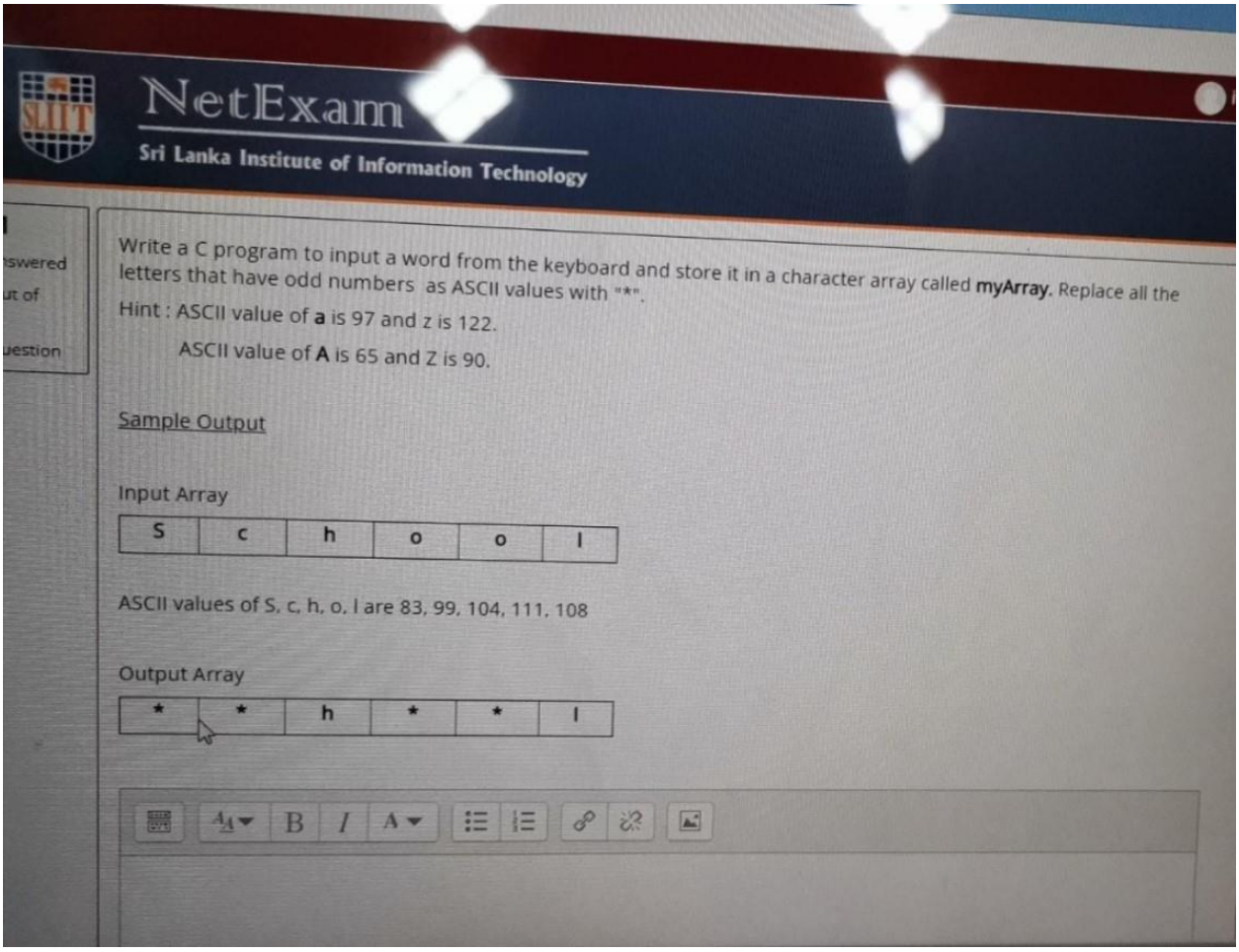
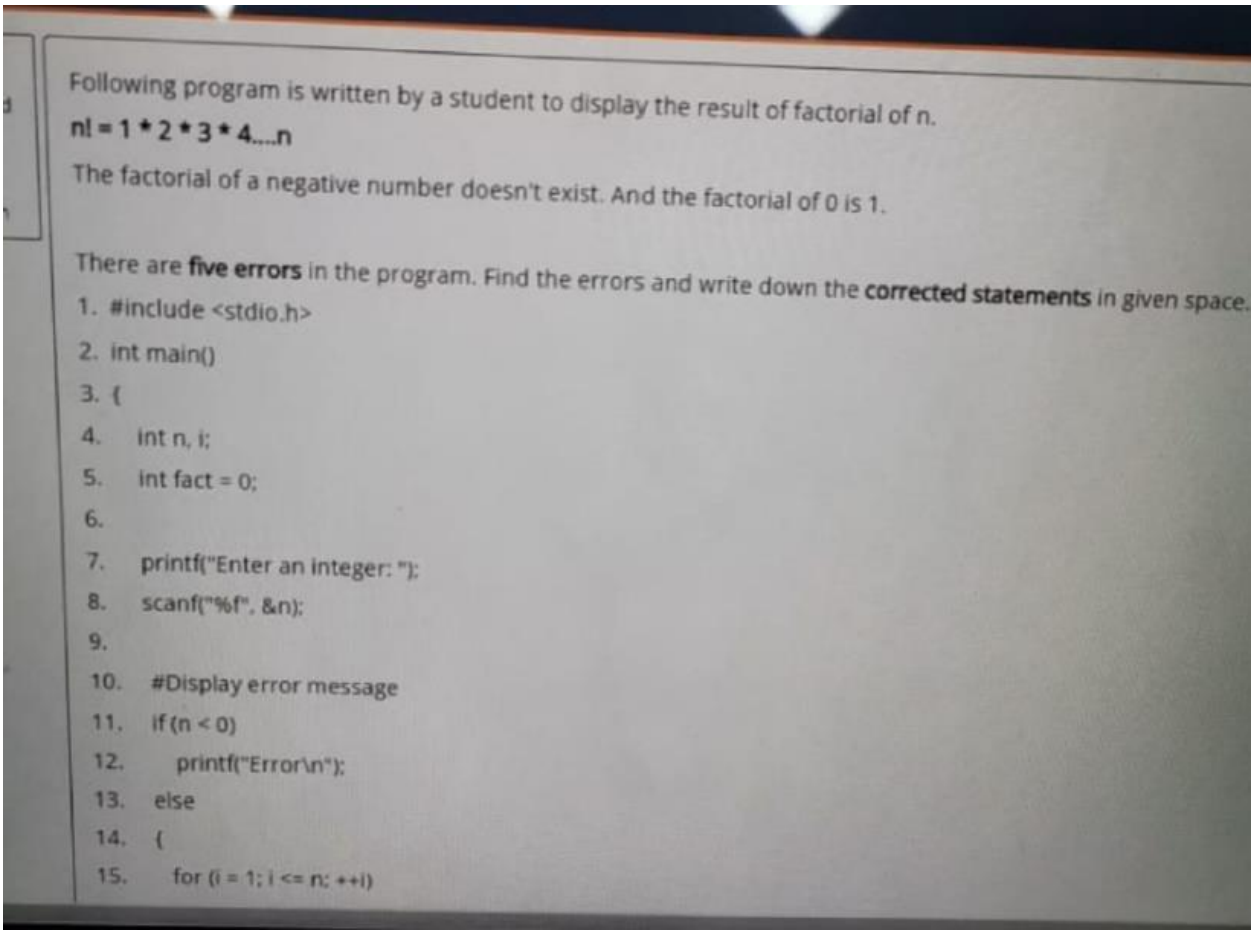


Question 1

```
#include <stdio.h>

int main(void)
{
   int i ;
   int upper = 0;
   char myArray[100];

   printf("input word : ");
   scanf("%s" , myArray);

   for(i=0; myArray[i]!= '\0'; i++){

       if(myArray[i] % 2 == 0)
       {
         printf("%c\t" , myArray[i]);
       }
```

```
        else
        {
            printf("*\t");
        }
    }
    return 0;
}
```



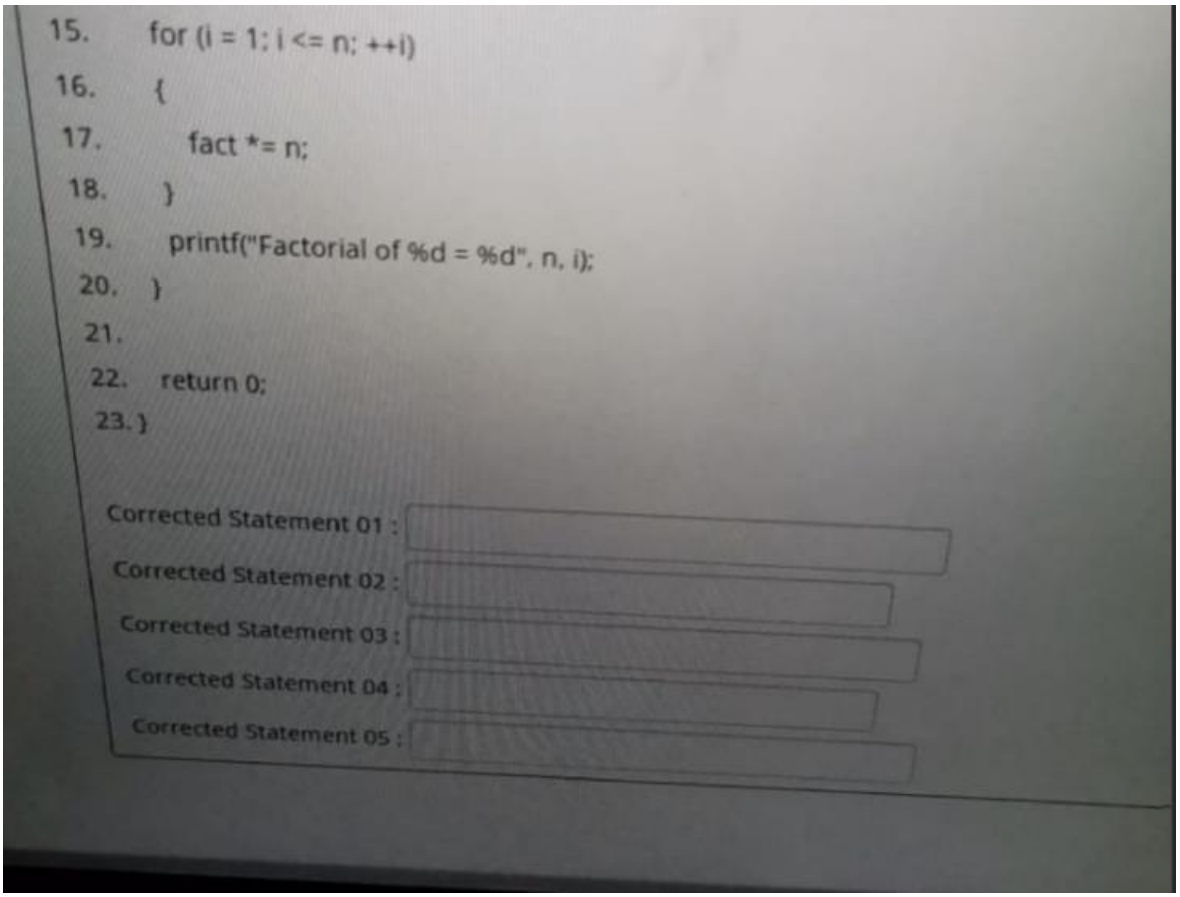
Following program is written by a student to display the result of factorial of n.

n! = 1 * 2 * 3 * 4....n

The factorial of a negative number doesn't exist. And the factorial of 0 is 1.

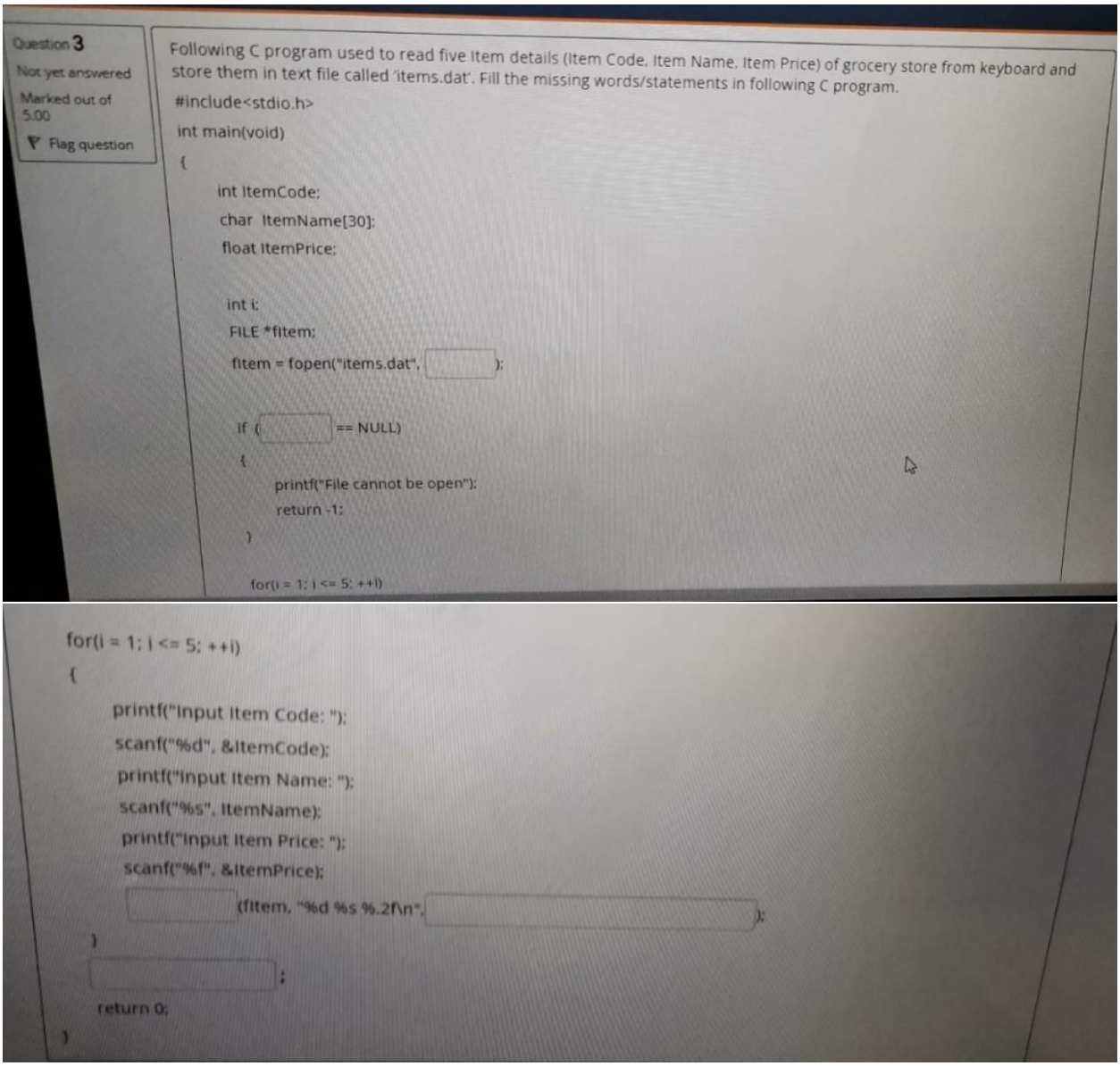
There are **five errors** in the program. Find the errors and write down the **corrected statements** in given space.

```
1.  #include <stdio.h>
2.  int main()
3.  {
4.      int n, i;
5.      int fact = 0;
6.
7.      printf("Enter an integer: ");
8.      scanf("%f", &n);
9.
10.     #Display error message
11.     if (n < 0)
12.         printf("Error\n");
13.     else
14.     {
15.         for (i = 1; i <= n; ++i)
```



Question 2

01 :- scanf(“%d” , &n) ;
02 :- fact = 1 ;
03 :- //display error massage
04 :- fact *= I ;
05 :- printf(“Factorial od %d = %d “ , n , fact);



Question 3

Not yet answered

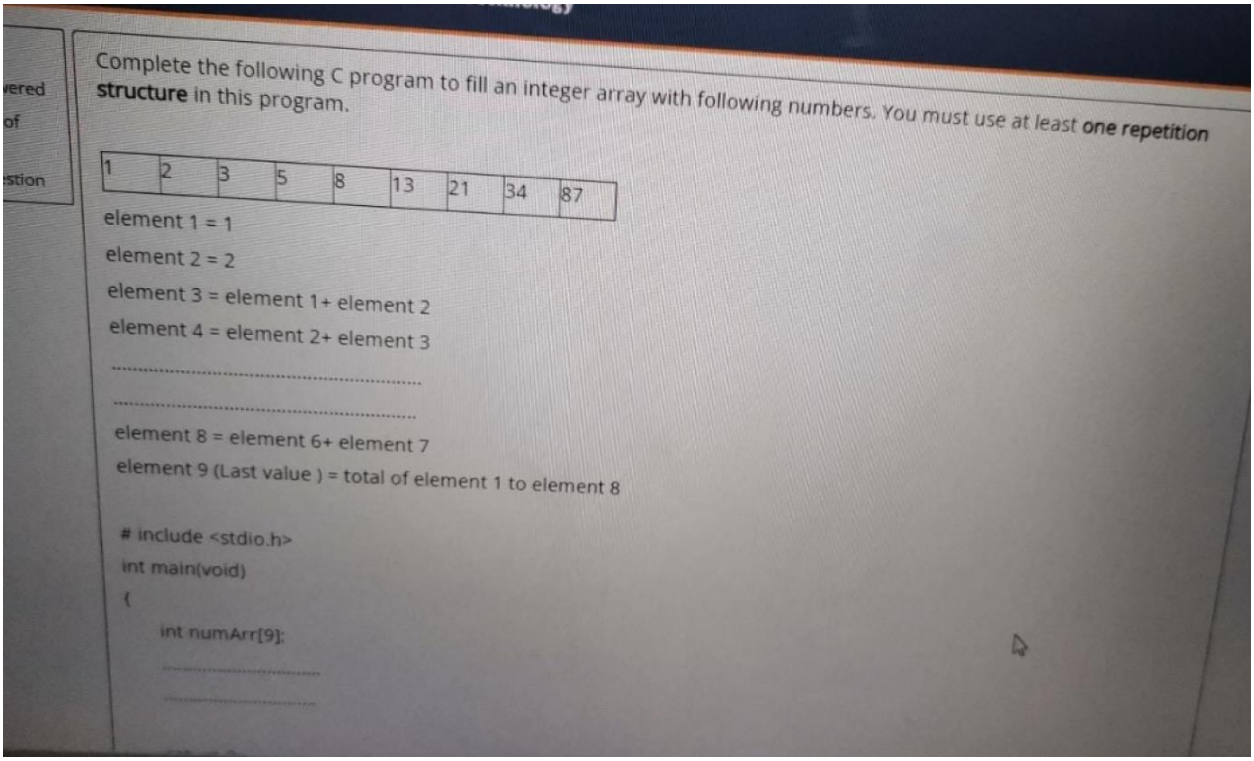
Marked out of 5.00

Flag question

Following C program used to read five Item details (Item Code, Item Name, Item Price) of grocery store from keyboard and store them in text file called 'items.dat'. Fill the missing words/statements in following C program.

```
#include<stdio.h>
int main(void)
{
    int ItemCode;
    char  ItemName[30];
    float ItemPrice;

    int i;
    FILE *fItem;
    fItem = fopen("items.dat", [ ]);

    if ([ ] == NULL)
    {
        printf("File cannot be open");
        return -1;
    }

    for(i = 1; i <= 5; ++i)
    {
        printf("Input Item Code: ");
        scanf("%d", &ItemCode);
        printf("Input Item Name: ");
        scanf("%s", ItemName);
        printf("Input Item Price: ");
        scanf("%f", &ItemPrice);
        [ ](fItem, "%d %s %.2f\n", [ ]);
    }
    [ ];
    return 0;
}
```

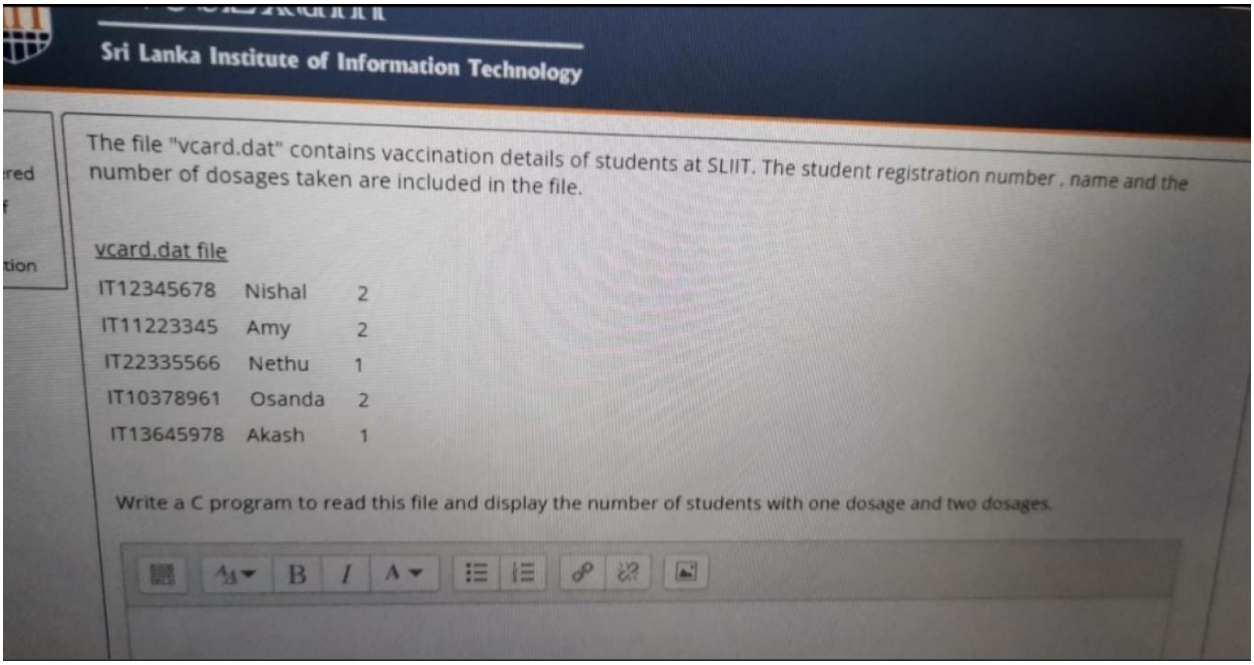
01 :- "w+"
02 :- fItem
03 :- fItem
04 :- fprintf
05 :- ItemCode , ItemName , ItemPrice
06 :- fclose (fItem)



Question 4

```
#include <stdio.h>

//function main program execution
int main (void )
{
        int i , sum ;
        int numArr[9] ;

        numArr[0] = 1 ;
        numArr[1] = 2 ;
        sum = numArr[0] + numArr[1] ;

        printf("%d  %d  " , numArr[0] , numArr[1]);

        for (i = 2 ; i < 8 ; i++)
        {
                numArr[i] = numArr[i-2] + numArr[i-1] ;
                printf("%d  " , numArr[i]);
                sum += numArr[i] ;
        }
        numArr[8] = sum ;
        printf("%d" , numArr[8] );
```

```
    return 0 ;

} //end function main
```

