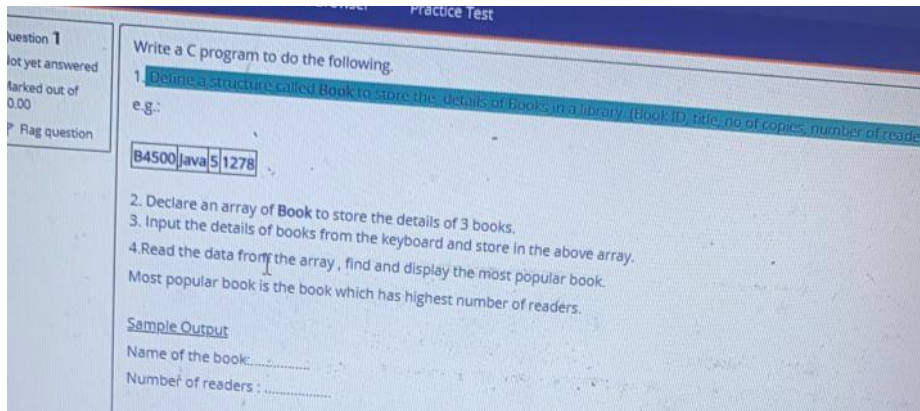


01.



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

```
struct Book {
    char BookID[15];
    char title[25];
    int no_of_copies;
    int number_of_readers;
};
```

```
int main (void){

    struct Book Book[4][3];
    int i, high = 0;
    char name[25];

    for(i=0; i<3; ++i){
        printf("Enter %d the book ID: ", i+1);
        scanf(" %s", &Book[1][i].BookID);

        printf("Enter %d the book title: ", i+1);
        scanf(" %s", &Book[2][i].title);

        printf("Enter %d the number of copies: ", i+1);
        scanf("%d", &Book[3][i].no_of_copies);

        printf("Enter %d the number of readers: ", i+1);
        scanf("%d", &Book[4][i].number_of_readers);

        printf("\n");
    }
```

```

printf("\n");

for(i=0; i<3; ++i){
    printf("%d Book ID: %s", i+1, Book[1][i].BookID); printf("\n");

    printf("%d Book title: %s", i+1, Book[2][i].title); printf("\n");

    printf("%d Number of copies: %d", i+1, Book[3][i].no_of_copies); printf("\n");

    printf("%d Number of readers: %d", i+1, Book[4][i].number_of_readers); printf("\n");

    printf("\n");
}

// if (Book[4][1].number_of_readers > Book[4][2].number_of_readers){
//     if (Book[4][1].number_of_readers > Book[4][3].number_of_readers){
//         }
//     else{
//         }
// }
// else{
//     if (Book[4][2].number_of_readers > Book[4][3].number_of_readers){
//         }
//     else{
//         }
// }

for (i=0; i<3; ++i){
    if(high < Book[4][i].number_of_readers){
        high = Book[4][i].number_of_readers;
        strcpy(name, Book[2][i].title);
    }
}

printf("Name of the Book: %s", name); printf("\n");
printf("Number of readers: %d", high);

```

```
    return 0;  
}
```

02.

Dashboard Examinations Lockdown Browser Practice Test

Question 1
Not yet answered
Marked out of 10.00
Flag question

Write a C program to do the following.

1. Define a structure called **Employee** to store the employee details Employee ID, name, experience (in years) and salary.
e.g.:

E190	Niam	2	35000.00
------	------	---	----------
2. Declare an array of **Employee** to store the details of 3 employees.
3. Input the details of employees from the keyboard and store in the above array.
4. Read the data from the array and display the Employee ID, name and increment.
10% from the salary is given as increment for the employees who has worked more than 2 years.

Sample output

Employee ID	Name	Increment
.....
.....
.....

