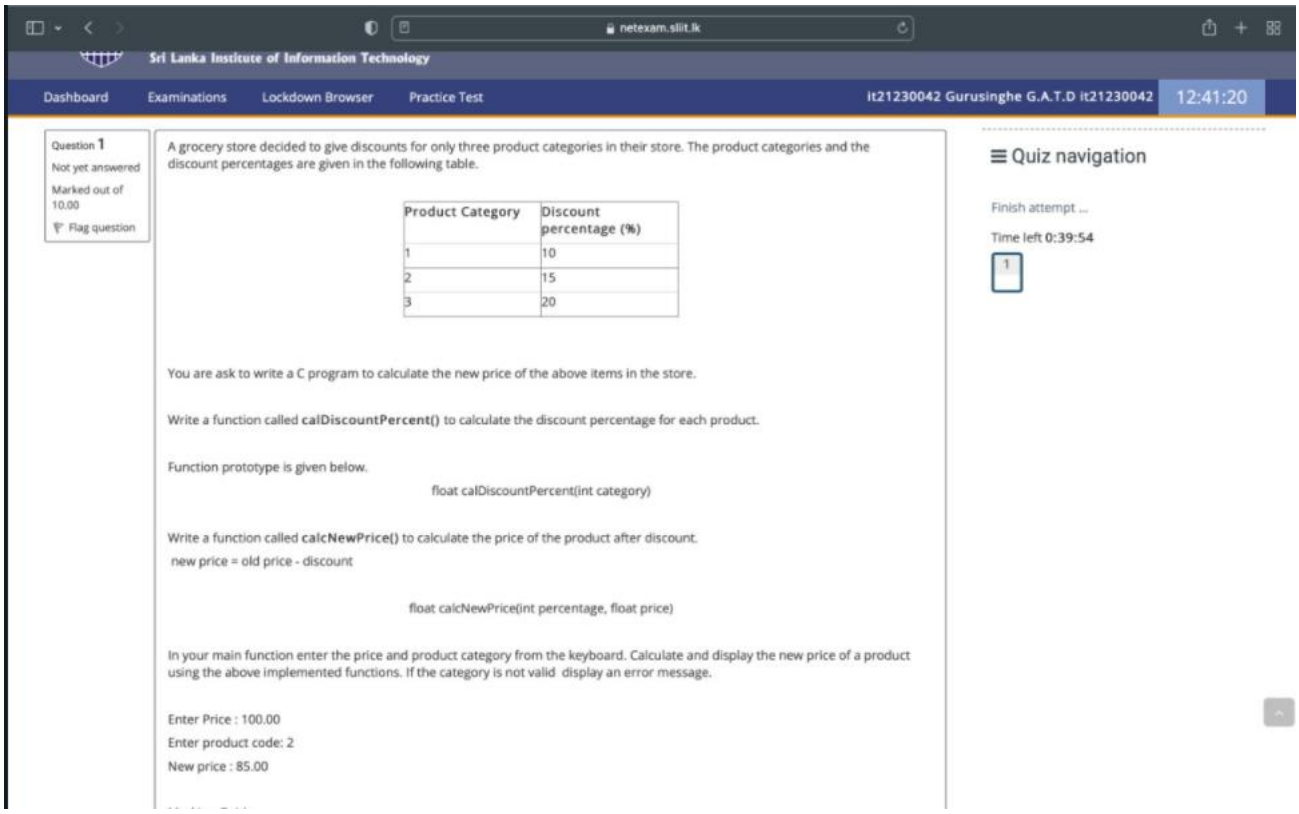
```
#include <stdio.h>

float calcNoOfTimes (int empCategory);
float calcBonus (float salary , float noOfTimes);

//function main program execution
int main (void)
{
        int empCategory ;
        float salary , noOfTimes  ;

        printf("Enter Salary : ");
        scanf("%f",&salary );

        printf("Enter Empolyee catogory :");
        scanf("%d",&empCategory );

        noOfTimes = calcNoOfTimes ( empCategory);

        printf("Bouns : %.2f/=" , calcBonus ( salary , noOfTimes) );
        return 0 ;
} //end function main

float calcNoOfTimes (int empCategory)
{
        switch (empCategory)
        {
            case 1 :
                return 1.0 ;
                break ;

            case 2 :
                return 1.5 ;
                break ;

            case 3 ... 9 :
                return 2.0 ;
                break ;

            default :
                printf("invalid ampolyee Category!! try again\n");
```

```
}
}

float calcBonus (float salary , float noOfTimes)
{
        return noOfTimes * salary ;
}
```