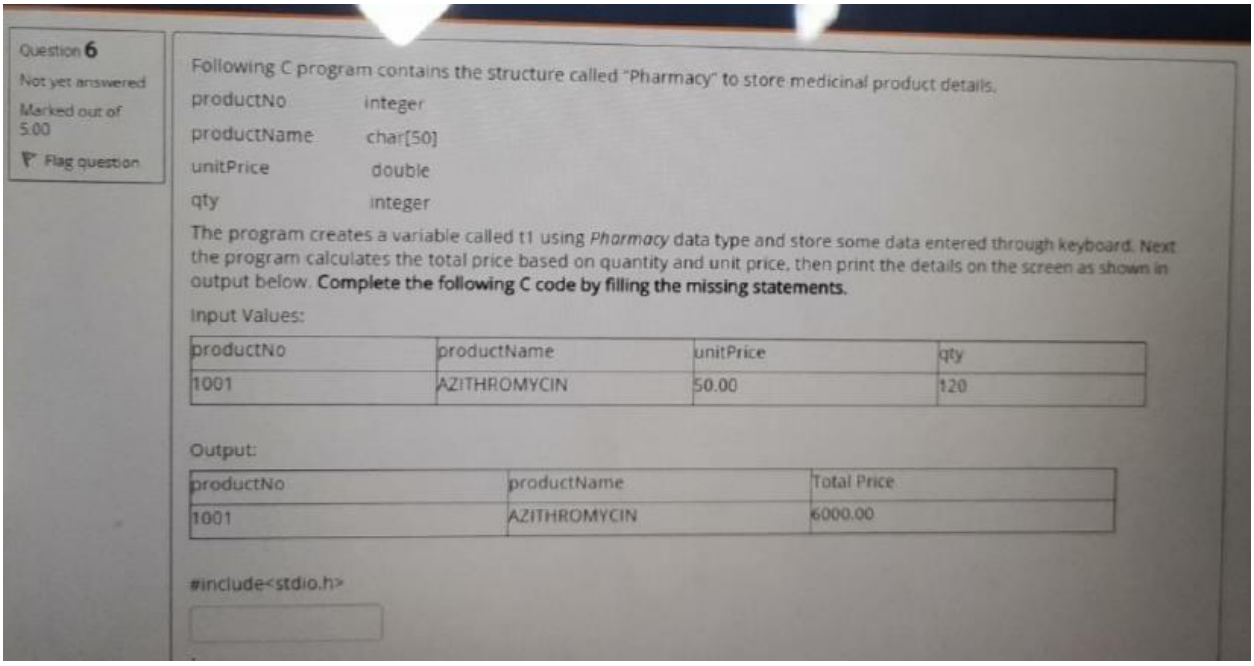


Question 5

Before the programming Create a vcard file and store the Question's details

```
#include <stdio.h>

int main (void)
{
    int num ;
    int dos1 = 0 , dos2 = 0 ;
    FILE *vcard ;
    vcard = fopen("vcard.dat" , "r+");

    if (vcard == NULL)
    {
        printf("Flle cannot open");
        return -1 ;
    }

    fscanf(vcard , "%*s %*s %d" , &num);

    while (!feof (vcard))
    {
```

```
            if (num == 1)
            {
                    dos1 += 1 ;
            }
            else if (num == 2)
            {
                    dos2 += 1 ;
            }
            fscanf(vcard , "%*s %*s %d" , &num);
    }

    printf("number of students with one dosages = %d\n" , dos1);
    printf("number of students with two dosages = %d\n" , dos2);

    fclose(vcard);
    return 0 ;
}
```



Question 6

Not yet answered

Marked out of 5.00

Flag question

Following C program contains the structure called "Pharmacy" to store medicinal product details.

productNo	integer
productName	char[50]
unitPrice	double
qty	integer

The program creates a variable called t1 using *Pharmacy* data type and store some data entered through keyboard. Next the program calculates the total price based on quantity and unit price, then print the details on the screen as shown in output below. **Complete the following C code by filling the missing statements.**

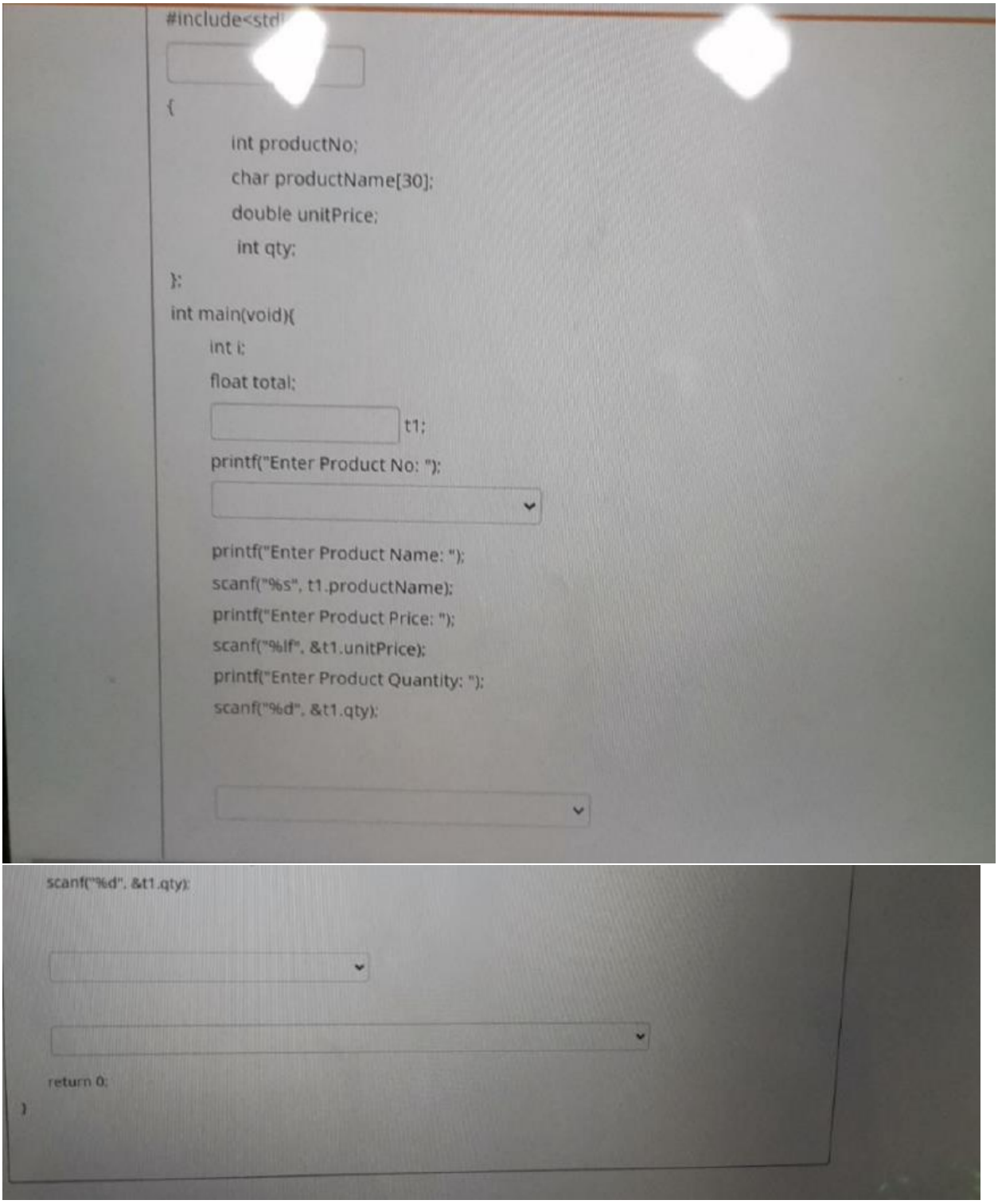
Input Values:

productNo	productName	unitPrice	qty
1001	AZITHROMYCIN	50.00	120

Output:

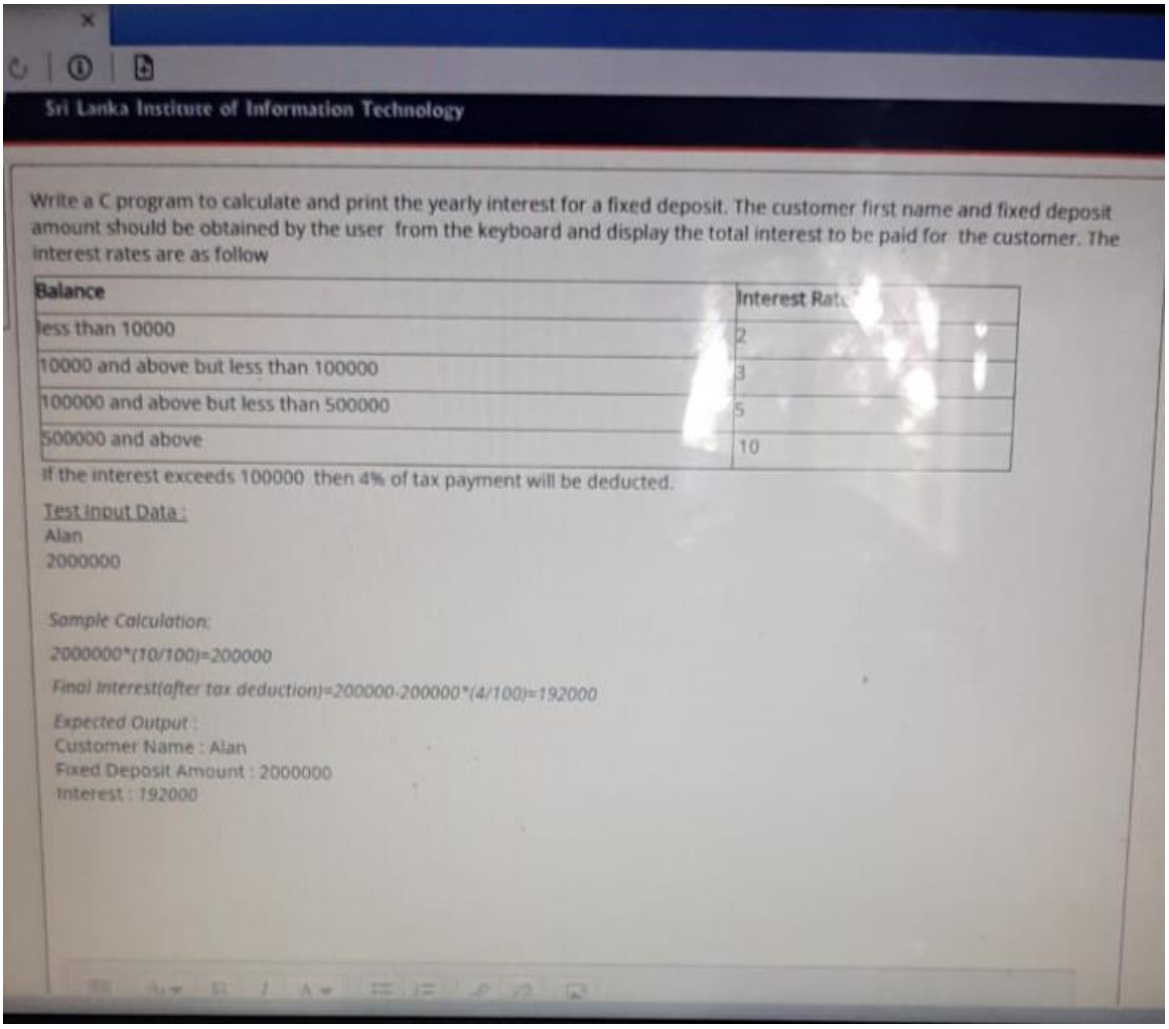
productNo	productName	Total Price
1001	AZITHROMYCIN	6000.00

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


#include<std
{
int productNo;
char productName[30];
double unitPrice;
int qty;
};
int main(void){
int i;
float total;
t1;
printf("Enter Product No: ");
printf("Enter Product Name: ");
scanf("%s", t1.productName);
printf("Enter Product Price: ");
scanf("%lf", &t1.unitPrice);
printf("Enter Product Quantity: ");
scanf("%d", &t1.qty);
scanf("%d", &t1.qty);
return 0;
}

Question 6

01 :- struct Pharmacy
02 :- struct Pharmacy
03 :- scanf(" %d " , &t1.productNo) ;
04 :- total = t1.unitPrice * t1.qty ;
05 :- printf(" %d \t %s \t %.2f " , t1.productNo , t1.productName , total) ;


Sri Lanka Institute of Information Technology

Write a C program to calculate and print the yearly interest for a fixed deposit. The customer first name and fixed deposit amount should be obtained by the user from the keyboard and display the total interest to be paid for the customer. The interest rates are as follow

Balance	Interest Rate
less than 10000	2
10000 and above but less than 100000	3
100000 and above but less than 500000	5
500000 and above	10

If the interest exceeds 100000 then 4% of tax payment will be deducted.

Test Input Data :
Alan
2000000

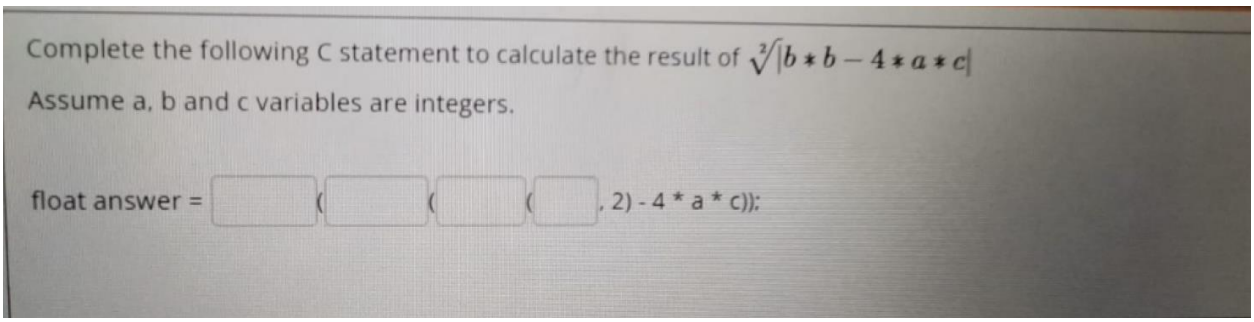
Sample Calculation:
2000000*(10/100)=200000
Final Interest(after tax deduction)=200000-200000*(4/100)=192000

Expected Output :
Customer Name : Alan
Fixed Deposit Amount : 2000000
Interest : 192000

Question 7

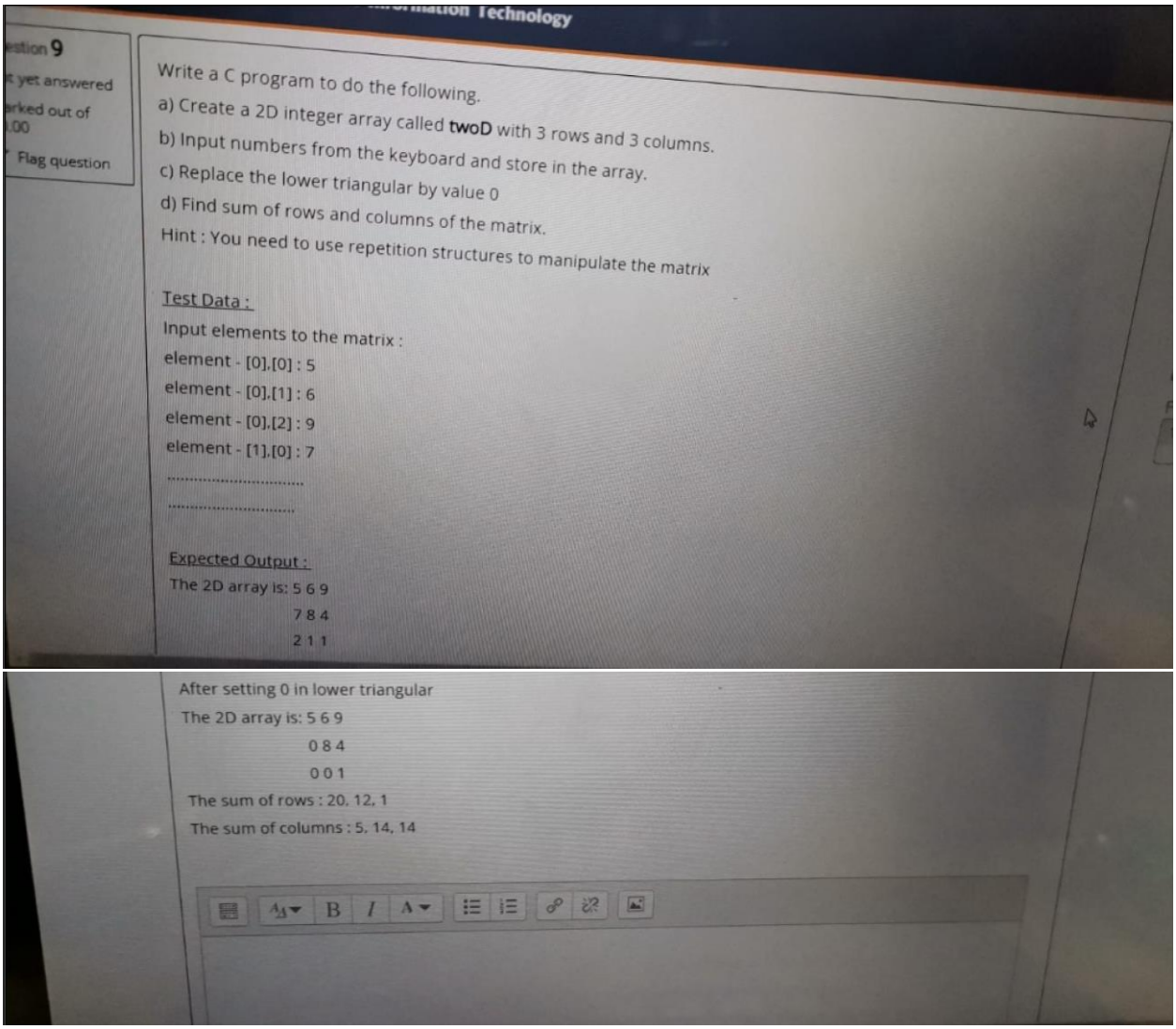
```
#include <stdio.h>

int main()
{
   char name[50];
   int amount , tax ;


   printf("Customer name : ");
   scanf("%s" , name);
```

```
   printf("Fixed Diposit amount :" );
   scanf("%d" , &amount);


   if(amount < 10000)
   {
      tax = amount * (2.0 / 100) ;
   }

   else if(amount >= 10000 && amount < 100000)
   {
      tax = amount * (3.0 / 100) ;
   }

   else if(amount >= 100000 && amount < 500000)
   {
      tax = amount * (5.0 / 100) ;
   }
   else if(amount >= 500000)
   {
      tax = amount * (10.0 / 100) ;
   }

   if (tax > 100000)
   {
      tax = tax - tax * (4.0 / 100) ;
   }

   printf("Interest : %d" , tax);
   return 0;
}
```



Question 8

01 :- sqrt
02 :- fabs
03 :- pow
04 :- b

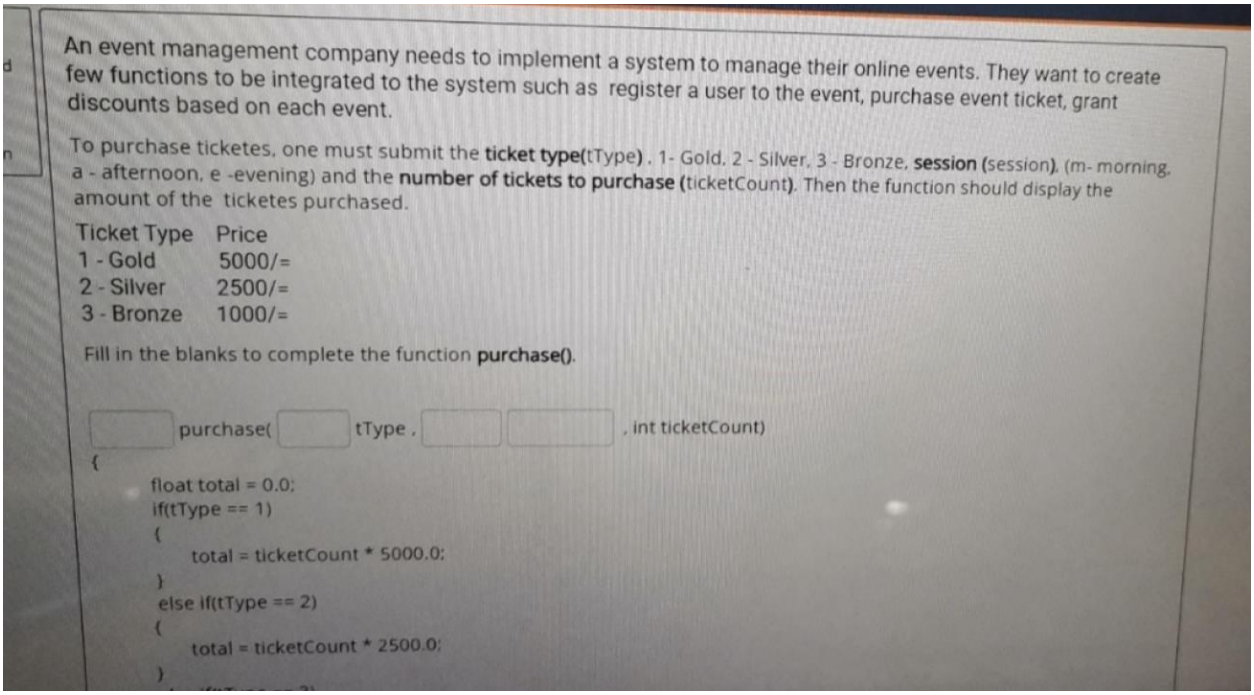


Question 9

```
#include <stdio.h>

int main (void)
{
        int twoD[3][3];
        int i , j ;
        int sum_row[3] = {0} ;
        int sum_columns[3] = {0};
```

```
printf("input element of matrix : \n");


for (i = 0 ; i < 3 ; i++)
{
	for(j = 0 ; j < 3 ; j++)
	{
		printf("element - [%d],[%d] : " , i , i);
		scanf("%d" , &twoD[i][j]);
	}
}

printf("\n2D array is : \n");

for (i = 0 ; i < 3 ; i++)
{
	for (j = 0 ; j < 3 ; j++)
	{
		printf("%d   " , twoD[i][j]);
	}
	puts(" ");
}

printf("\nAfter settinf 0 in lower tringular\n");


printf("\n2D array is : \n");

for (i = 0 ; i < 3 ; i++)
{
	for (j = 0 ; j < 3 ; j++)
	{
		if (i <= j)
		{
			printf("%d  " , twoD[i][j]);
		}
		else
		{
			twoD[i][j] = 0 ;
			printf("%d  " , twoD[i][j]);
		}

	}
	puts(" ");
```

```
        }

        printf("\nThe sum of rows : ");
        for (i = 0 ; i < 3 ; i++)
        {
                for (j = 0 ; j < 3 ; j++)
                {
                        sum_row[i] += twoD[i][j];
                }
                printf("%d " ,sum_row[i] );
        }

        printf("\nThe sum of columns : ");
        for (i = 0 ; i < 3 ; i++)
        {
                for (j = 0 ; j < 3 ; j++)
                {
                        sum_columns[i] += twoD[j][i];
                }
                printf("%d " ,sum_columns[i] );
        }

        return 0 ;
}
```



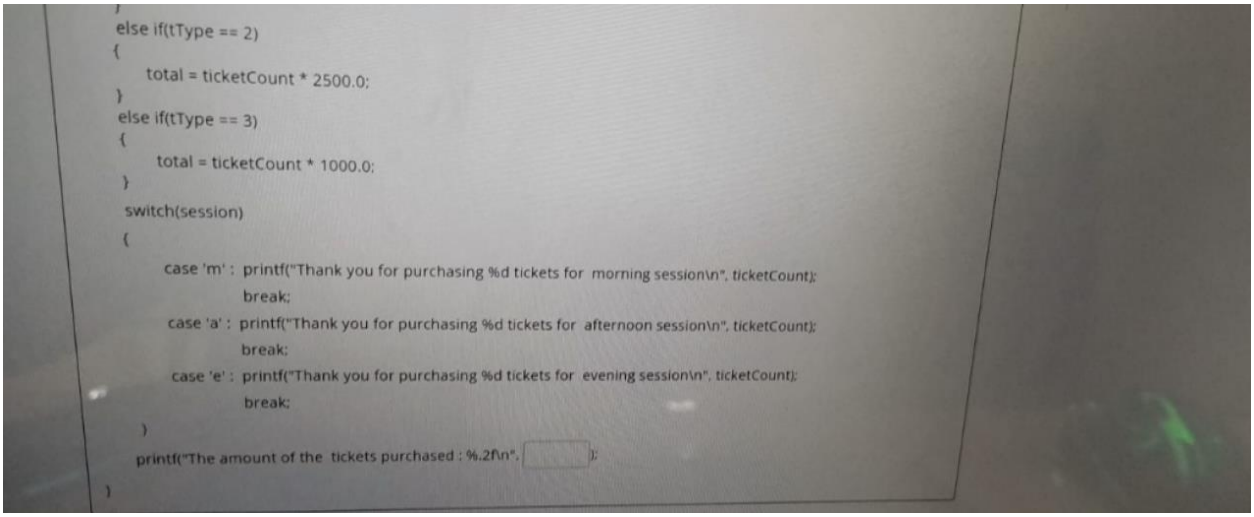
An event management company needs to implement a system to manage their online events. They want to create few functions to be integrated to the system such as register a user to the event, purchase event ticket, grant discounts based on each event.