Marking Guide

- Defining the structure correctly - 2.0 marks
- Declaring arrays correctly - 2.0 mark
- Input data and store in the array - 1.0
- Access array elements - 1.0
- Correct Calculation - 1.5
- Correct Output - 1.0
- Coding standards - 0.5 mark
- Correct compilation of program - 0.5 mark

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

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

```
struct Employee {  
    char EmployeeID[15];  
    char name[25];  
    int experience;  
    float salary;  
};
```

```
int main (void){  
  
    struct Employee Employee[4][3];  
    int i;  
    float increment;  
  
    for(i=0; i<3; ++i){  
        printf("Enter the %d employee ID: ", i+1);  
        scanf("%s", Employee[1][i].EmployeeID);  
  
        printf("Enter the %d employee name: ", i+1);  
        scanf("%s", Employee[2][i].name);
```

```

        printf("Enter the %d employee experience in years: ", i+1);
        scanf("%d", &Employee[3][i].experience);

        printf("Enter the %d employee salary: ", i+1);
        scanf("%f", &Employee[4][i].salary);
        printf("\n");
    }

    printf("\n");
    for(i=0; i<3; ++i){
        printf("Enter the %d employee ID: %s", i+1, Employee[1][i].EmployeeID); printf("\n");

        printf("Enter the %d employee name: %s", i+1, Employee[2][i].name); printf("\n");

        printf("Enter the %d employee experience in years: %d", i+1,
Employee[3][i].experience); printf("\n");

        printf("Enter the %d employee salary: %.2f", i+1, Employee[4][i].salary); printf("\n");
    printf("\n");
    }

    printf("Employee ID \t Name \t Increment"); printf("\n");
    for(i=0; i<3; ++i){
        if (Employee[3][i].experience > 2){
            increment = Employee[4][i].salary * 10.0 / 100.0;
        }

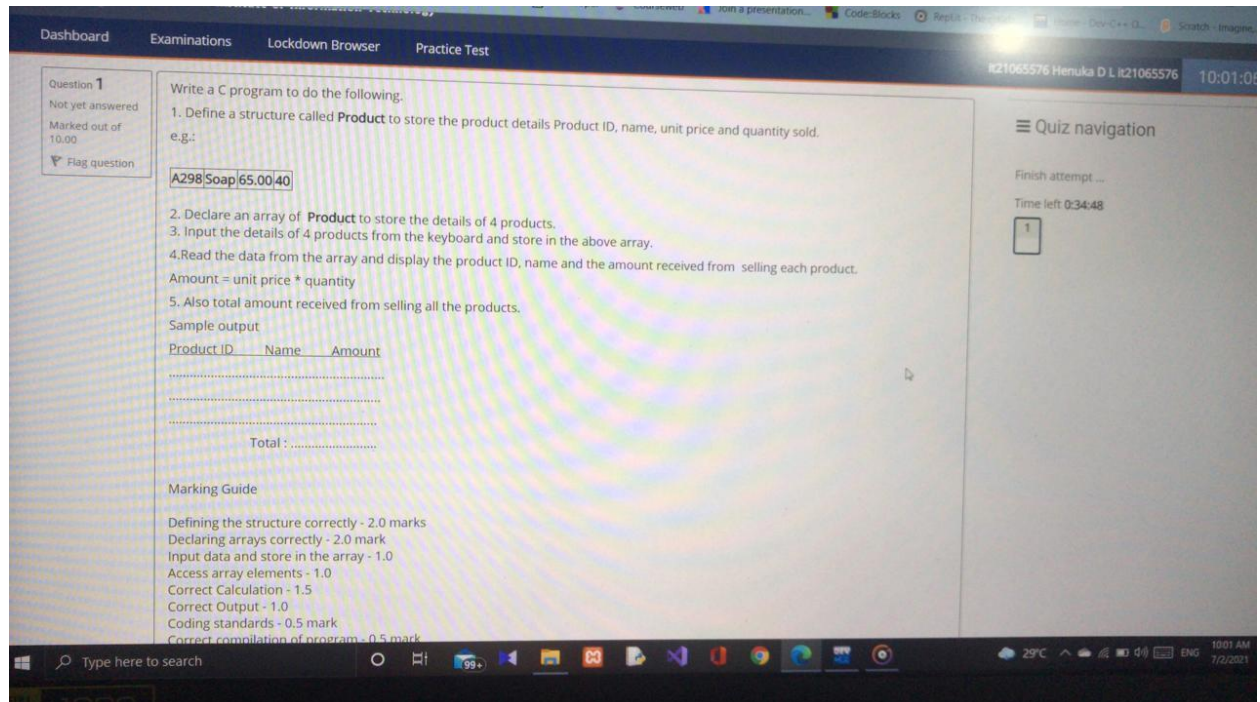
        else{
            continue;
        }

        printf("%s \t\t %s \t %.2f \n", Employee[1][i].EmployeeID, Employee[2][i].name,
increment);
    }

    return 0;
}