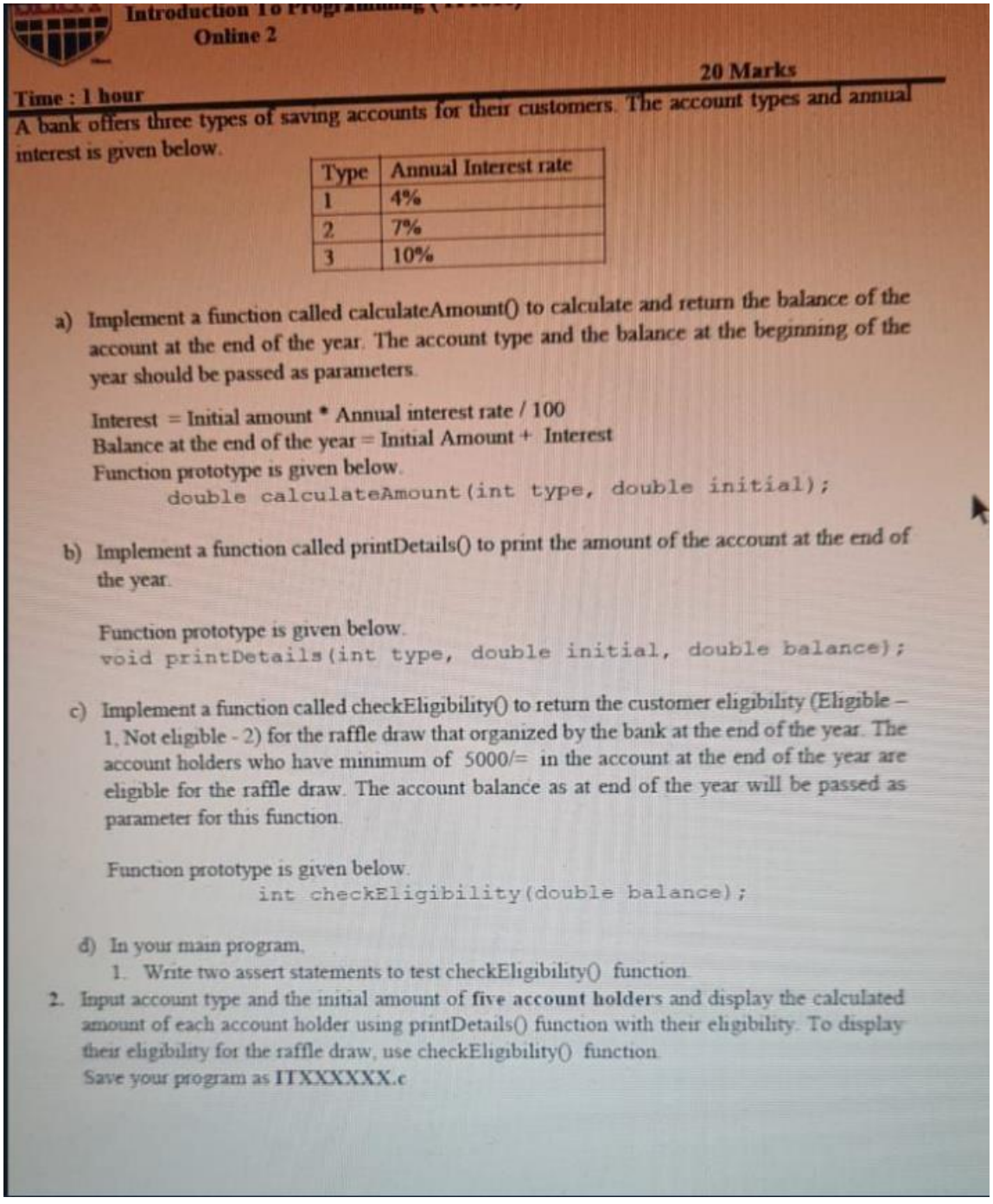

```
#include <stdio.h>
#include <math.h>

float findRadianValues (float angleInDegrees);
void printRaianValues (void);
int main (void)
{
        printRaianValues ();
        return 0 ;
}
float findRadianValues (float angleInDegrees)
{
        return (M_PI / 180) * angleInDegrees ;
}

void printRaianValues (void)
```

```
{
        int angle = 100 , i ;

        printf("Angle(degrees)\tAngle(radians)\n");

        for (i = 0 ; i < 6 ; i++)
        {
        printf("%d\t\t %.2f\n" , angle , findRadianValues (angle) );
        angle += 20 ;
        }
}
```




```
#include <stdio.h>

float calDiscount (int category);
float calNewPrice (int percentage , float price);

//function main program execution
int main ()
{
        int category , percentage ;
        float price ;
```

```
	printf("Enter the price : ");
	scanf("%f", &price);

	printf("Enter product code : ");
	scanf("%d", &category);

	percentage = calDiscount ( category );

	printf("New price : %.2f", calNewPrice ( percentage , price) );

	return 0 ;
} //end function main

float calDiscount (int category)
{
	switch (category)
	{
		case 1 :
		    return 10 ;
		    break ;

		case 2 :
		    return 15 ;
		    break ;

		case 3 :
		    return 20 ;
		    break ;

	default :
		    printf("Category is not valid!! try again\n");
	}
}

float calNewPrice (int percentage , float price)
{
	float n_price ;

	n_price = price - (price * (percentage / 100.0));
	return n_price ;
}
```