To purchase ticketes, one must submit the **ticket type**(tType) . 1- Gold, 2 - Silver, 3 - Bronze, **session** (session). (m- morning, a - afternoon, e -evening) and the **number of tickets to purchase** (ticketCount). Then the function should display the amount of the ticketes purchased.

Ticket Type	Price
1 - Gold	5000/=
2 - Silver	2500/=
3 - Bronze	1000/=

Fill in the blanks to complete the function **purchase()**.

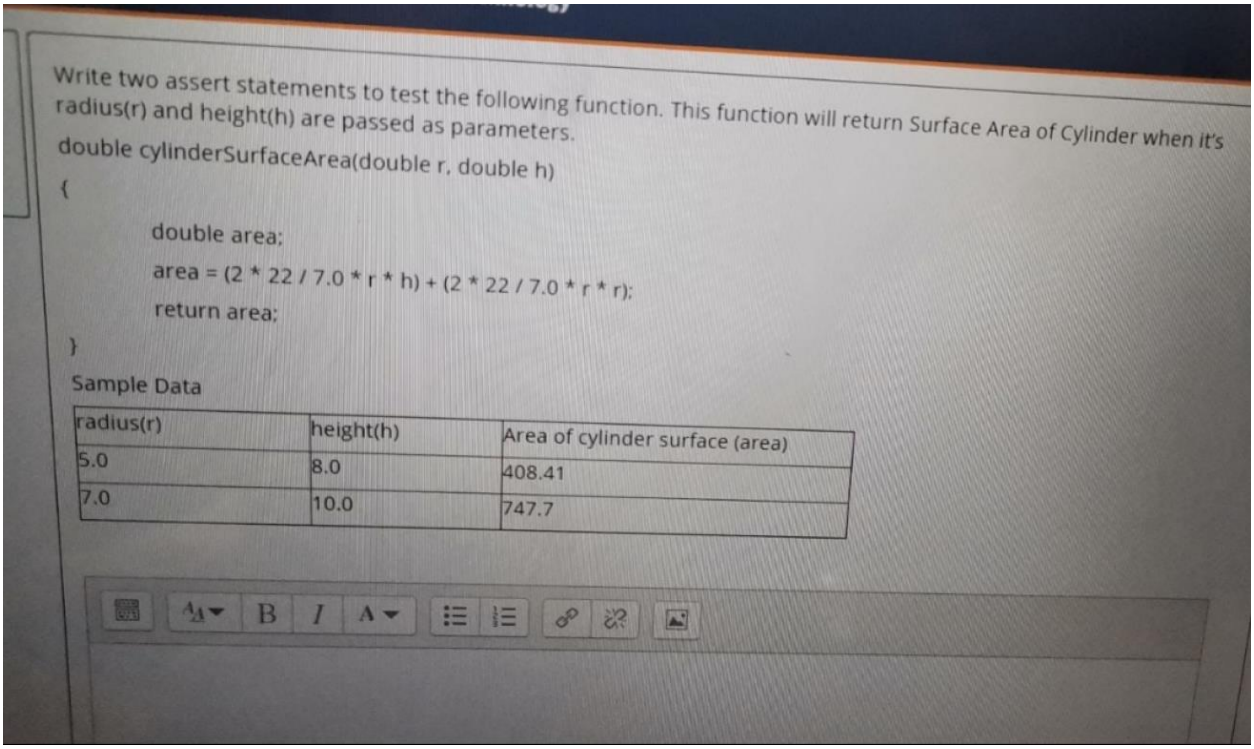
```
[      ] purchase( [      ] tType , [      ] [      ] , int ticketCount)
{
    float total = 0.0;
    if(tType == 1)
    {
        total = ticketCount * 5000.0;
    }
    else if(tType == 2)
    {
        total = ticketCount * 2500.0;
    }
```



```
else if(tType == 2)
{
    total = ticketCount * 2500.0;
}
else if(tType == 3)
{
    total = ticketCount * 1000.0;
}
 switch(session)
 {
      case 'm' :  printf("Thank you for purchasing %d tickets for  morning session\n", ticketCount);
                  break;
       case 'a' :  printf("Thank you for purchasing %d tickets for  afternoon session\n", ticketCount);
                  break;
       case 'e' :  printf("Thank you for purchasing %d tickets for  evening session\n", ticketCount);
                  break;
   }
   printf("The amount of the  tickets purchased : %.2f\n",      );
}
```

Question 10

01 :- void
02 :- int
03 :- char
04 :- session
05 :- total



Write two assert statements to test the following function. This function will return Surface Area of Cylinder when it's radius(r) and height(h) are passed as parameters.

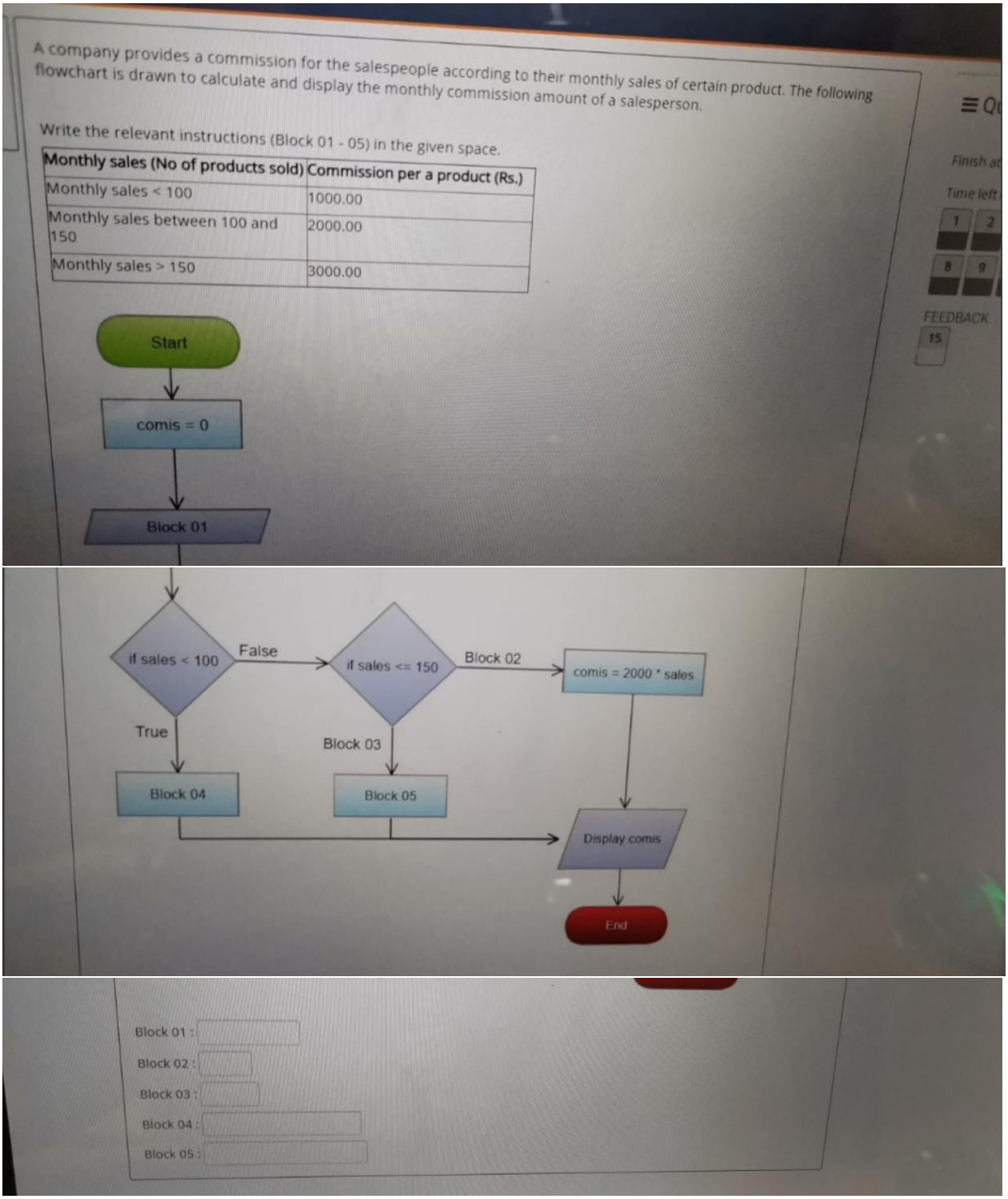
```
double cylinderSurfaceArea(double r, double h)
{
        double area;
        area = (2 * 22 / 7.0 * r * h) + (2 * 22 / 7.0 * r * r);
        return area;
}
```

Sample Data

radius(r)	height(h)	Area of cylinder surface (area)
5.0	8.0	408.41
7.0	10.0	747.7

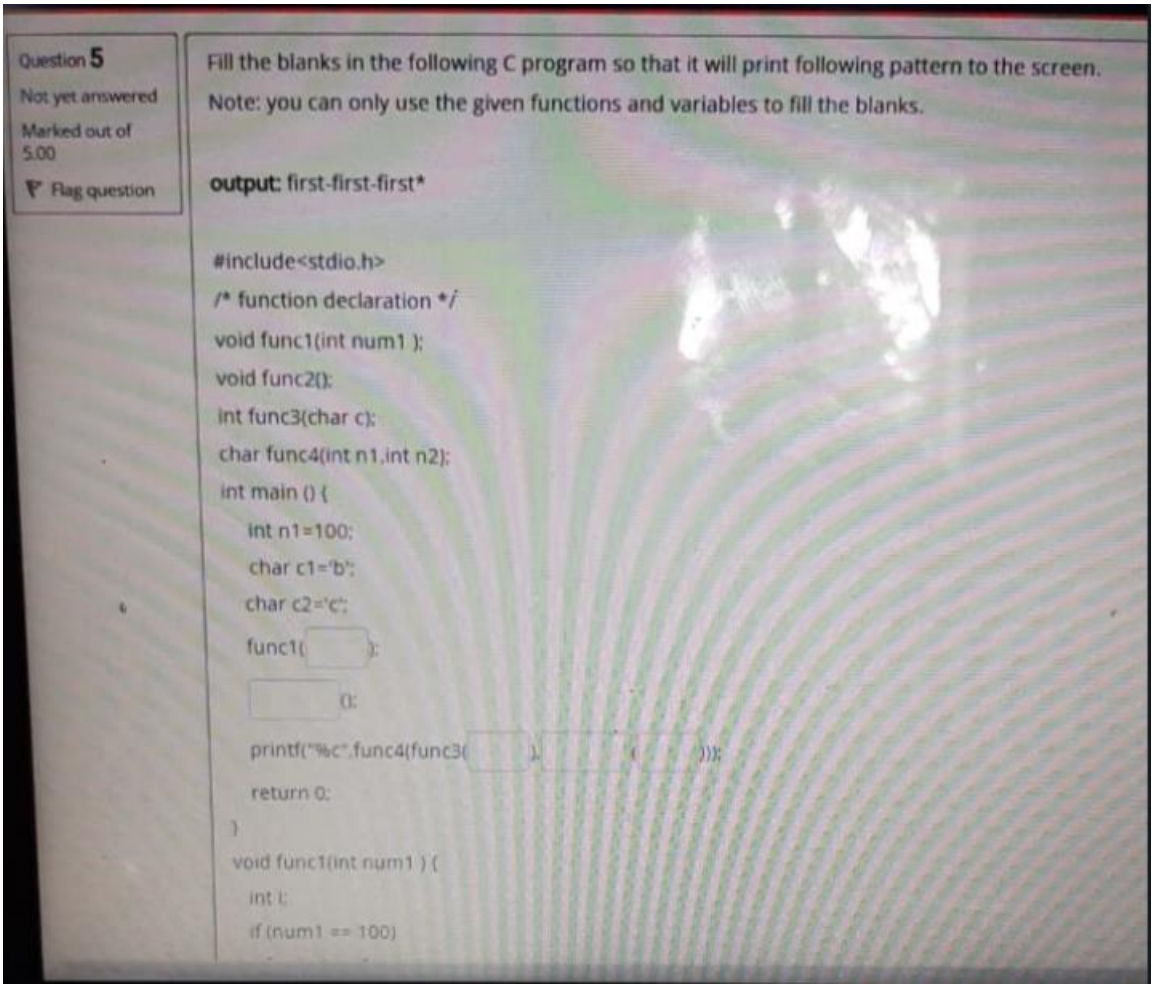
Question 11

assert (fabs (double cylinderSurfaceArea (5.0 , 8.0) - 408.41) < 0.001) ;
assert (fabs (double cylinderSurfaceArea (7.0 , 10.0) - 747.7) < 0.001) ;



Question 12

Block 01 :- input sales
Block 02 :- Ture
Block 03 :- False
Block 04 :- comis = 1000 * sales
Block 05 :- comis = 3000 * sales

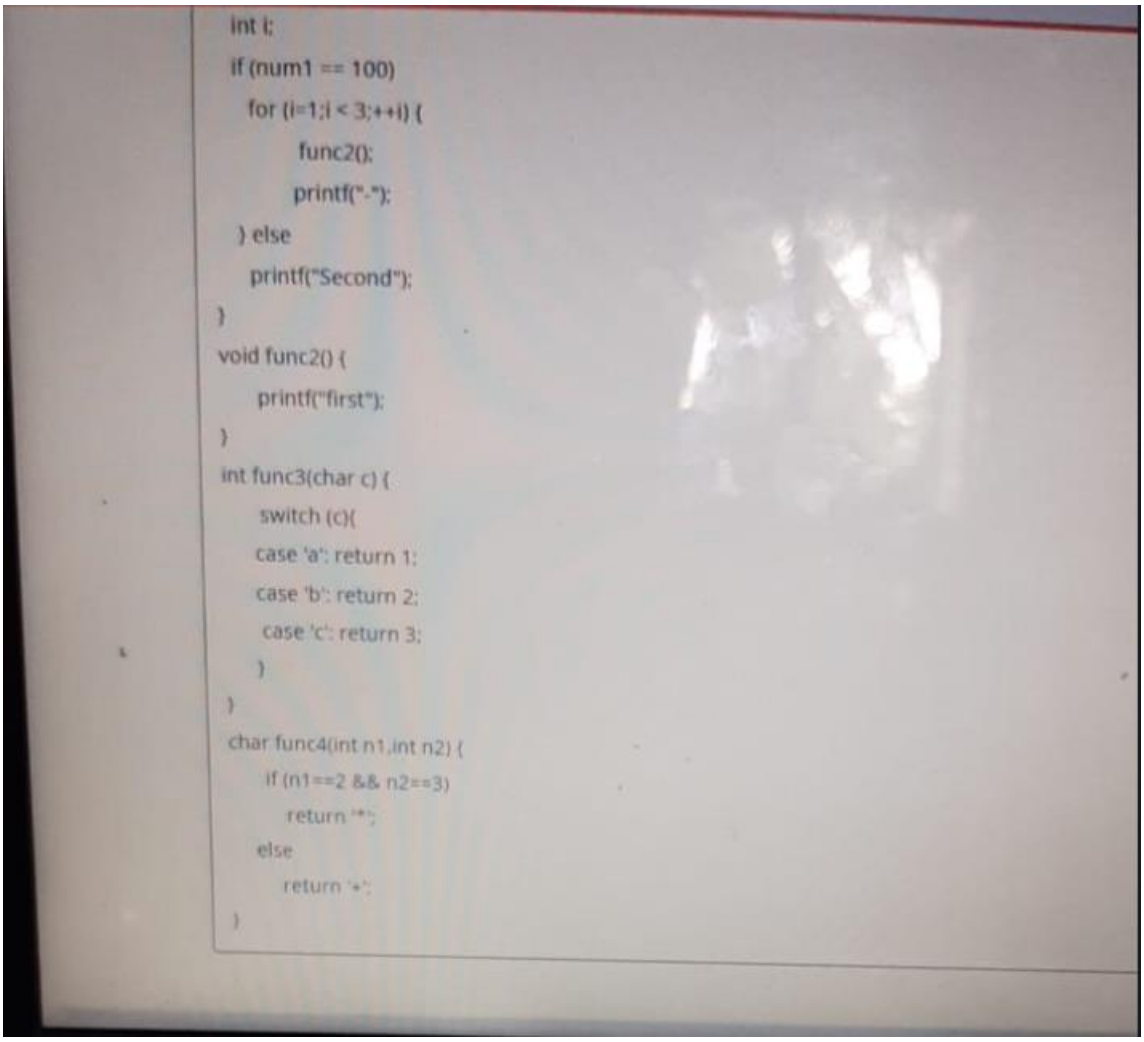


Question 5
Not yet answered
Marked out of 5.00
Flag question

Fill the blanks in the following C program so that it will print following pattern to the screen.
Note: you can only use the given functions and variables to fill the blanks.

output: first-first-first*

```
#include<stdio.h>
/* function declaration */
void func1(int num1 );
void func2();
int func3(char c);
char func4(int n1,int n2);
int main () {
   int n1=100;
   char c1='b';
   char c2='c';
   func1(    );
   (    );
   printf("%c",func4(func3(    ),(    ),(    )));
   return 0;
}
void func1(int num1 ) {
  int i;
  if (num1 == 100)
```



```
int i;
if (num1 == 100)
  for (i=1;i < 3;++i) {
        func2();
        printf("-");
  } else
    printf("Second");
}
void func2() {
    printf("first");
}
int func3(char c) {
    switch (c){
    case 'a': return 1;
    case 'b': return 2;
    case 'c': return 3;
    }
}
char func4(int n1,int n2) {
    if (n1==2 && n2==3)
      return '*';
    else
      return '+';
}
```

Question 13

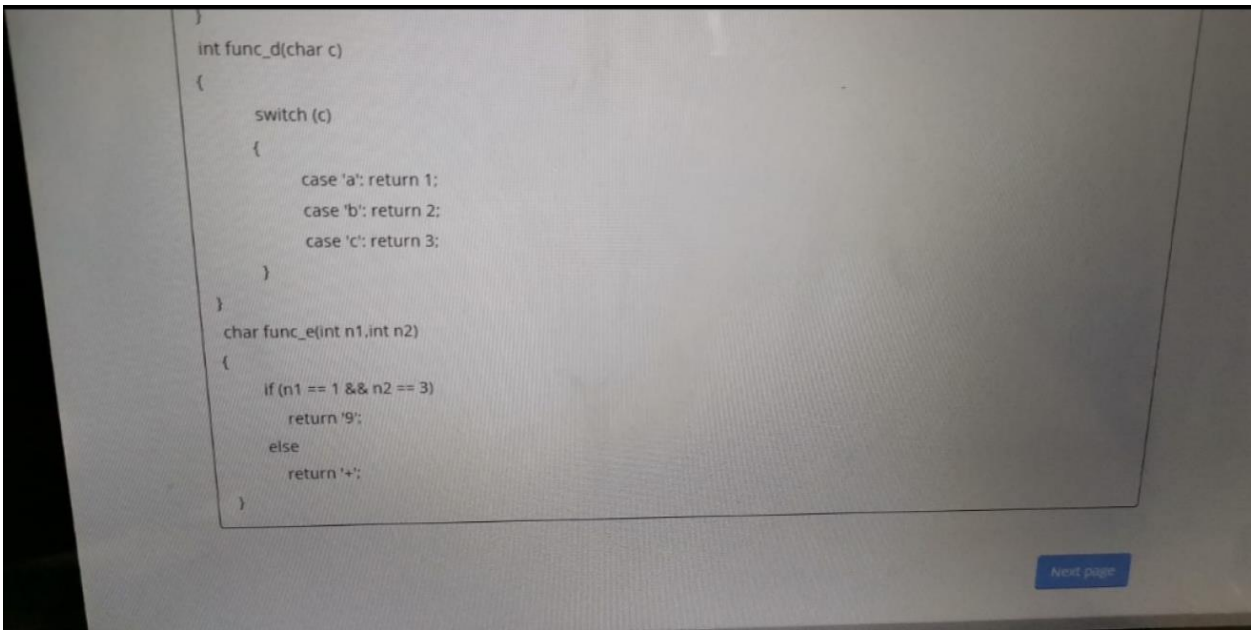
func1 (n1) ;
func2 ( ) ;
printf(" %c " , func4(func3 (c1) , func3 (c2))) ;

Fill the blanks in the following c program so that it will print following pattern to the screen. Note: you can only use the given functions and variables to fill the blanks.

Output: firstthird-firstthird-firstthird9

```
#include <stdio.h>
/* function declaration */
void func_a(int num1);
void func_b();
int func_d(char c);
char func_e(int n1,int n2);
int main ()
{
    int m1 = 100;
    char c1 = 'a';
    char c2 = 'c';
    func_a(    );
    (  )();
    printf("%c",func_e(func_d(  ),  (  )));
```

```
    int i;
    if (num1 == 100)
        for (i = 1;i < 3; ++i)
        {
            func_b();
            printf("-");
        }
    else
        printf("Second");
}
void func_b()
{
    printf("first");
    printf("third");
}
int func_d(char c)
{
    switch (c)
    {
        case 'a': return 1;
        case 'b': return 2;
```

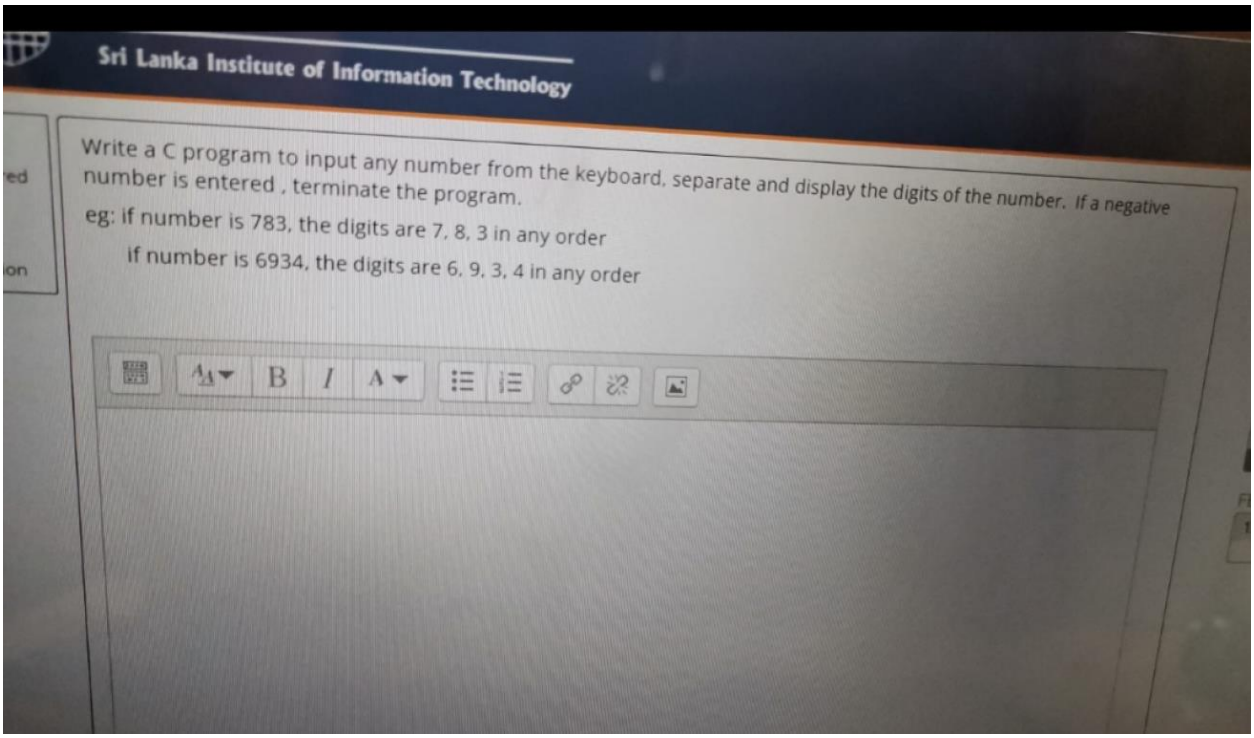


```
int func_d(char c)
{
        switch (c)
        {
                case 'a': return 1;
                case 'b': return 2;
                case 'c': return 3;
        }
}
char func_e(int n1,int n2)
{
        if (n1 == 1 && n2 == 3)
            return '9';
        else
            return '+';
}
```

Next page

Question 14

```
func_a ( m1 ) ;
func_b ( ) ;
printf( " %c " , func_e( func_d ( c1 ) , func_d ( c2 ) )) ;
```



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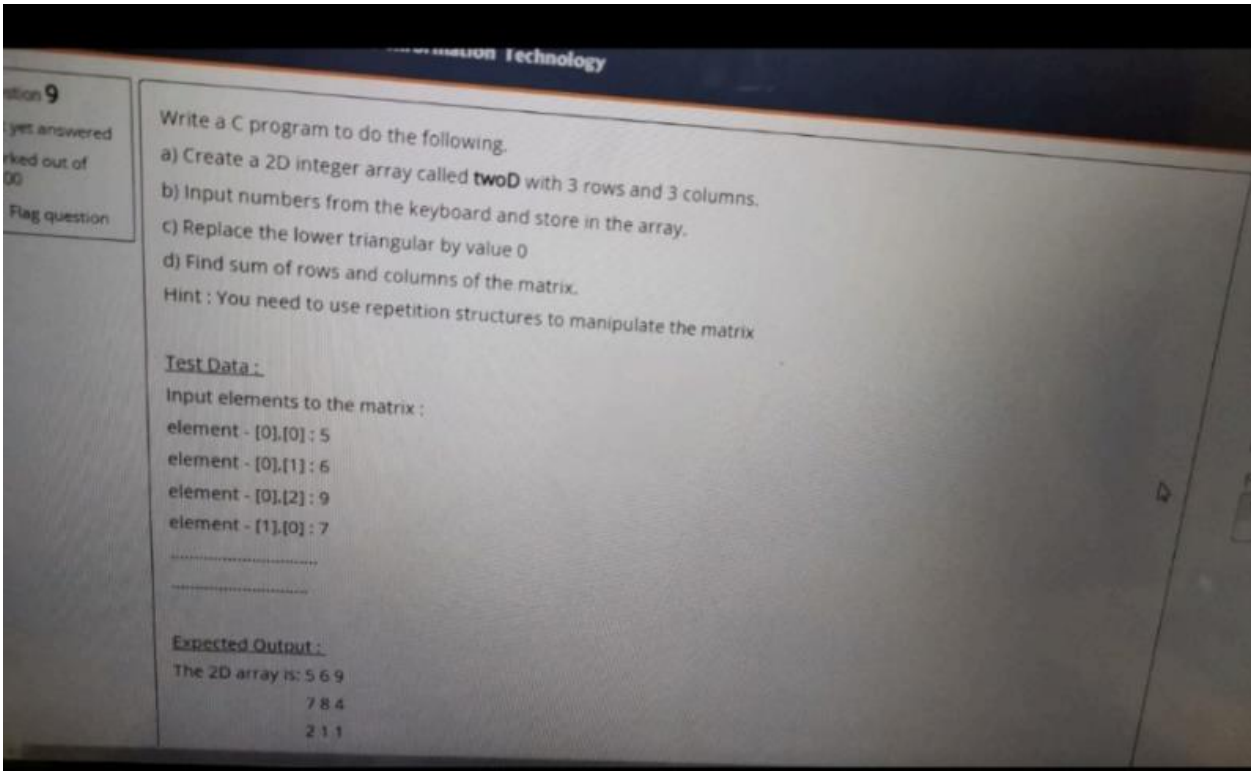
Write a C program to input any number from the keyboard, separate and display the digits of the number. If a negative number is entered , terminate the program.