```

03.



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

```
struct Product {  
    char ProductID[15];  
    char name[25];  
    float unitPrice;  
    int qty;  
};
```

```
int main (void){
```

```
    struct Product Product[4][4];  
    int i;  
    float total = 0, amount;
```

```
    for(i=0; i<3; ++i){  
        printf("Enter the %d Product ID: ", i+1);  
        scanf("%s", Product[1][i].ProductID);  
  
        printf("Enter the %d Product name: ", i+1);  
        scanf("%s", Product[2][i].name);  
  
        printf("Enter the %d Product price: ", i+1);
```

```

        scanf("%f", &Product[3][i].unitPrice);

        printf("Enter the %d Product qty: ", i+1);
        scanf("%d", &Product[4][i].qty);
        printf("\n");
    }

    printf("\n");
    for(i=0; i<3; ++i){
        printf("Enter the %d Product ID: %s", i+1, Product[1][i].ProductID); printf("\n");

        printf("Enter the %d Product name: %s", i+1, Product[2][i].name); printf("\n");

        printf("Enter the %d Product price: %.2f", i+1, Product[3][i].unitPrice); printf("\n");

        printf("Enter the %d Product qty: %d", i+1, Product[4][i].qty); printf("\n");
    printf("\n");
    }

    printf("Product ID \t Name \t Amount"); printf("\n");
    for(i=0; i<3; ++i){

        amount = Product[3][i].unitPrice * (float)Product[4][i].qty;

        printf("%s \t\t %s \t %.2f \n", Product[1][i].ProductID, Product[2][i].name, amount);

        total = total + amount;
    }

    printf("\t\t Total: %.2f", total);

    return 0;
}

```

04.

Question 1
Not yet answered
Marked out of 10.00
Flag question

A researcher wants to record the rainfall of 4 cities in Sri Lanka for 3 days. He uses a 2D array for this purpose. Sample of a rainfall array is given below.

48	110	98	89
56	67	78	62
49	59	34	68

Write a C program to do the following.

1. Declare a 2D array called **rainfall** with 3 rows and 4 columns.
2. Input the rainfall of 4 cities in Sri Lanka for 3 days and store in the array.
3. Find the maximum rainfall of each day and store those in another array **maxRainfall**.
4. Display the maximum rainfall of each day.

Marking Guide

Declaring arrays correctly - 0.5 mark
Taking keyboard inputs and store in the array- 2 marks
Array Manipulation - 4 marks
Display the output - 2 marks
Coding standards - 0.5 mark
Correct compilation of program - 0.5 mark
Correct execution of the program - 0.5 mark

Quiz navigation

Finish attempt ...

Time left 0:34:51

1

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

```
int main (void){
```

```
    int rainfall[3][4];
```

```
    int x, y, maxRainfall[4] = {0};
```

```
    for(y=0; y<3; ++y){
```

```
        for (x=0; x<4; ++x ){
```

```
            printf("Enter %d day %d city rainfall: ", x+1, y+1);
```

```
            scanf("%d", &rainfall[y][x]);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    printf("\n");
```

```
    for(y=0; y<3; ++y){
```

```
        for (x=0; x<4; ++x ){
```

```
            printf("Enter %d day %d city rainfall: %d", x+1, y+1, rainfall[y][x]); printf("\n");
```

```
        }
```

```
        printf("\n");
```

```
    }
```



```
printf("\n");

for(y=0; y<3; ++y){
    for (x=0; x<4; ++x){
        if (maxRainfall[x] <= rainfall[y][x]){
            maxRainfall[x] = rainfall[y][x];
        }
    }
}

for(x=0; x<4; ++x){
    printf("%d Day Max Rain Fall: %d", x+1, maxRainfall[x]); printf("\n");
}

return 0;
}
```

05.