Introduction To Programming
Online 2

Time : 1 hour

20 Marks

A bank offers three types of saving accounts for their customers. The account types and annual interest is given below.

Type	Annual Interest rate
1	4%
2	7%
3	10%

a) Implement a function called calculateAmount() to calculate and return the balance of the account at the end of the year. The account type and the balance at the beginning of the year should be passed as parameters.

Interest = Initial amount * Annual interest rate / 100
Balance at the end of the year = Initial Amount + Interest
Function prototype is given below.

```
double calculateAmount(int type, double initial);
```

b) Implement a function called printDetails() to print the amount of the account at the end of the year.

Function prototype is given below.

```
void printDetails(int type, double initial, double balance);
```

c) Implement a function called checkEligibility() to return the customer eligibility (Eligible – 1, Not eligible - 2) for the raffle draw that organized by the bank at the end of the year. The account holders who have minimum of 5000/= in the account at the end of the year are eligible for the raffle draw. The account balance as at end of the year will be passed as parameter for this function.

Function prototype is given below.

```
int checkEligibility(double balance);
```

d) In your main program,
1. Write two assert statements to test checkEligibility() function.
2. Input account type and the initial amount of **five account holders** and display the calculated amount of each account holder using printDetails() function with their eligibility. To display their eligibility for the raffle draw, use checkEligibility() function.