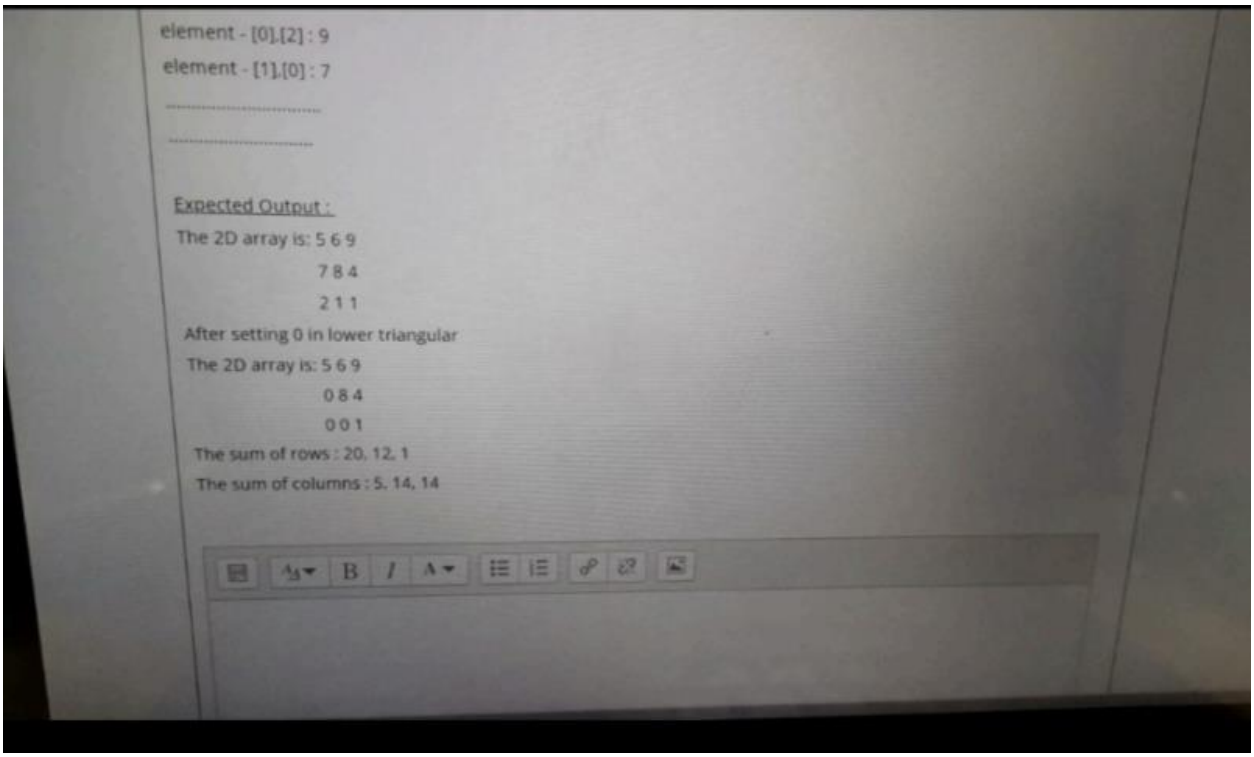
eg: if number is 783, the digits are 7, 8, 3 in any order

if number is 6934, the digits are 6, 9, 3, 4 in any order

Question 15

```
#include <stdio.h>

int main (void)
{
        char num[100] , I ;

        while (1 )
        {
                 printf("Enter the number : ");
                scanf("%s" , &num);

                if (num[0] == '-')
                {
                     return -1 ;
                 }
                 for (i = 0 ; num[i] != '\0' ; i++)
                 {
                          printf(" %c , " , num[i]);
                 }

                 puts(" ");
        }
        return  0 ;
}
```



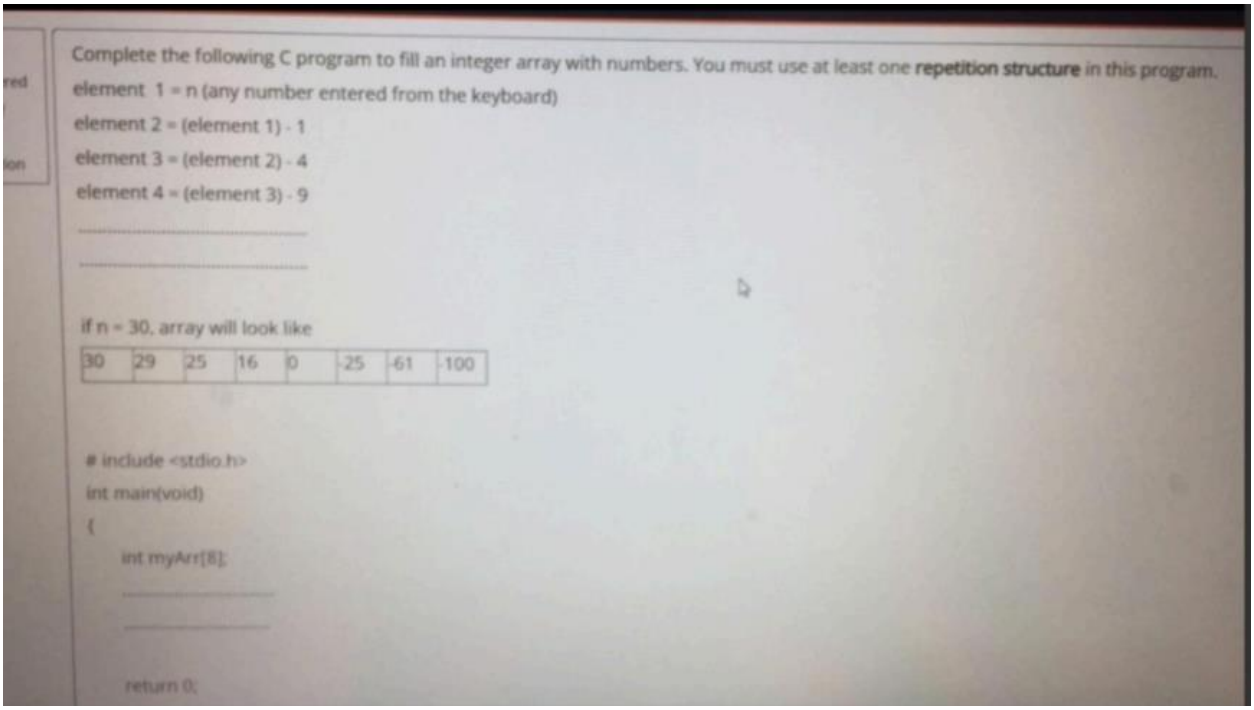


Question 16

```
#include <stdio.h>

int main (void)
{
	int twoD[3][3];
	int i , j ;
	int sum_row[3] = {0} ;
	int sum_columns[3] = {0};

	printf("input element of matrix : \n");


	for (i = 0 ; i < 3 ; i++)
	{
		for(j = 0 ; j < 3 ; j++)
		{
			printf("element - [%d],[%d] : " , i , i);
			scanf("%d" , &twoD[i][j]);
		}
	}

	printf("\n2D array is : \n");

	for (i = 0 ; i < 3 ; i++)
```

```
{
        for (j = 0 ; j < 3 ; j++)
        {
                printf("%d   " , twoD[i][j]);
        }
        puts(" ");
}

printf("\nAfter settinf 0 in lower tringular\n");


printf("\n2D array is : \n");

for (i = 0 ; i < 3 ; i++)
{
        for (j = 0 ; j < 3 ; j++)
        {
                if (i <= j)
                {
                        printf("%d  " , twoD[i][j]);
                }
                else
                {
                        twoD[i][j] = 0 ;
                        printf("%d  " , twoD[i][j]);
                }

        }
        puts(" ");
}

printf("\nThe sum of rows : ");
for (i = 0 ; i < 3 ; i++)
{
        for (j = 0 ; j < 3 ; j++)
        {
                sum_row[i] += twoD[i][j];
        }
        printf("%d " ,sum_row[i] );
}

printf("\nThe sum of columns : ");
for (i = 0 ; i < 3 ; i++)
{
```

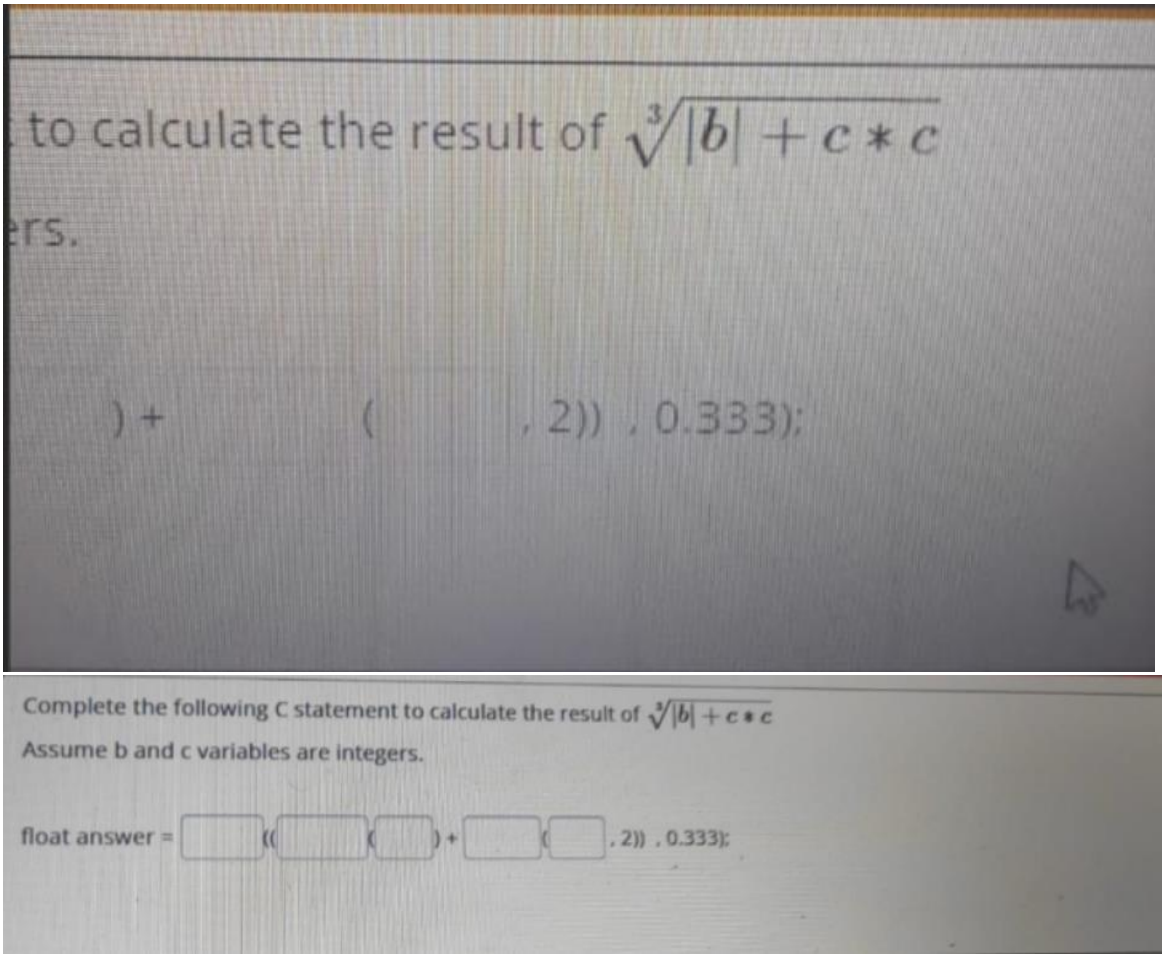
```
                for (j = 0 ; j < 3 ; j++)
                {
                        sum_columns[i] += twoD[j][i];
                }
                printf("%d " ,sum_columns[i] );
        }

        return 0 ;
}
```



Question 16

```
#include <stdio.h>

//function main program execution
int main (void )
{
        int i ,num;
        int myArr[8] ;

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

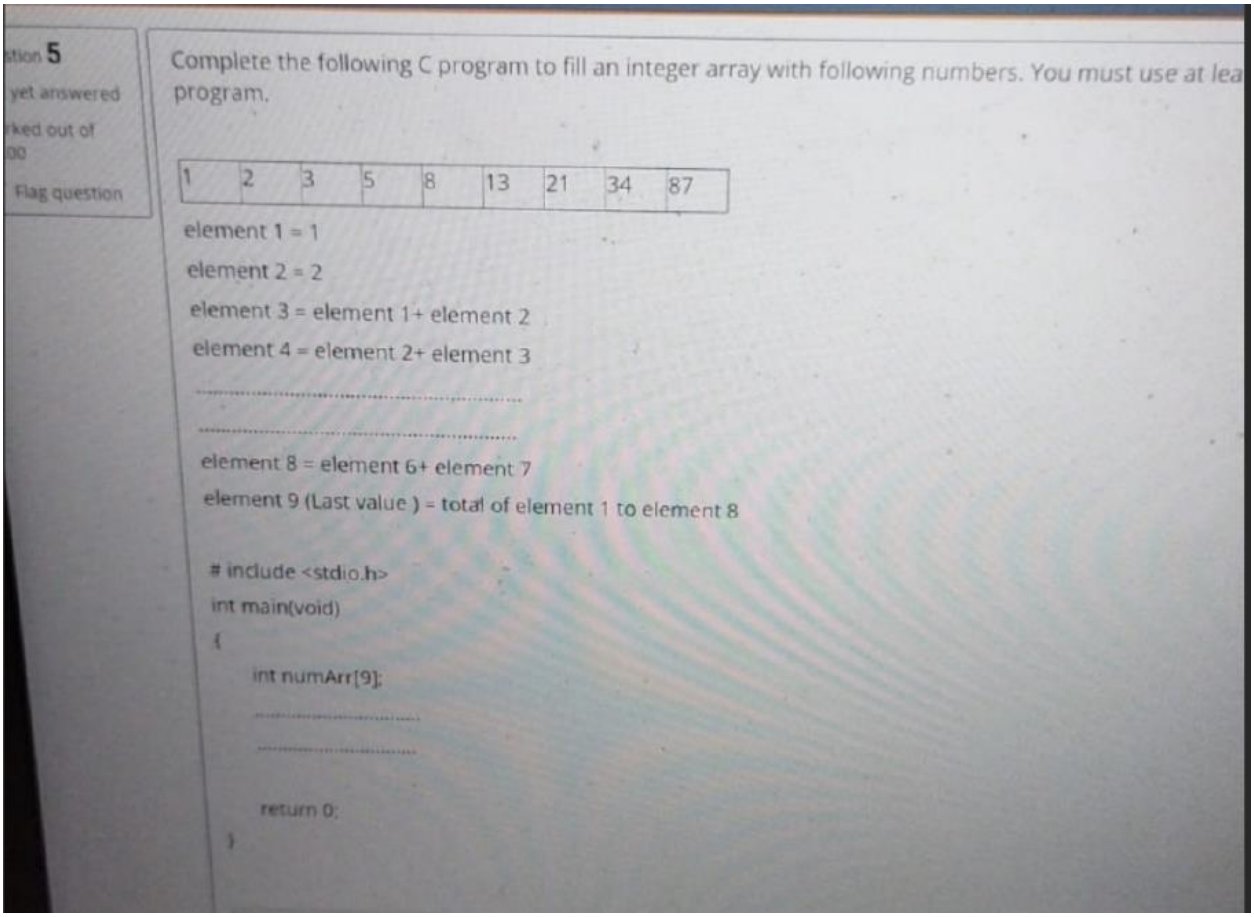
```
        myArr[0] = num ;
        printf("\n%d  " , myArr[0]);

        for (i = 1 ; i < 8 ; i++ )
        {
                myArr[i] = myArr[i-1] - (i*i) ;
                printf("%d  " , myArr[i]);
        }

        return 0 ;
} //end function main
```



Question 17

01 :- pow
02 :- fabs
03 :- b

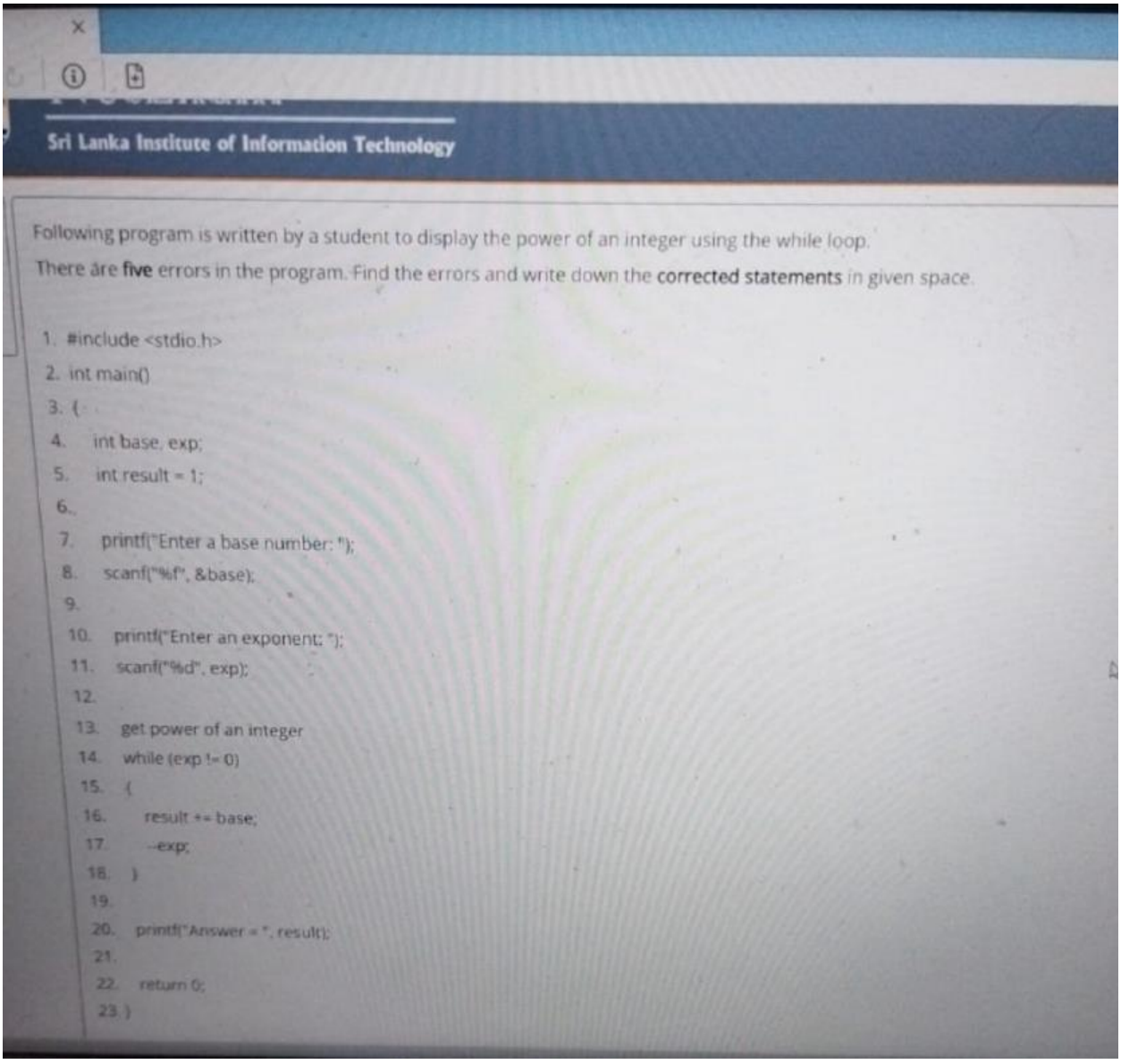
04 :- pow
05 :- c



Question 18

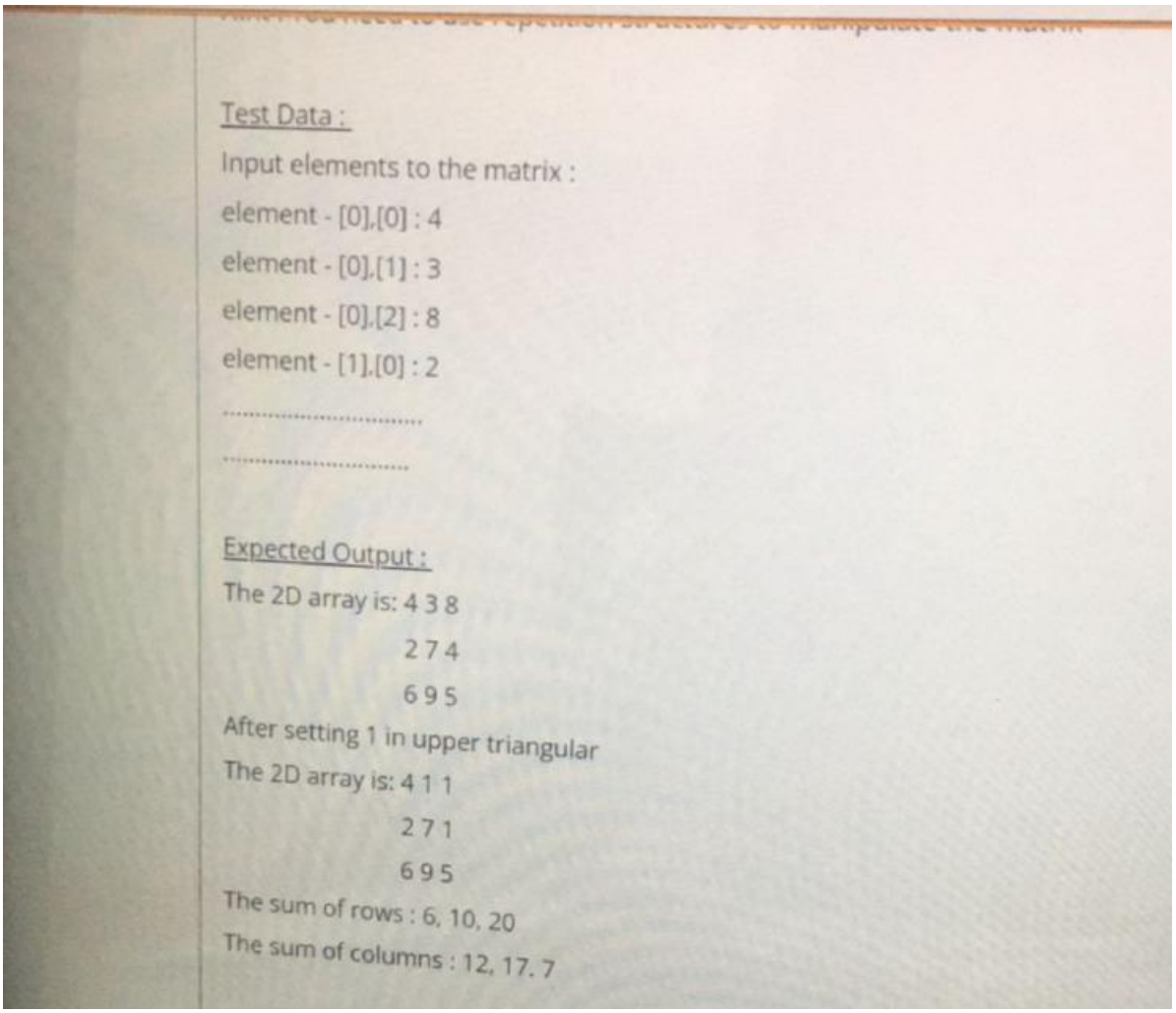
```
#include <stdio.h>

//function main program execution
int main (void )
{
        int i , sum ;
        int numArr[9] ;

        numArr[0] = 1 ;
        numArr[1] = 2 ;
        sum = numArr[0] + numArr[1] ;

        printf("%d  %d  " , numArr[0] , numArr[1]);

        for (i = 2 ; i < 8 ; i++)
```

```
        {
                numArr[i] = numArr[i-2] + numArr[i-1] ;
                printf("%d  " , numArr[i]);
                sum += numArr[i] ;
        }
        numArr[8] = sum ;
        printf("%d" , numArr[8] );

        return 0 ;

} //end function main
```



Question 19

8 line :- scanf("%d " , &base) ;
11 line :- scanf("%d " , &exp) ;
13 line :- //get power of an integer
16 line :- result *= base ;
20 line :- printf("Answer = %d " , result) ;



Test Data :

Input elements to the matrix :

element - [0],[0] : 4

element - [0],[1] : 3

element - [0],[2] : 8

element - [1],[0] : 2

.....

.....

Expected Output :

The 2D array is: 4 3 8

2 7 4

6 9 5

After setting 1 in upper triangular

The 2D array is: 4 1 1

2 7 1

6 9 5

The sum of rows : 6, 10, 20

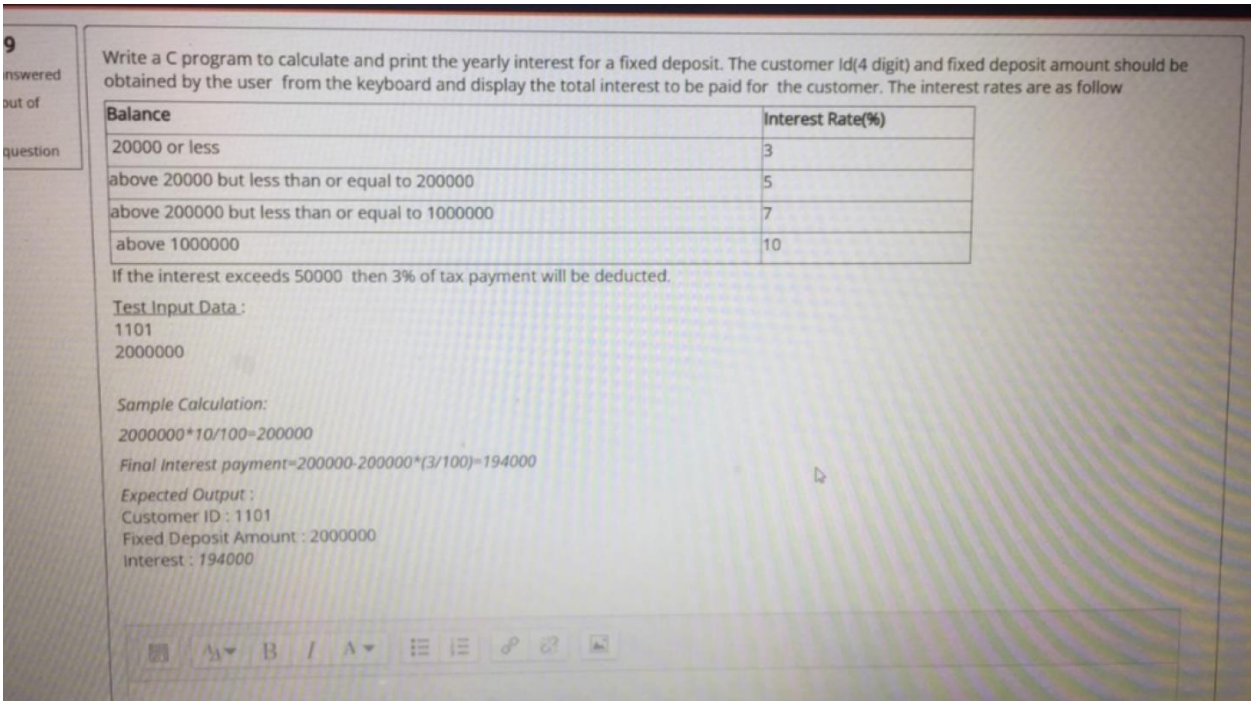
The sum of columns : 12, 17, 7

Question 20

```
#include <stdio.h>

int main (void)
{
```

```
int twoD[3][3];
int i , j ;
int sum_row[3] = {0} ;
int sum_columns[3] = {0};

printf("input element of matrix : \n");


for (i = 0 ; i < 3 ; i++)
{
        for(j = 0 ; j < 3 ; j++)
        {
                printf("element - [%d],[%d] : " , i , i);
                scanf("%d" , &twoD[i][j]);
        }
}

printf("\n2D array is : \n");

for (i = 0 ; i < 3 ; i++)
{
        for (j = 0 ; j < 3 ; j++)
        {
                printf("%d   " , twoD[i][j]);
        }
        puts(" ");
}

printf("\nAfter settinf 1 in upper tringular\n");


printf("\n2D array is : \n");

for (i = 0 ; i < 3 ; i++)
{
        for (j = 0 ; j < 3 ; j++)
        {
                if (i >= j)
                {
                        printf("%d  " , twoD[i][j]);
                }
                else
                {
                        twoD[i][j] = 1 ;
```

```
                                printf("%d  " , twoD[i][j]);
                        }

                }
                puts(" ");
        }

        printf("\nThe sum of rows : ");
        for (i = 0 ; i < 3 ; i++)
        {
                for (j = 0 ; j < 3 ; j++)
                {
                        sum_row[i] += twoD[i][j];
                }
                printf("%d " ,sum_row[i] );
        }

        printf("\nThe sum of columns : ");
        for (i = 0 ; i < 3 ; i++)
        {
                for (j = 0 ; j < 3 ; j++)
                {
                        sum_columns[i] += twoD[j][i];
                }
                printf("%d " ,sum_columns[i] );
        }

        return 0 ;
}
```



9
nswered
out of
question

Write a C program to calculate and print the yearly interest for a fixed deposit. The customer Id(4 digit) and fixed deposit amount should be obtained by the user from the keyboard and display the total interest to be paid for the customer. The interest rates are as follow

Balance	Interest Rate(%)
20000 or less	3
above 20000 but less than or equal to 200000	5
above 200000 but less than or equal to 1000000	7
above 1000000	10

If the interest exceeds 50000 then 3% of tax payment will be deducted.

Test Input Data :
1101
2000000

Sample Calculation:

*2000000*10/100=200000*

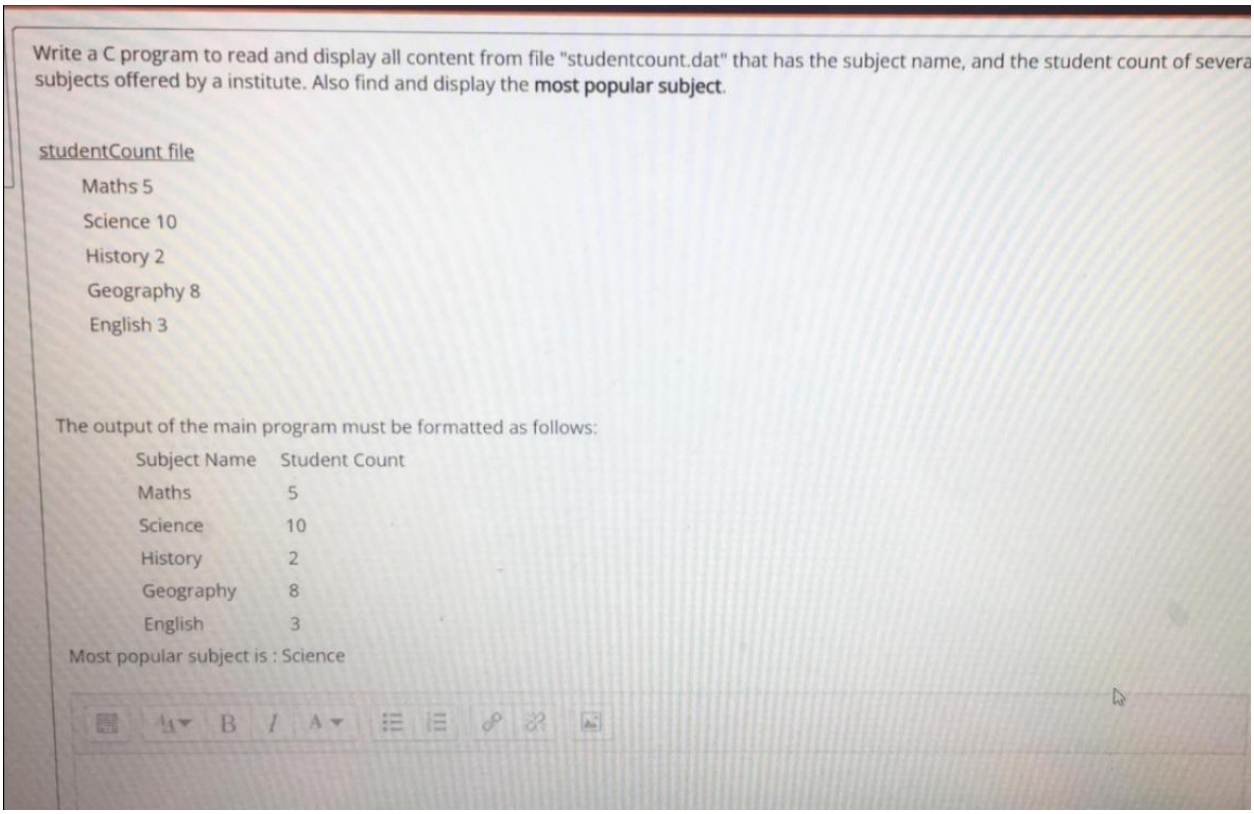
Final Interest payment=200000-200000(3/100)=194000*

Expected Output :
Customer ID : 1101
Fixed Deposit Amount : 2000000
Interest : *194000*

Question 21

```
#include <stdio.h>

int main()
{
   char name[50];
   int amount , tax ;


   printf("Customer name : ");
   scanf("%s" , name);

   printf("Fixed Diposit amount :" );
   scanf("%d" , &amount);


   if(amount <= 20000)
   {
      tax = amount * (3.0 / 100) ;
   }

   else if(amount > 20000 && amount <= 200000)
   {
      tax = amount * (5.0 / 100) ;
   }
```

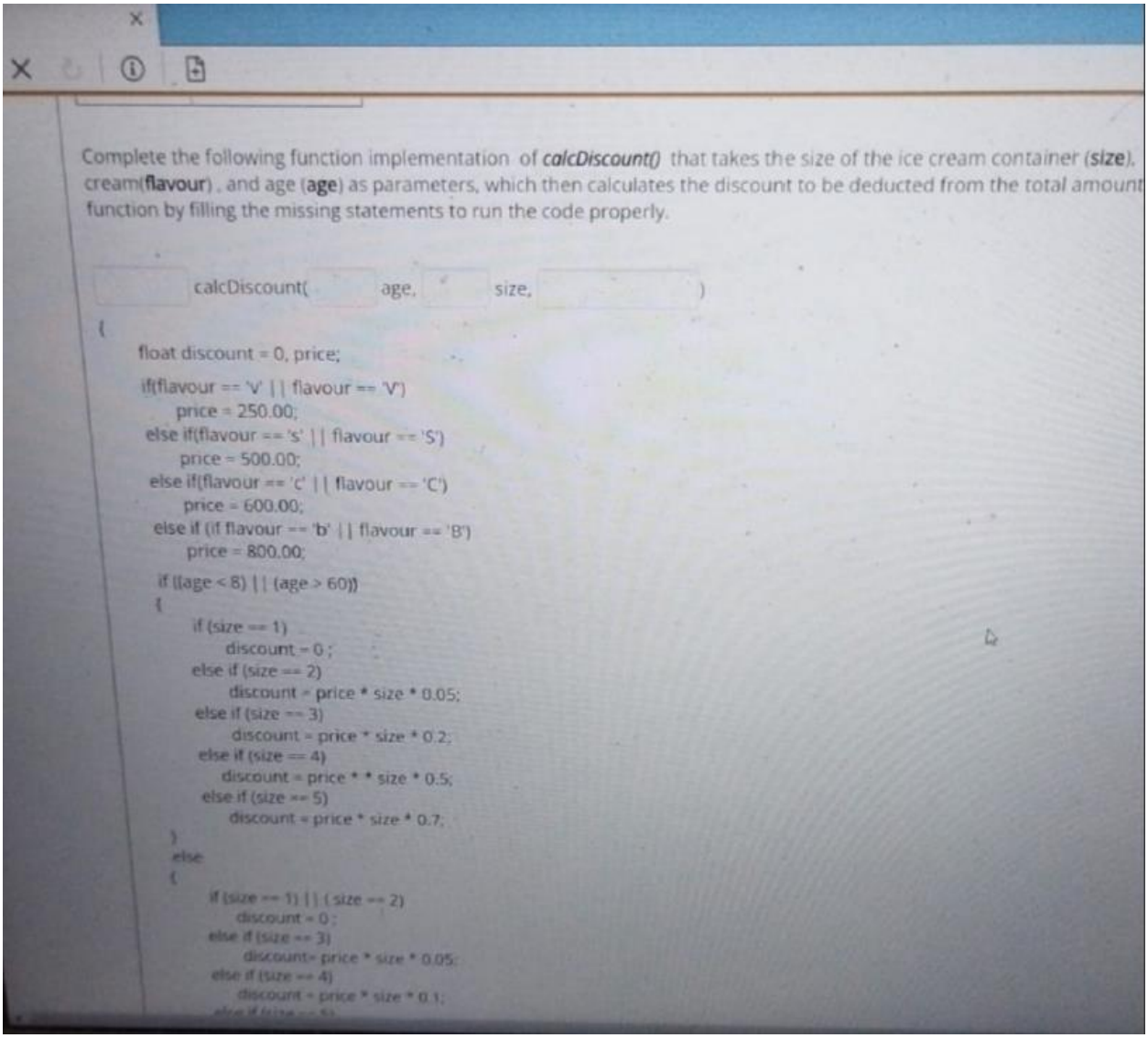
```
   else if(amount > 200000 && amount <= 1000000)
   {
      tax = amount * (7.0 / 100) ;
   }
   else if(amount > 1000000)
   {
      tax = amount * (10.0 / 100) ;
   }

   if (tax > 50000)
   {
      tax = tax - tax * (3.0 / 100) ;
   }

   printf("Interest : %d" , tax);
   return 0;
}
```



Question 22

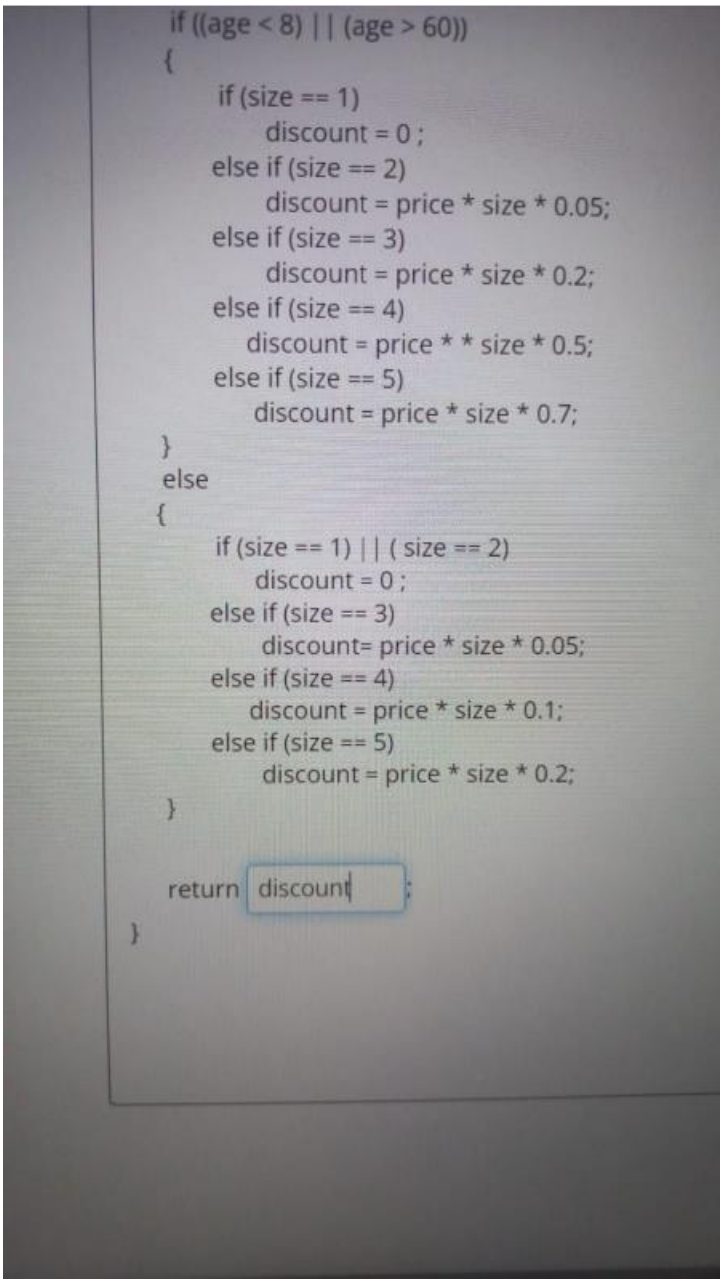

```
#include <stdio.h>
#include <string.h>

int main (void)
{
	char sub[20];
	char m_sub[20];
	int count , most = 0 ;
	FILE *student ;
	student = fopen ("studentcount.dat" , "r+");

	if (student == NULL)
	{
		printf("File cannot open");
		return -1 ;
	}

	printf("Subject name \t\t student count\n");
	fscanf(student , "%s %d" , sub , &count);

	most = count ;
	while (!feof (student))
	{
		printf("%s \t \t \t %d \n" , sub , count );
		if (most < count)
		{
			strcpy (m_sub , sub);
			most = count ;
		}
		fscanf(student , "%s %d" , sub , &count);
	}
	printf("\nMost populay subject is : %s" , m_sub);
```

```
        fclose (student);
        return 0 ;
}
```



Complete the following function implementation of ***calcDiscount()*** that takes the size of the ice cream container (**size**), cream(**flavour**) , and age (**age**) as parameters, which then calculates the discount to be deducted from the total amount function by filling the missing statements to run the code properly.

```
        calcDiscount(     age,     size,          )
{
    float discount = 0, price;
    if(flavour == 'V' || flavour == 'V')
        price = 250.00;
    else if(flavour == 's' || flavour == 'S')
        price = 500.00;
    else if(flavour == 'c' || flavour == 'C')
        price = 600.00;
    else if (if flavour == 'b' || flavour == 'B')
        price = 800.00;
    if ((age < 8) || (age > 60))
    {
        if (size == 1)
            discount = 0 ;
        else if (size == 2)
            discount = price * size * 0.05;
        else if (size == 3)
            discount = price * size * 0.2;
        else if (size == 4)
            discount = price * * size * 0.5;
        else if (size == 5)
            discount = price * size * 0.7;
    }
    else
    {
        if (size == 1) || ( size == 2)
            discount = 0 ;
        else if (size == 3)
            discount= price * size * 0.05;
        else if (size == 4)
            discount = price * size * 0.1;
```



```
if ((age < 8) || (age > 60))
{
    if (size == 1)
        discount = 0 ;
    else if (size == 2)
        discount = price * size * 0.05;
    else if (size == 3)
        discount = price * size * 0.2;
    else if (size == 4)
        discount = price * * size * 0.5;
    else if (size == 5)
        discount = price * size * 0.7;
}
else
{
    if (size == 1) || ( size == 2)
        discount = 0 ;
    else if (size == 3)
        discount= price * size * 0.05;
    else if (size == 4)
        discount = price * size * 0.1;
    else if (size == 5)
        discount = price * size * 0.2;
}

return discount ;
}
```

Question 23

01 :- float
02 :- int
03 :- int
04 :- char flavour
O5:- discount ;

Book publishing house distributes books to bookstores. Book publishers records following book details before the distribution.

Book No integer
Book Name char[50]
Book Price float
Quantity integer

Following C program uses a structure called "Book" to store book details before the distribution. You need to enter the details of 3 books from keyboard and calculate the total price of each book based on the quantity ordered. Finally print the details as shown in second table. **Complete the following C code by filling in the missing words/statements.**

Input Values:

Book No	Book Name	Book Price	Quantity
1001	C Programming	1500.00	12
1002	Algorithms	1750.00	8
1003	Java	1200.00	10

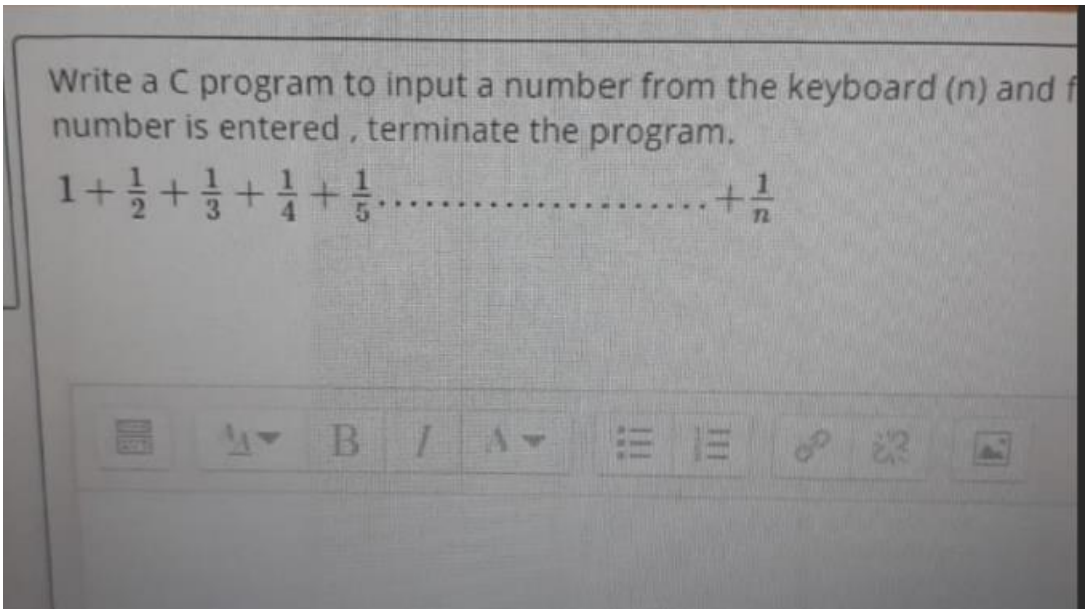
Output:

Book No	Book Name	Total Price
1001	C Programming	18000.00
1002	Algorithms	14000.00
1003	Java	12000.00