Save your program as ITXXXXXX.c

```
#include <stdio.h>
#include <assert.h>

double calculateAmount ( int type , double initial);
```

```
void printfdetails(int type , double inial , double balance);
int chackEligibility (double balance);

int main (void)
{
	int type , i  ;
	double initial , balance = 0;

	while (i < 5)
	{
	      printf("Enter account %d type :" , i+1);
	      scanf("%d", &type);

	      printf("Initial amount : ");
	      scanf("%lf", &initial);

	     balance = calculateAmount ( type , initial);

	    if (balance == -1)
	    {
	         printf("\ninvalied account type :\n\n");
	         continue ;
	     }

	assert(chackEligibility (6000) == 1);
	assert(chackEligibility (2000) == 2);

	printfdetails(type ,  initial ,  balance);

	i++ ;
	}

	return 0 ;
}

double calculateAmount ( int type , double initial)
{
	double interest , balance ;

switch (type)
{
	case 1 :
```

```
                interest = initial * 4 / 100;
                balance = initial + interest ;
                return balance ;
                break ;

        case 2 :
                interest = initial * 7 / 100;
                balance = initial + interest ;
                return balance ;
                break ;

        case 3 :
                interest = initial * 10 / 100;
                balance = initial + interest ;
                return balance ;
                break ;

        default :
                return -1 ;
        }

}
void printfdetails(int type , double initial , double balance)
{
        int eligibility ;

        eligibility = chackEligibility ( balance);

        printf("\nAccount type :%d\n", type);
        printf("Initial amount :%.2f\n", initial);
        printf("amount of the account :%.2f\n", balance);

        if (eligibility == 1)
        {
             printf("eligibility for the reffle drow\n\n");
        }
        else
        {
            printf("not eligibility for the reffle drow\n\n");
        }
}
```

```
int chackEligibility (double balance)
{
        if (balance >= 5000)
        {
            return 1 ;
        }
        else
        {
            return 2 ;
        }
}
```

A hotel has decided to offer 10% discounts from hotel charge for the wedding packages during the festive season. Discount is valid only if the no of guests is more than 200.

(Hotel charge = no of guests * charge per guest)

You are asked to write a C program to calculate the discount given for wedding packages.

Write a function called **getDiscountPrice()** to get the discount for the wedding package by considering no of guests. Function should return the discount. Function prototype is given below.

float getDiscountPrice(int noOfGuests, float chargePerGuest);

Write a function called getAmount() to calculate and return the amount to be paid. Function prototype is given below.

Amount to be paid = (no of guests * charge per guest)- discount

float getAmount(int noOfGuests, float chargePerGuest, float discount);

In your main function read the number of guests and the charge per guest from the keyboard and display the discount and the amount to be paid for the wedding package using the functions created above in the following format.

Enter no of guests: .....