```
#include<stdio.h>
        {
    int bookNo;
    char bookName[50];
    double bookPrice;
    int qty;
};
int main(void){
        book[3];
    int i;
    float total[3]={0};
    for(i=0; i <= 3; i++){
        printf("Enter Book No: ");
        scanf("%d",&book[i].bookNo);
        printf("Enter Book Name: ");
        
        printf("Enter Book Price: ");
        scanf("%lf",&book[i].bookPrice);
        printf("Enter Book Quantity: ");
        scanf("%d",&book[i].qty);

        = book[i].bookPrice * book[i].qty;
    }
    printf("Book No\tBook Name\t\tTotal Price\n");

    for(i=0;i<3;i++){
        printf("%d\t%s\t\t%.2f\n",
```

Question 24

01 :- struct Book
02 :- struct Book
03 :- scanf(" %s " , book[i] . bookName) ;
04 :- total[i]
05 :- printf(" %d \t %s \t %.2f " , book[i].bookNo , book[i] . bookName , total[i]) ;



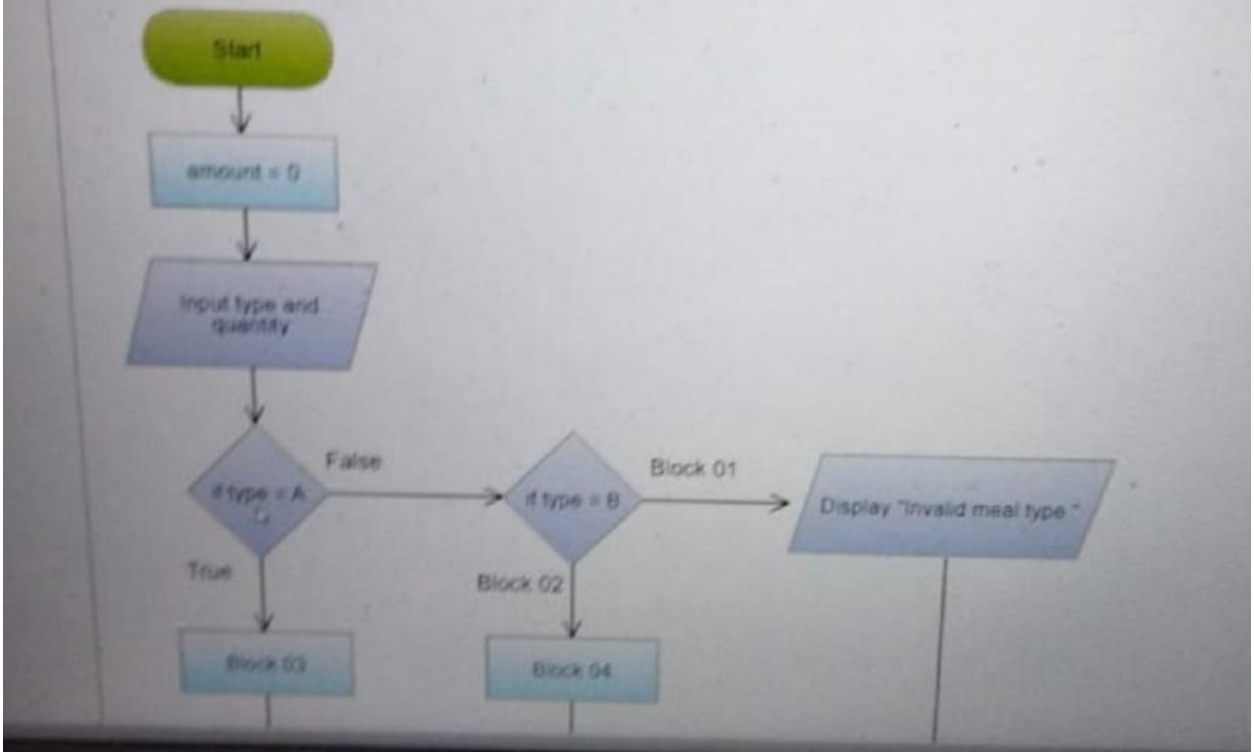
Question 25

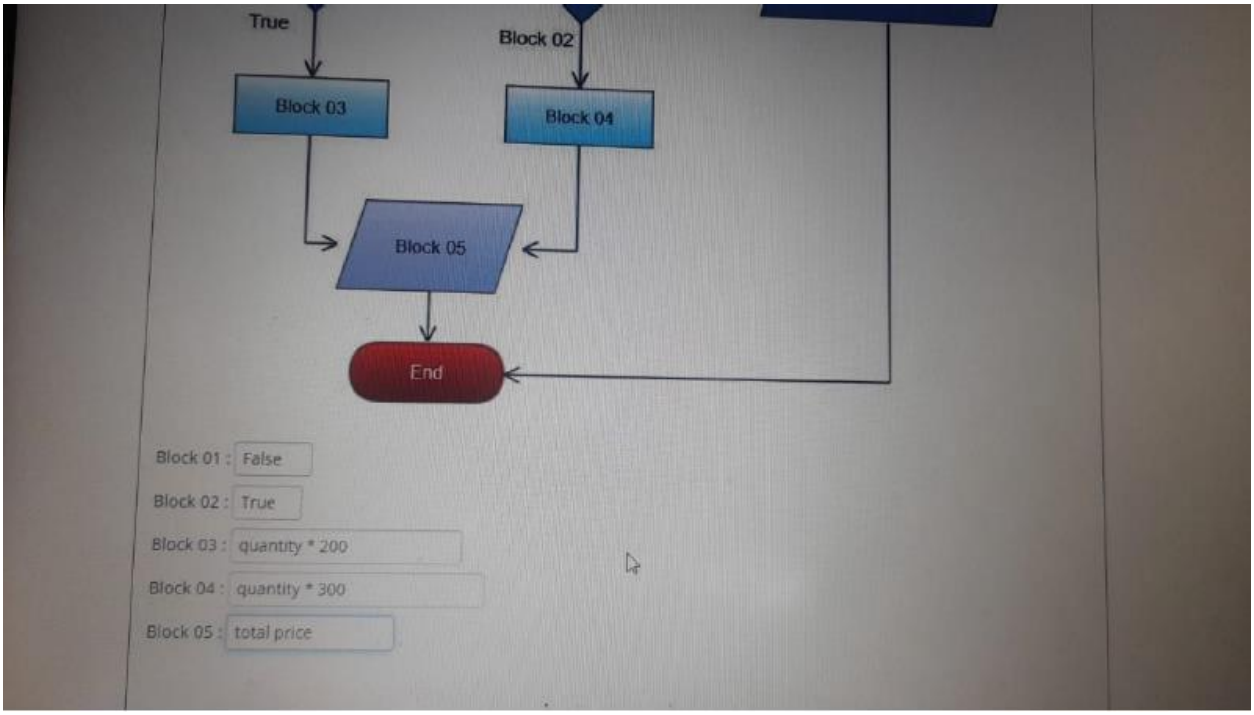
```
#include <stdio.h>
 int main (void)
{
        int n , i  ;
        float result = 0 ;

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

        for (i = 1 ; i <= n ; i++)
        {
                result += 1.0 / i ;
        }

        printf("\nanswer is = %.2f" , result);
}
```

A cafeteria that provides food parcels gets pre orders from customers. The following flowchart is drawn to calculate and dis
amount of a customer.

Write the relevant instructions (Block 01 - 05) in the given space.

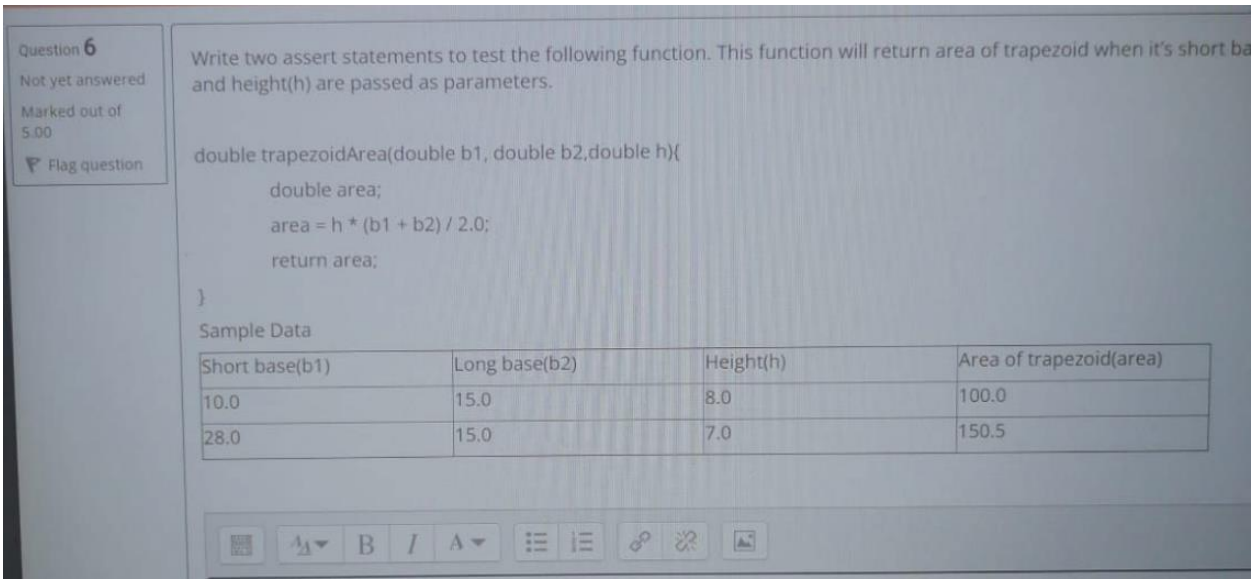
Food Parcel Type	Price of a parcel(Rs.)
A	200.00
B	300.00





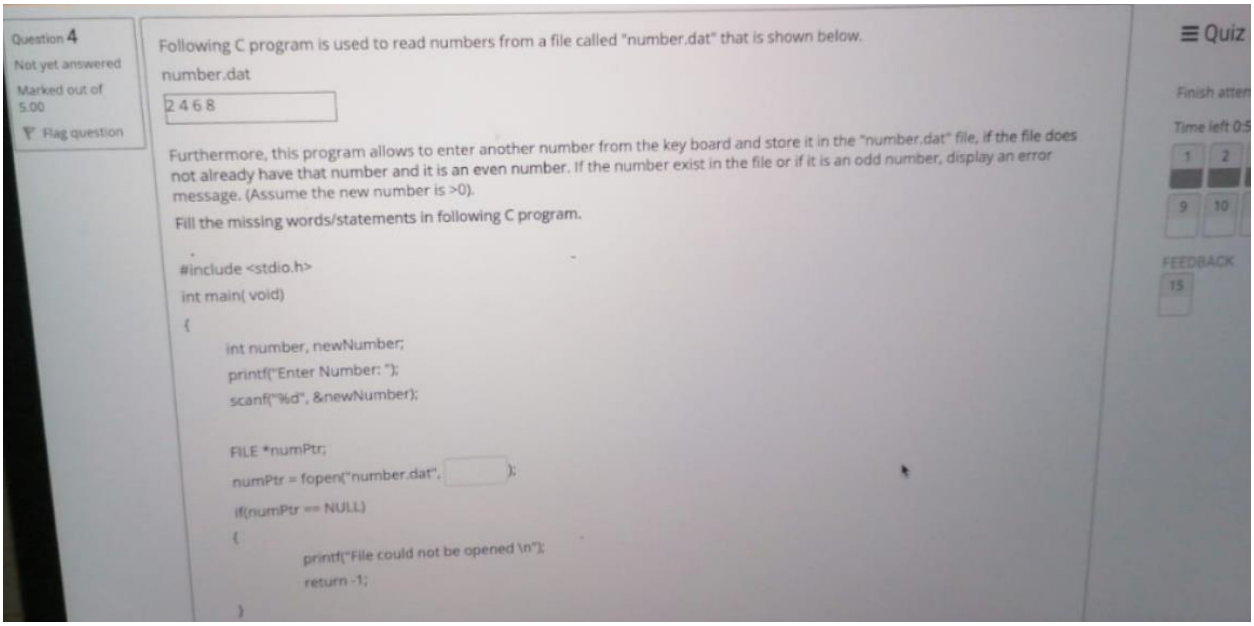
Question 26

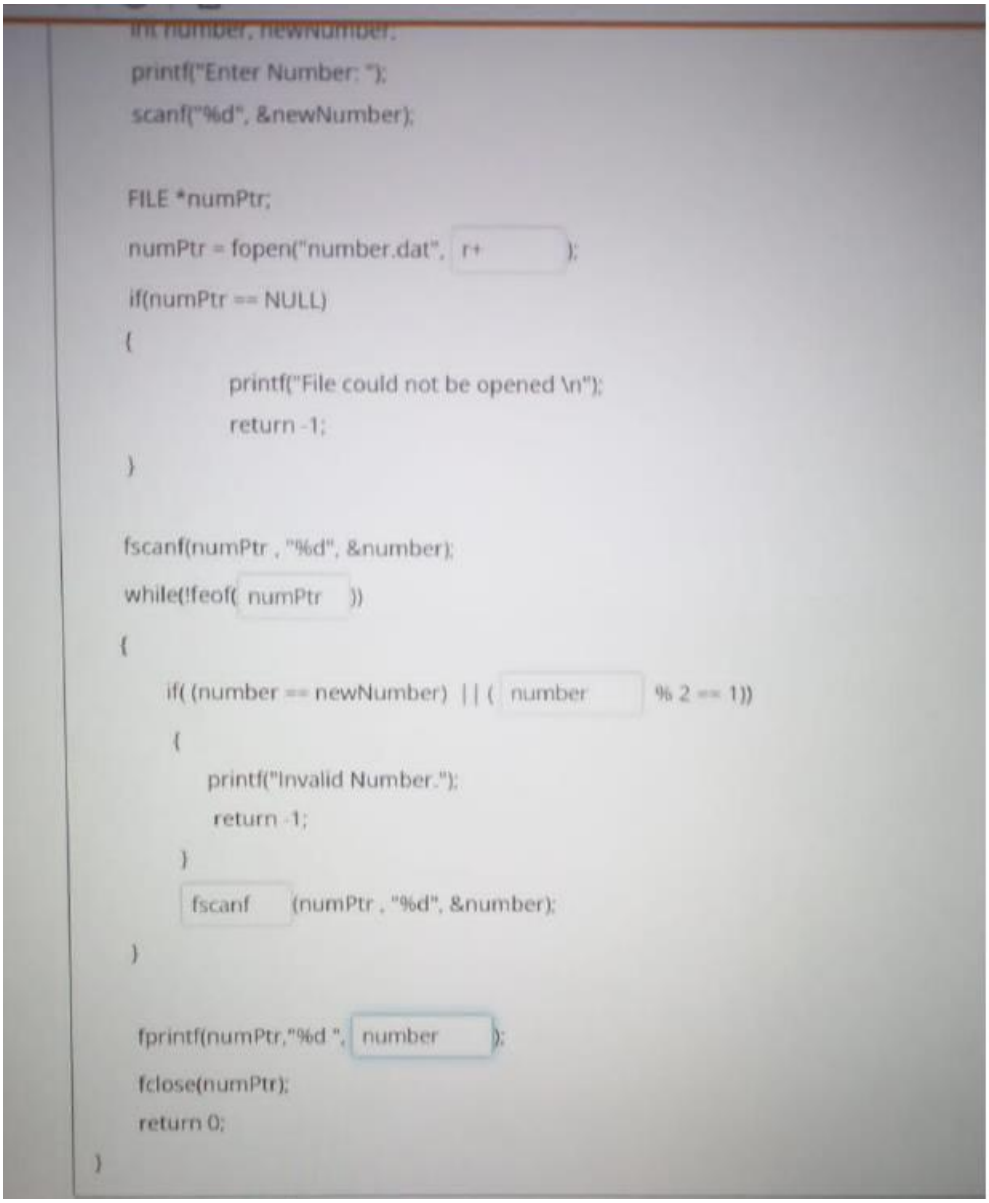
Blook 01 :- False
Blook 02 :- Ture
Blook 03 :- quality * 200
Blook 04 :- quality * 300
Blook 05 :- total price



Question 27

assert (fabs (trapezoidArea (10.0 , 15.0 , 8.0) -100.0) < 0.0001) ;
assert (fabs (trapezoidArea (28.0 , 15.0 , 7.0) -150.5) < 0.0001) ;

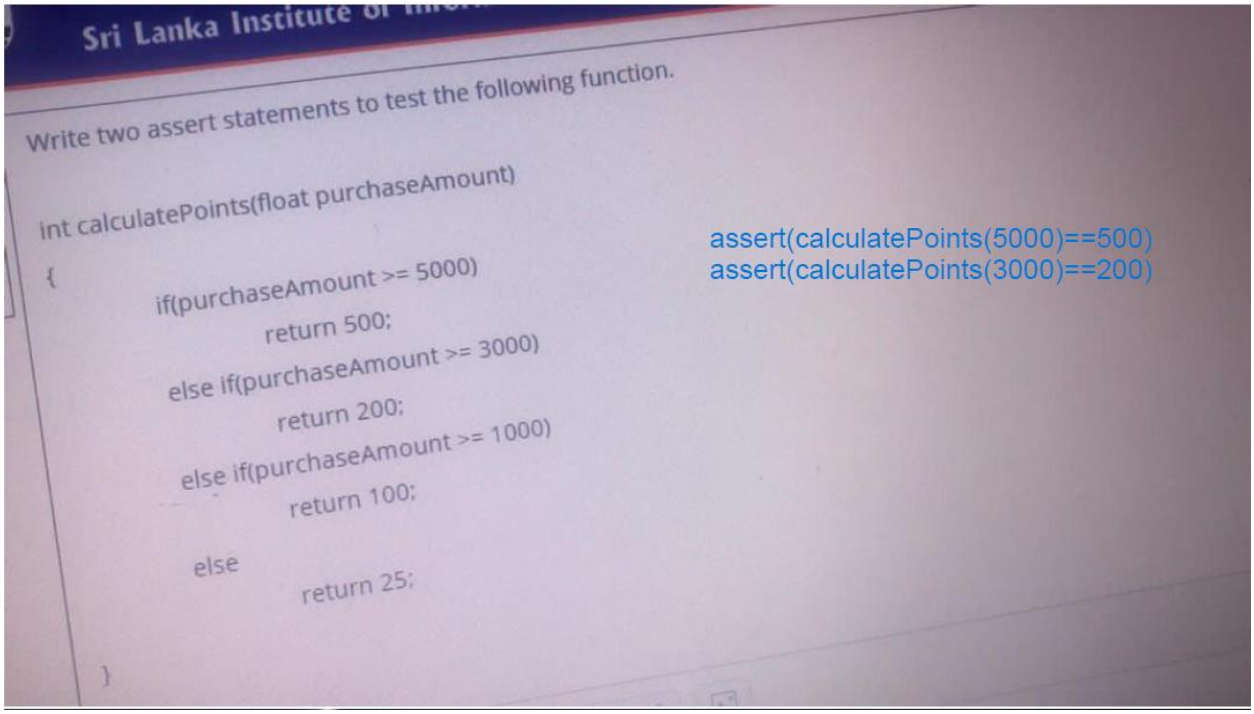




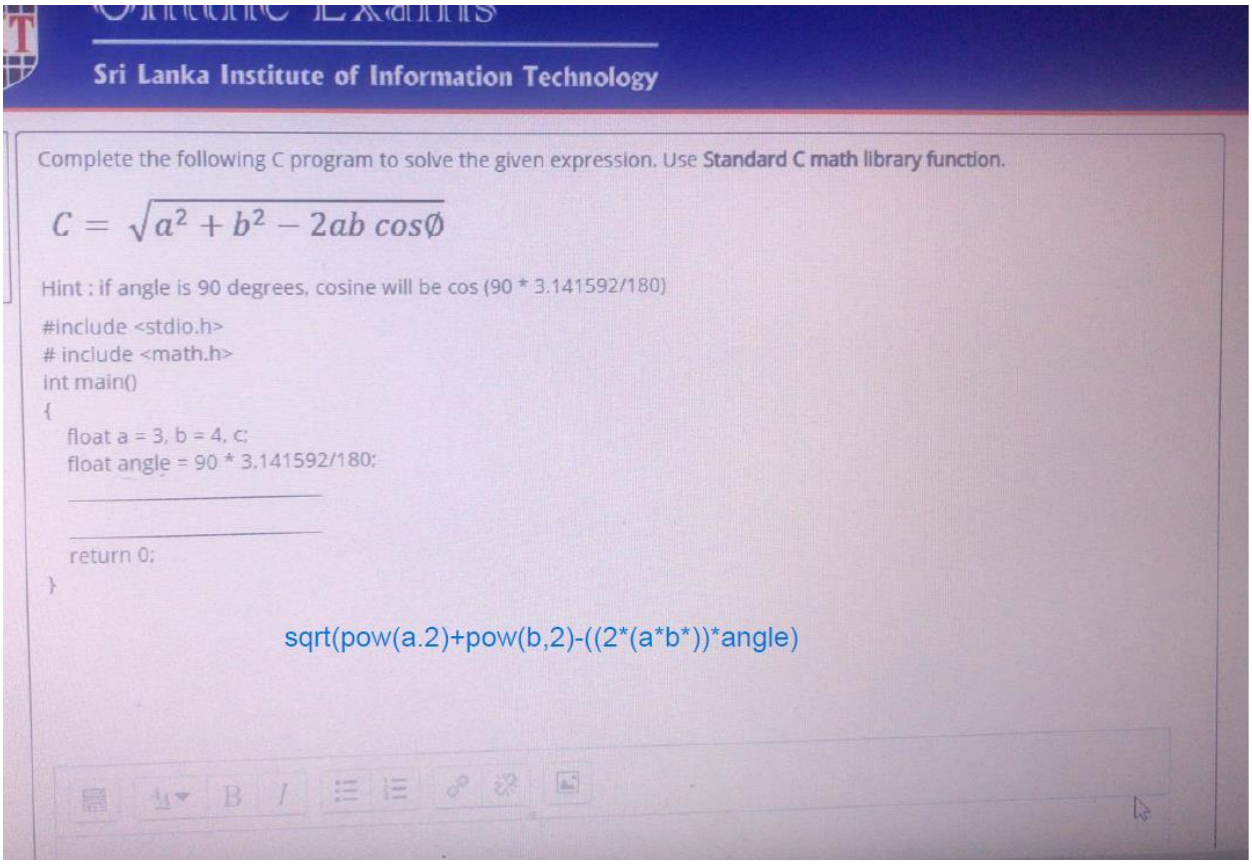
```
int number, newNumber;
printf("Enter Number: ");
scanf("%d", &newNumber);

FILE *numPtr;
numPtr = fopen("number.dat", r+ );
if(numPtr == NULL)
{
        printf("File could not be opened \n");
        return -1;
}

fscanf(numPtr , "%d", &number);
while(!feof( numPtr ))
{
    if( (number == newNumber) || ( number % 2 == 1))
    {
        printf("Invalid Number.");
        return -1;
    }
    fscanf (numPtr , "%d", &number);
}

fprintf(numPtr,"%d ", number );
fclose(numPtr);
return 0;
}
```

Question 28

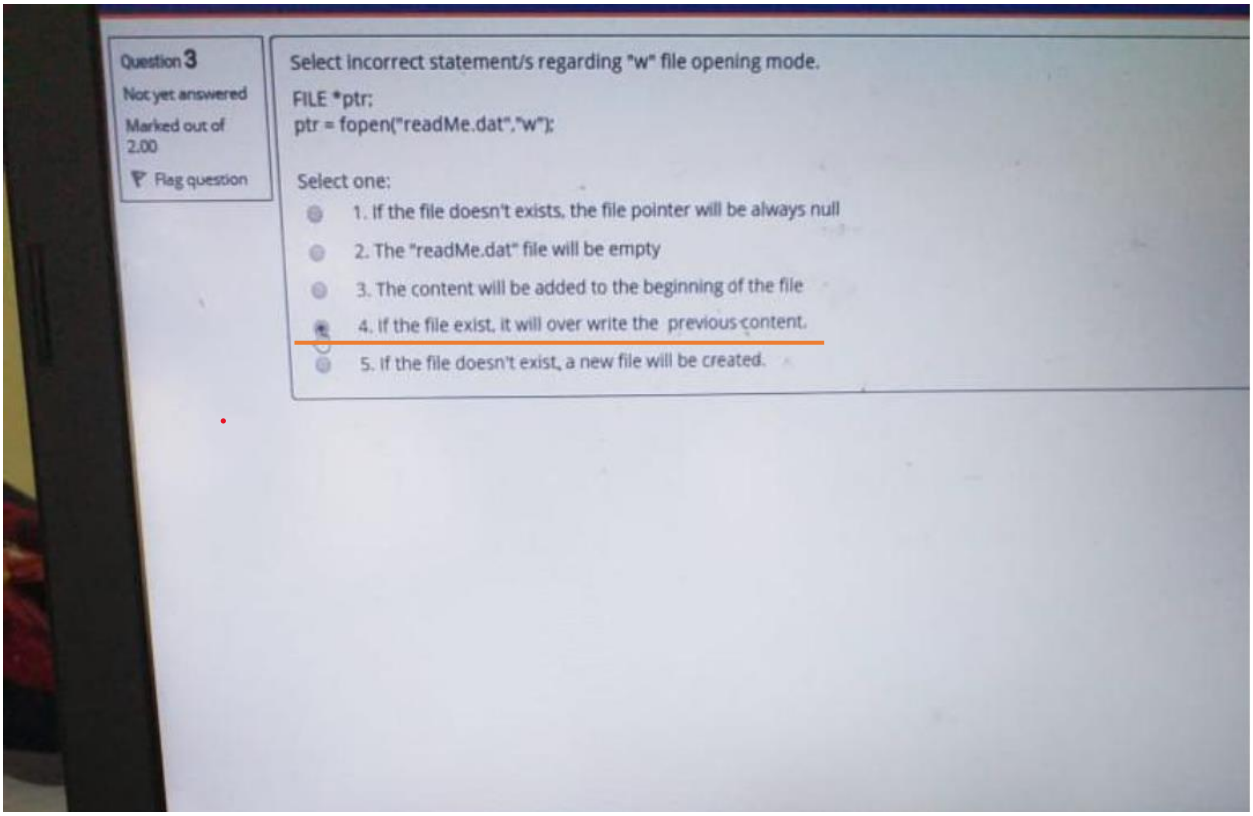
01 :- “a+ “
02 :- numPtr
03 :- newNumber
04 :- fscanf
05 :- newNumber



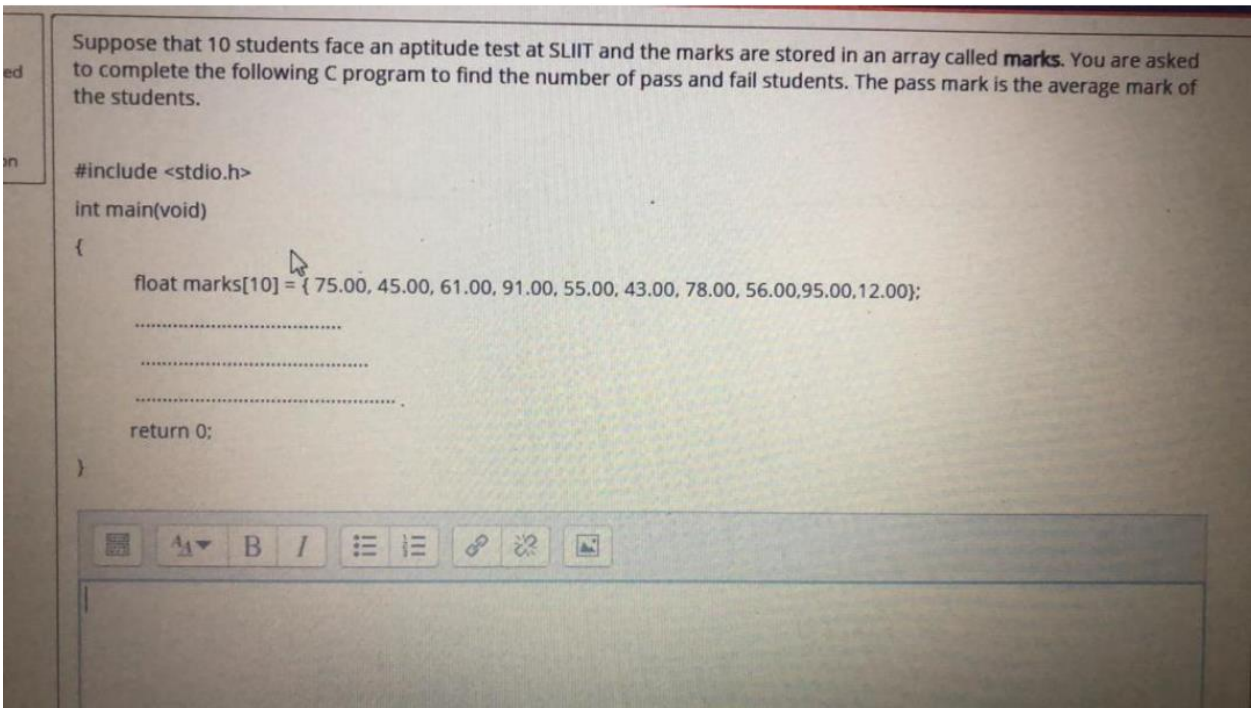
Question 29



Question 30

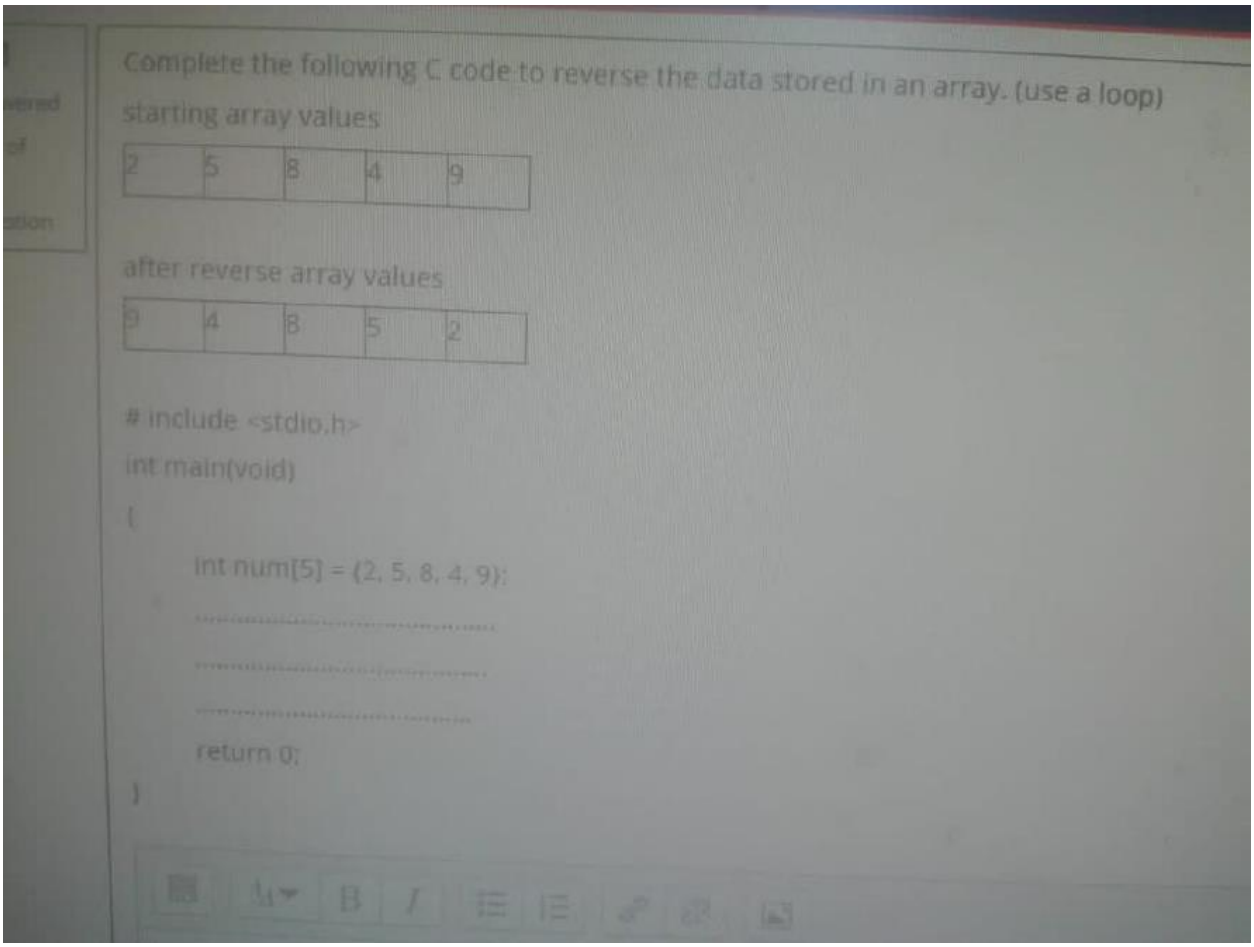


Question 31



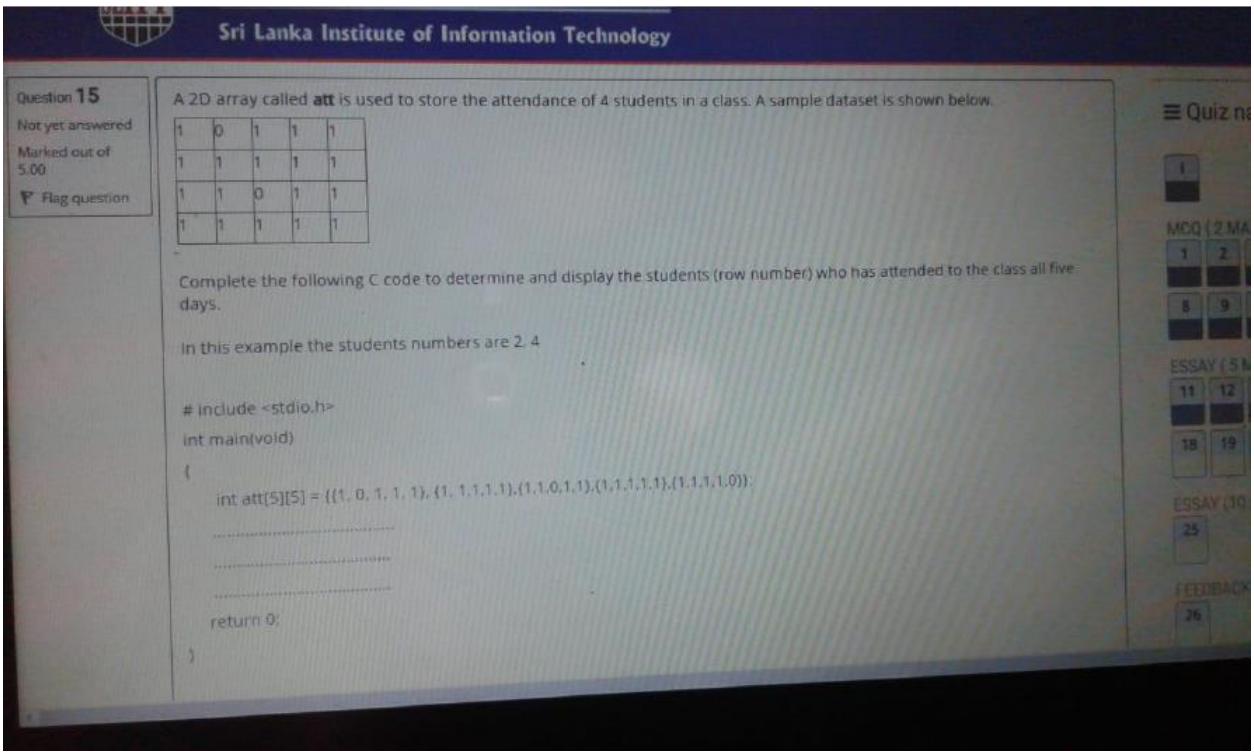
Question 32

```
#include <stdio.h>

int main (void)
{
	int i , pass = 0 , fail = 0;
	float avg = 0 ;
	float marks[10] = {75.00,45.00,61.00,91.00,55.00,43.00,78.00,56.00,95.00,12.00};

	for (i = 0 ; i < 10 ; i++)
	{
		avg += marks[i] ;
	}
	avg = (float)avg / 10.0 ;

	for (i = 0 ; i < 10 ; i++)
	{
		if (avg <= marks[i])
		{
			pass += 1 ;
		}
		else
		{
			fail += 1 ;
		}
	}

	printf("no of pass students = %d\n" , pass);
	printf("no of fail students = %d" , fail);



	return 0 ;
}
```



Question 33

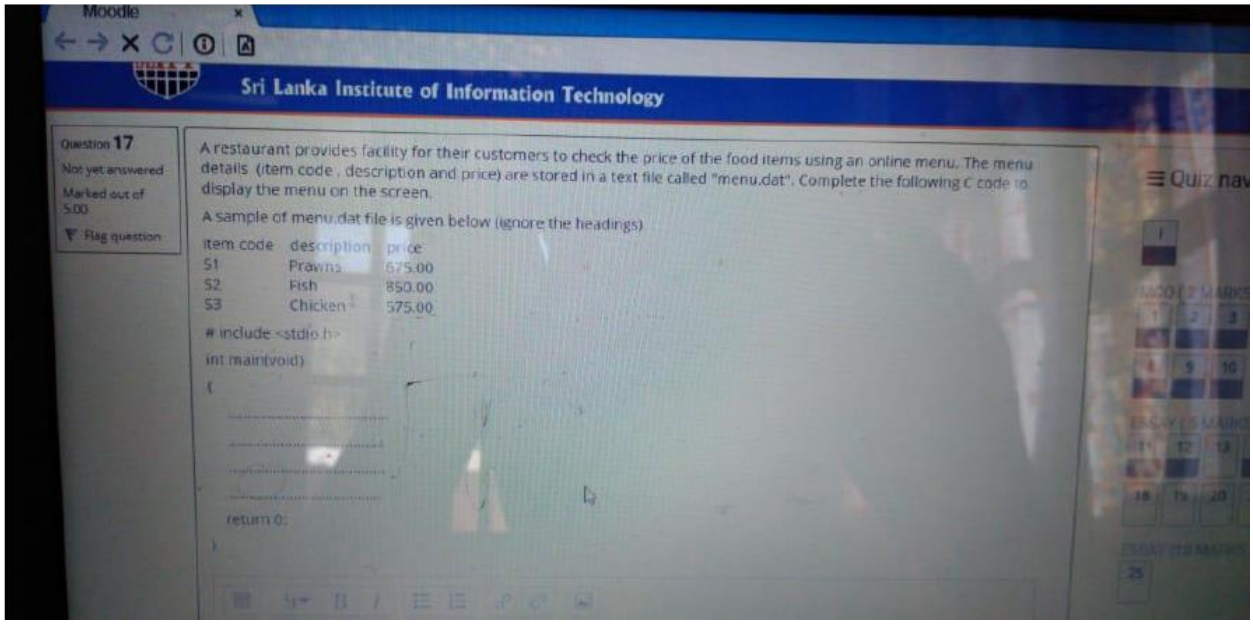
```
#include <stdio.h>

int main (void)
{
	int num[5] = {2,5,8,4,9};
	int reverse[5] ;
	int i , j = 0;

	printf("After reverse array values\n");
	for (i = 4 ; i >= 0 ; i--)
	{
		reverse[j] = num[i] ;
		printf("%d  " , reverse[j]);
		j++ ;
	}

	return 0 ;
}
```



Question 34

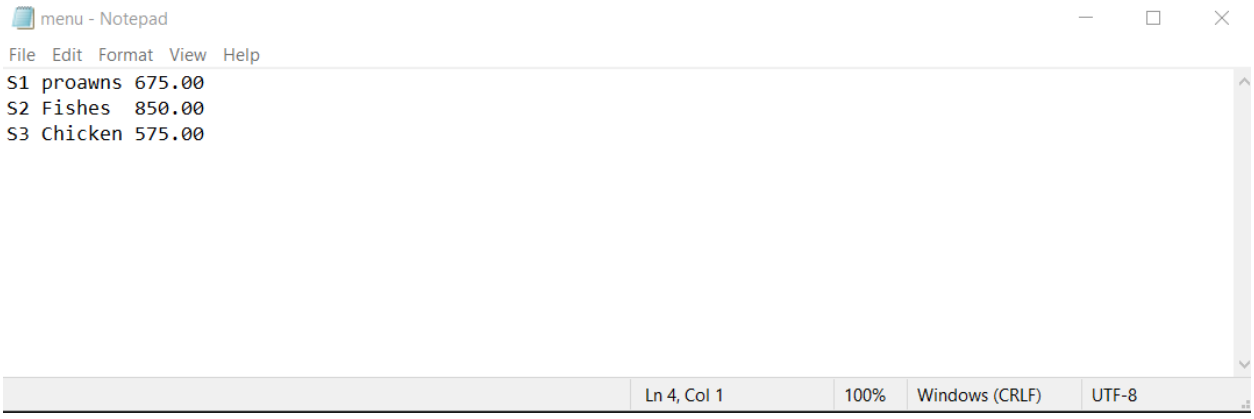
```
#include <stdio.h>

int main (void)
{
	int att[5][5] = {{1,0,1,1,1},{1,1,1,1,1},{1,1,0,1,1},{1,1,1,1,1},{1,1,1,1,0}};
	int i , j , count ;

	printf("All five days attendence students = ");
	for (i = 0 ; i < 5 ; i++)
	{
		count = 0 ;

		for (j = 0 ; j < 5 ; j++)
		{
			if(att[i][j] == 1)
			{
				count += 1 ;
			}
		}
		if(count == 5)
		{
			printf("%d " , i+1 );
```

```
            }
        }

        return 0;
}
```



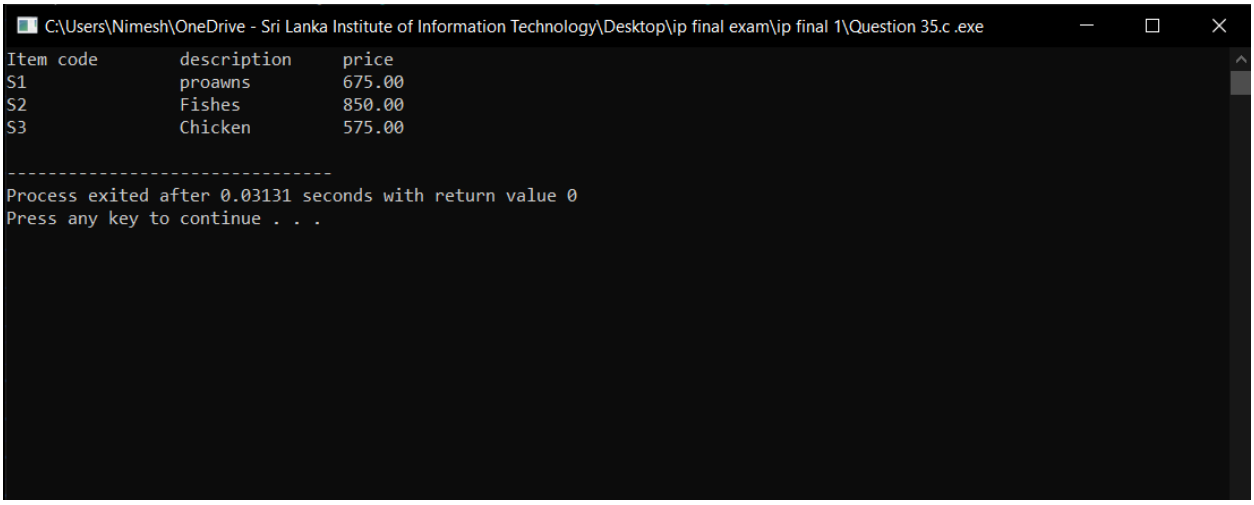
Question 35

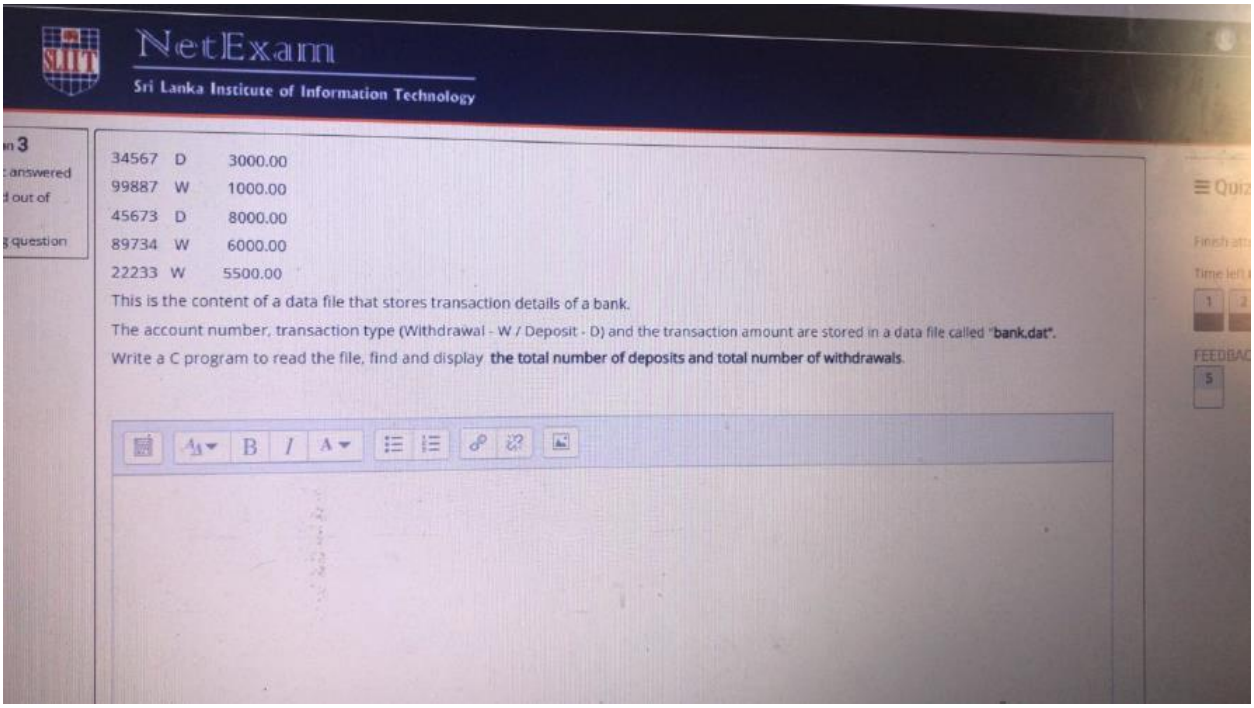
Before the programming Create a file and store the Question's details




```
#include <stdio.h>

int main (void)
{
```

```
        char code[10];
        char discri[50];
        float price ;