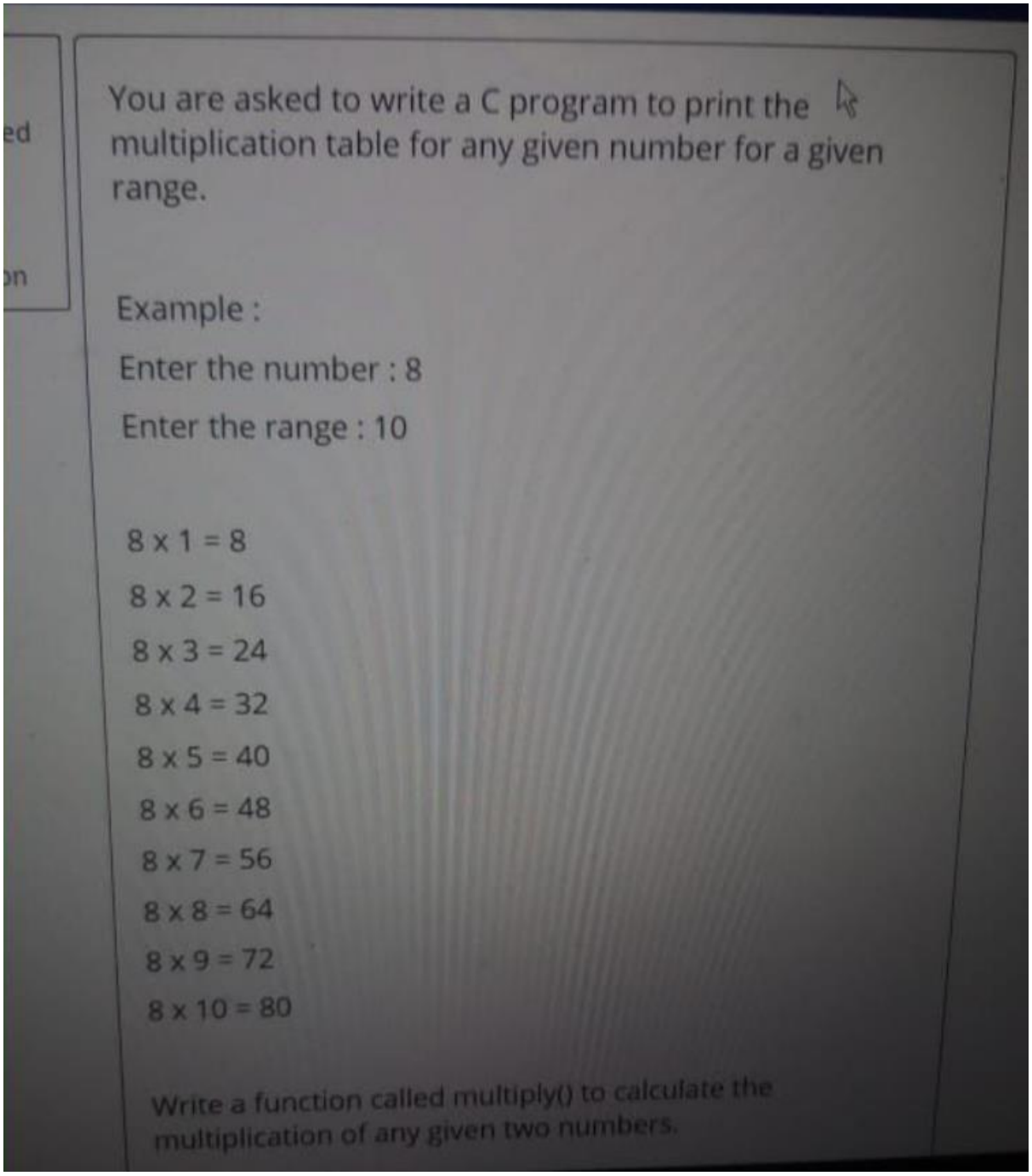
Enter charge per guest: .....

Discount: .....

Amount to be paid: .....

```
#include <stdio.h>

float getDiscountPrice (int noOfGuest , float chargePerGuest) ;
float getAmount (int noOfGuest , float chargePerGuest , float discount );

int main (void)
{
        int noOfGuest ;
        float chargePerGuest , discount  ;

        printf("Enter no of guest :");
        scanf("%d" , &noOfGuest);
```

```
        printf("Enter charge per guest :");
        scanf("%f" , &chargePerGuest);

        discount = getDiscountPrice ( noOfGuest , chargePerGuest);

        printf("Discount : %.2f\n" , discount);
        printf("Amount to be paid : %.2f" , getAmount ( noOfGuest ,
chargePerGuest , discount ) );

        return 0 ;
}

float getDiscountPrice (int noOfGuest , float chargePerGuest)
{
        int discount ;

        if (noOfGuest > 200)
        {
                discount = (noOfGuest * chargePerGuest) /100 * 10.0 ;
                return discount ;
        }
        else
        {
                return 0.00 ;
        }
}

float getAmount (int noOfGuest , float chargePerGuest , float discount )
{
        int amount ;

        amount = (noOfGuest * chargePerGuest) - discount ;
        return amount ;
}
```




```
#include <stdio.h>

void multiply (int number , int range);

int main (void)
{
        int number , range ;
```

```
        printf("Enter number : ");
        scanf("%d" , &number);

        printf("Enter the range : ");
        scanf("%d" , &range);

        multiply ( number ,  range);

        return 0 ;
}

void multiply (int number , int range)
{
        int i ;

        puts(" ");
        for (i = 1 ; i <= range ; i++)
        {
                printf("%d x %d = %d\n" , number , i , number * i);
        }
}
```