        FILE *menu ;
        menu = fopen("menu.dat" , "r+");

        if (menu == NULL)
        {
                printf("File cannot open");
                return -1 ;
        }

        fscanf(menu , "%s %s %f" , code , discri , &price);
        printf("Item code \t description \t price \n");

        while (! feof (menu))
        {
                printf("%s \t\t %s \t %.2f\n" , code , discri , price);
                fscanf(menu , "%s %s %f" , code , discri , &price);
        }
        fclose (menu);
        return 0 ;
}
```



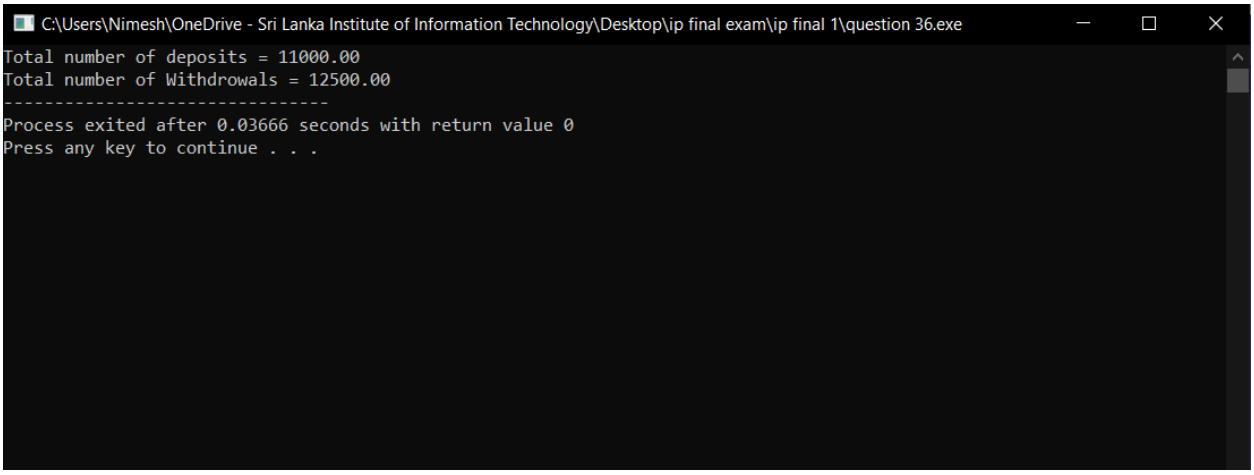


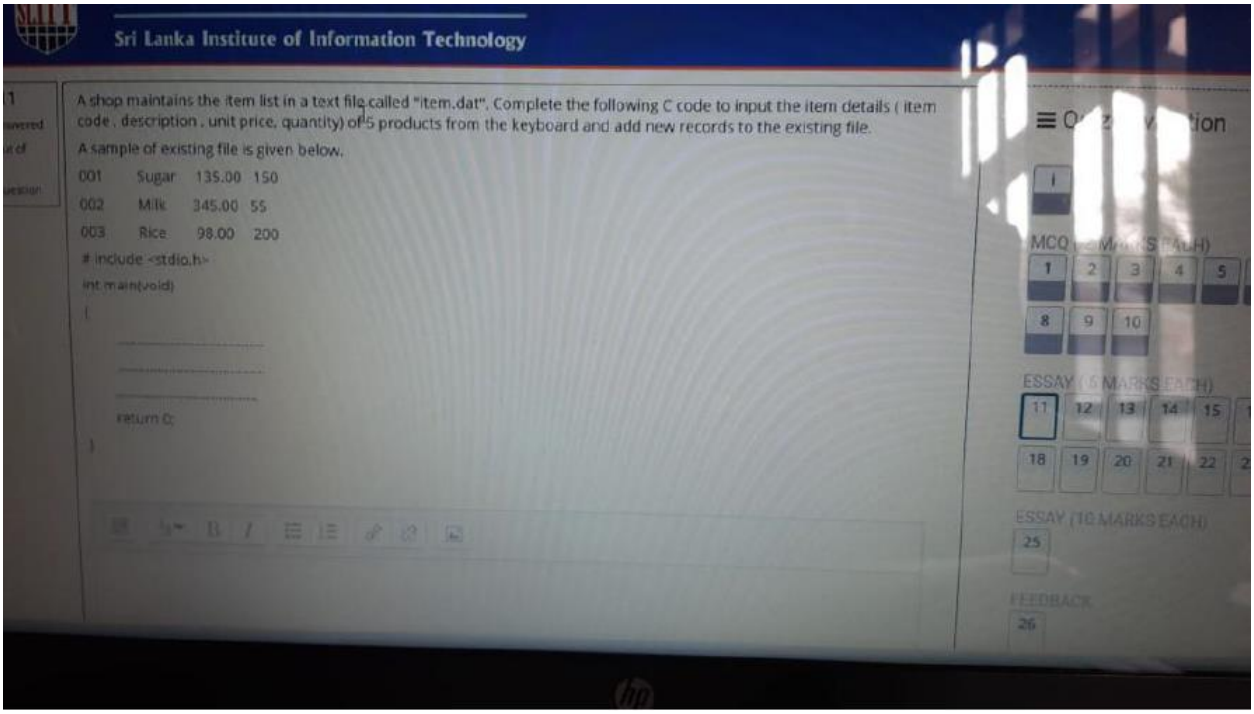
Question 36

Before the programming Create a file and store the Question's details


```
#include <stdio.h>

int main (void)
{
        char type ;
        float amount , deposit = 0 , withdrow = 0;

        FILE *bank ;
        bank = fopen ("bank.dat" , "r+");
```

```
	if(bank == NULL)
	{
		printf("File cannot open");
		return 0 ;
	}

	fscanf(bank , " %*d %c %f" , &type , &amount);

	while (!feof (bank))
	{
		if(type == 'D')
		{
			deposit += amount ;
		}
		else
		{
			withdrow += amount ;
		}
		fscanf(bank , " %*d %c %f" , &type , &amount);
	}

	printf("Total number of deposits = %.2f\n" , deposit);
	printf("Total number of Withdrowals = %.2f" , withdrow);

	return 0 ;
}
```

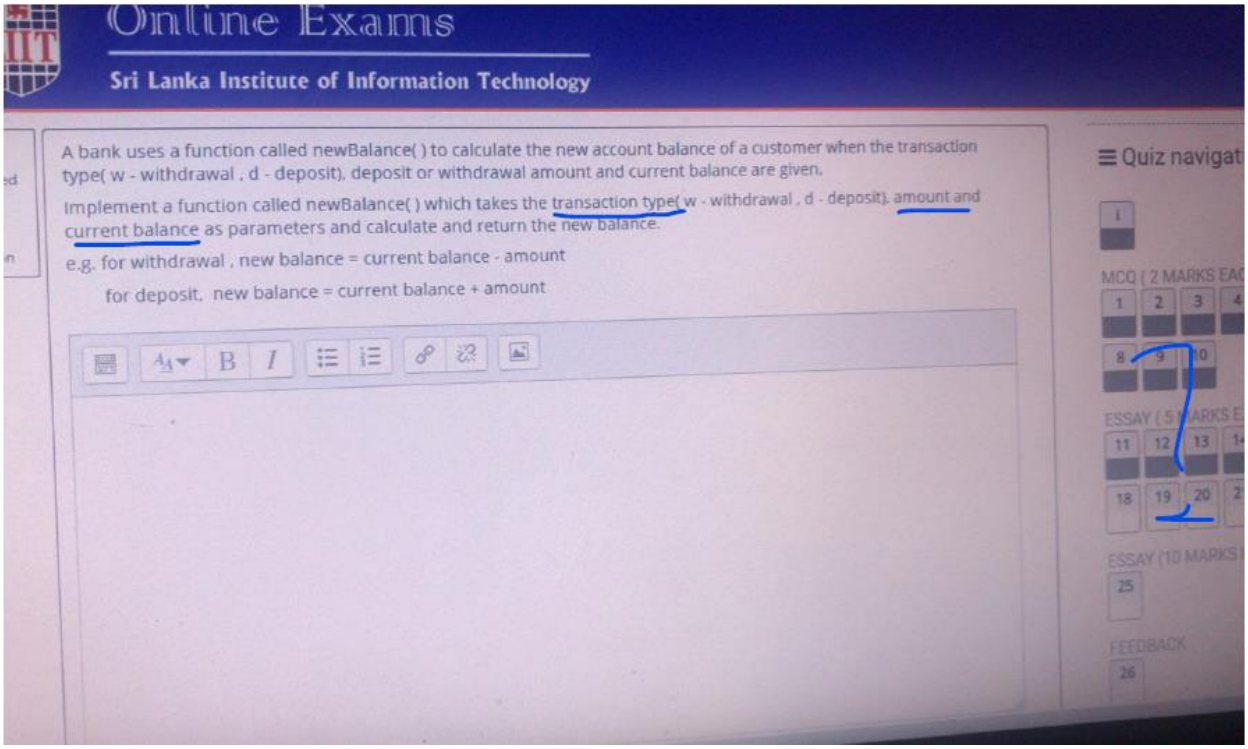




Question 37

```
#include<stdio.h>

int main (void)
{
   char itemCode[5] , description[50];
   float price;
   int i;

   FILE *shop;
   shop = fopen("menu.dat" , "a+");

   if (shop == NULL)
   {
         printf("File cannot open");
         return -1 ;
         }

   for (i = 0 ; i < 3 ; i ++)
   {
      printf("Enter Item Code : ");
      scanf("%s" , itemCode);

      printf("Enter Description : ");
      scanf("%s" , description);
```

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

    fprintf(shop , "%s %s %.2f\n" , itemCode , description , price);
  }

  fclose(shop);

  return 0;
}
```

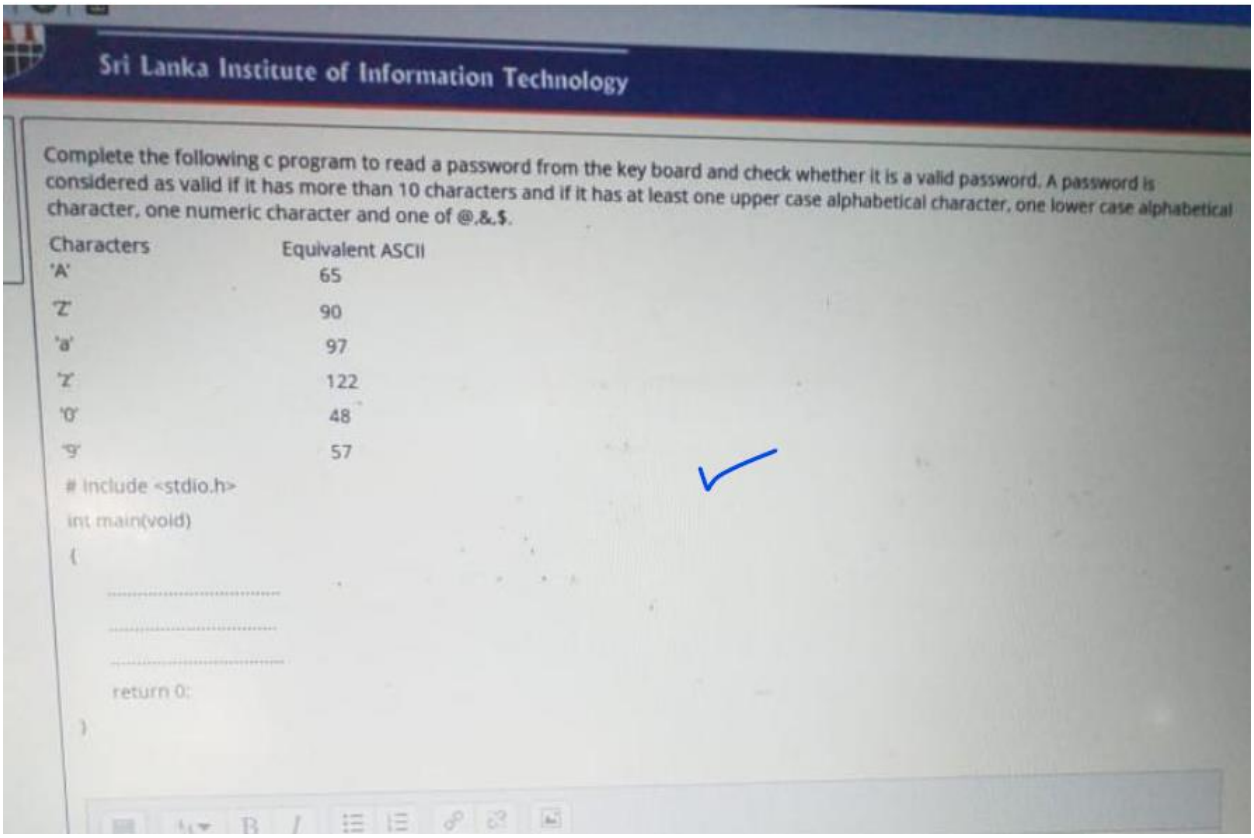


Question 38

…….Here have function implement part only…….

```
newBalance ( float amount , float balance , char type)
{
        float newBlance ;

        if (type == 'w')
        {
                newBalance = balnce - amount ;
                return newBalance ;
```

```
        }
        else if (type == 'd')
        {
                newBalance = balnce + amount ;
                return newBalance ;
        }
}
```



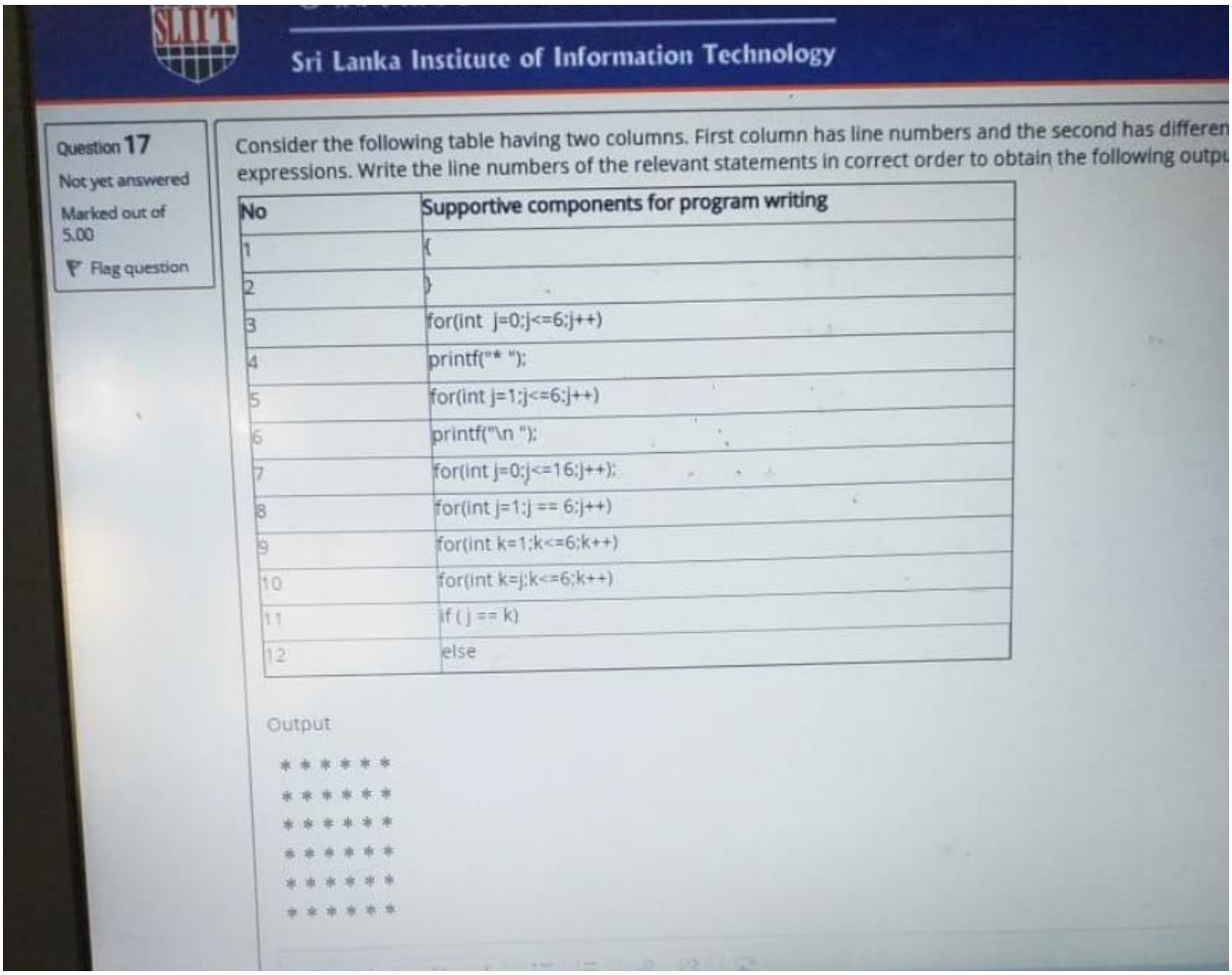
Question 39

…….Here used #include <stdio.h> header file only…….

```
#include <stdio.h>

//function main program execution
int main (void)
{
        char password[100] ;
        int check[4] = {0};
        int len , i ;

        printf("Enter the password :") ;
        scanf("%s" , password);
```

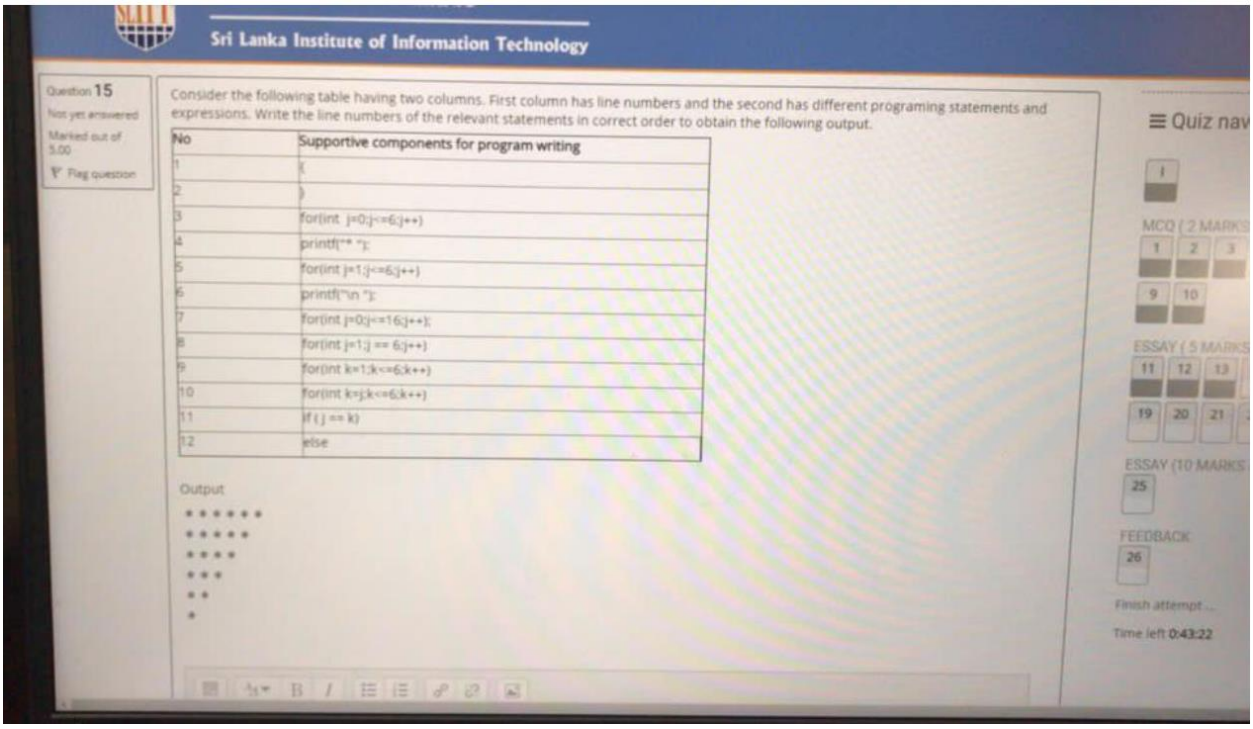
```
for (i = 0 ; password[i] != '\0' ; i++)
{
		if(password[i] >= 65 && password[i] <= 90)
		{
			check[0] += 1 ;
			continue ;
		}

		else if(password[i] >= 97 && password[i] <= 122)
		{
			check[1] += 1 ;
			continue ;
		}

		else if(password[i] >= 48 && password[i] <= 57)
		{
			check[2] += 1 ;
			continue ;
		}

		else if(password[i] == '@' || password[i] == '&' || password[i] == '$')
		{
			check[3] += 1 ;
			continue ;
		}
		else
		{
			printf("\n invalid password");
			return -1 ;
		}
	}

	if (i < 10)
{
	printf("\n invalid password");
		return -1 ;
	}

	for (i = 0 ; i < 4 ; i++)
	{
		if (check[i] == 0)
		{
			printf("\n invalid password");
```

```
                    return -1 ;
                }
        }

        printf("\n valid password");

        return 0 ;
} //end function main
```



Question 40

5 --> 1 --> 9 --> 1 --> 4 --> 2 --> 6 --> 2



Question 41

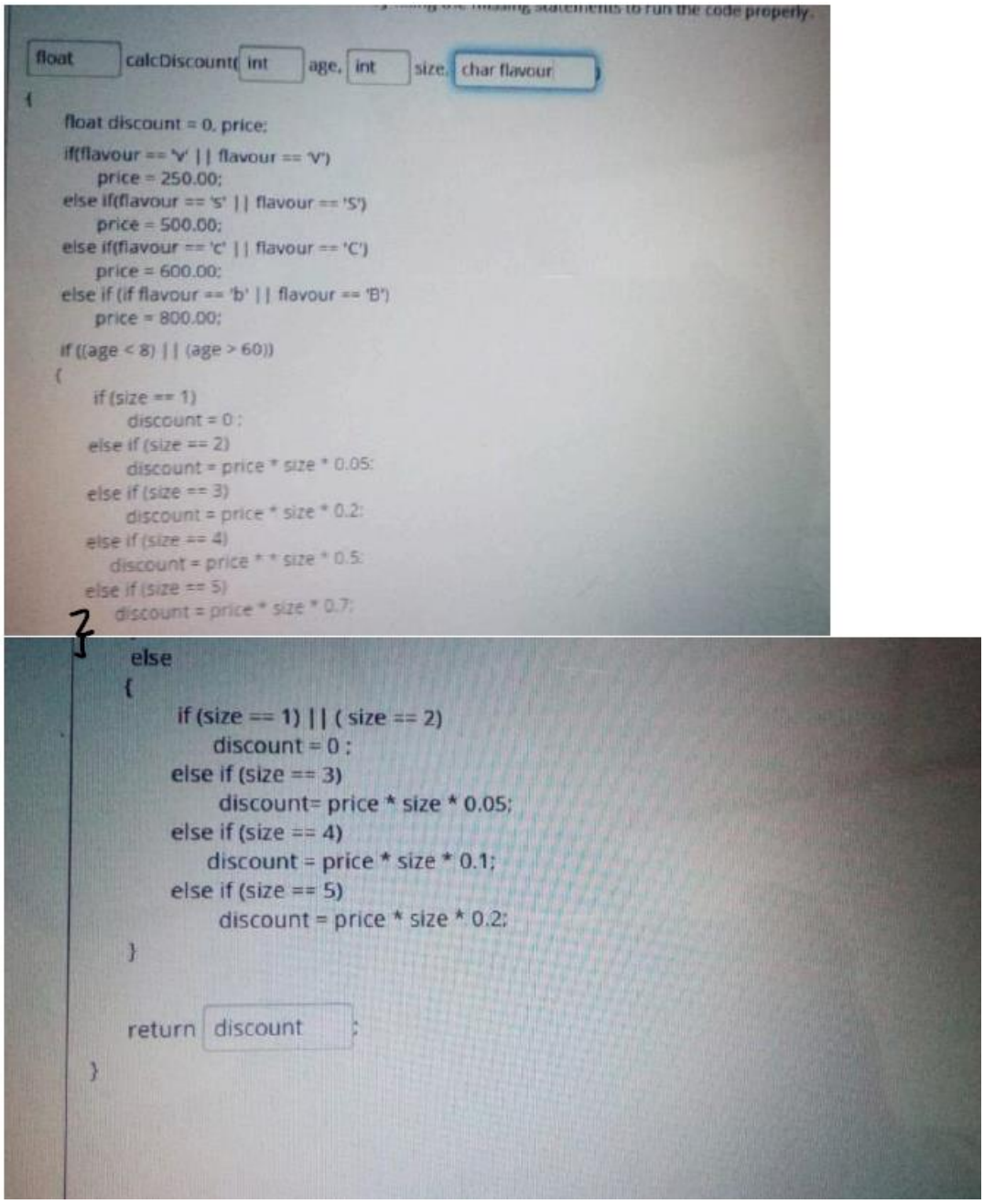
5 --> 1 --> 9 --> 1 --> 4 --> 2 --> 6 --> 2

Ice Cream Discount		
Age	container size	discount
children less than 8 years old and senior citizens	1L	No discount
	2L	5%
	3L	20%
	4L	50%
	5L	70%
For others	1L	No discount
	2L	No discount
	3L	5%
	4L	10%
	5L	20%

and the prices are as follows

Ice Cream Price	
Flavour	Price per liter
Vanilla	250/=
Strawberry	500/=
Chocolate	600/=
Butterscotch	800/=

Complete the following function implementation of ***calcDiscount()*** that takes the size of the ice cream container (**size**), the flavour of the ice cream(**flavour**), and age (**age**) as parameters, which then calculates the discount to be deducted from the total amount. Complete the function by filling the missing statements to run the code properly.



Question 42

01 :- float
01 :- int
03 :- int
04 :- char flavour
05 :- discount