A shipping company uses a 2D array to record the length, width and height of the boxes they shipped. They have recorded the sizes of 4 boxes in an array call **boxes**.

2	2	2
2	4	4
3	4	4
5	5	3

Write a C program to do the following.

1. Declare an array called **boxes** with 4 rows and 3 columns.
2. Input the length, width and height of 4 boxes and store in the array.
3. Calculate the volume of each box and store in another array called **volume**.
 $\text{volume} = \text{length} \times \text{height} \times \text{width}$
4. Display the volume of each box.

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

```
int main (void){
```

```
    int boxes[4][3];
```

```
    int x, y, volume[4] = {0};
```

```
    for (x=0; x<4; ++x ){
```

```
        printf("Enter %d box length: ", x+1);
```

```
        scanf("%d", &boxes[x][0]);
```

```
        printf("Enter %d box length: ", x+1);
```

```
        scanf("%d", &boxes[x][1]);
```

```
        printf("Enter %d box length: ", x+1);
```

```
        scanf("%d", &boxes[x][2]);
```

```
        printf("\n");
```

```
    }
```

```
    printf("\n");
```

```
    for(y=0; y<4; ++y){
```

```
        for (x=0; x<3; ++x){
```

```
            printf("%d", boxes[y][x]);
```

```
        }
```

```
        printf("\n");
    }

    for (x=0; x<4; ++x ){
        volume[x] = boxes[x][0] * boxes[x][1] * boxes[x][2];
    }

    printf("\n");
    for (x=0; x<4; ++x ){
        printf("%d Box volume: %d", x+1, volume[x]);
        printf("\n");
    }

    return 0;
}
```

06.

Question 1
Not yet answered
Marked out of 10.00
Flag question

The daily temperature of 2 main cities in Sri Lanka is recorded three times a day and stored in a 2D array called `temp`.
At the end of each day, the average temperature of each city is calculated and stored in another 1D array called `avgTemp`.

Write a C program to do the following.

1. Declare an array called `temp` with 2 rows and 3 columns.
2. Input the temperatures from the key board and store in the array.
3. Calculate the average temperature of each city and store the result in `avgTemp` array in the same order of cities.
4. Display the average temperatures of the cities.

example :

	temp array		
	morning	noon	evening
Colombo	29.1	32.6	31.3
Kandy	27.8	30.2	28.4

	avgTemp array
Colombo	31.0
Kandy	28.8

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

```
int main (void){
```

```
    float temp[2][3];
```

```
    int x, y;
```

```
    float avgTemp[2] = {0};
```

```
    for (x=0; x<2; ++x ){
```

```
        printf("Enter %d city morning temp: ", x+1);
```

```
        scanf("%f", &temp[x][0]);
```

```
        printf("Enter %d city afternoon temp: ", x+1);
```

```
        scanf("%f", &temp[x][1]);
```

```
        printf("Enter %d city evening temp: ", x+1);
```

```
        scanf("%f", &temp[x][2]);
```

```
        printf("\n");
    }

    printf("\n");

    for (x=0; x<2; ++x ){
        printf("Enter %d city morning temp: %.1f", x+1, temp[x][0]); printf("\n");

        printf("Enter %d city afternoon temp: %.1f", x+1, temp[x][1]); printf("\n");

        printf("Enter %d city evening temp: %.1f", x+1, temp[x][2]); printf("\n");
    }

    for(x=0; x<2; ++x){
        avgTemp[x] = (temp[x][0] + temp[x][1] + temp[x][2]) / 3.0;
    }

    printf("\n");

    printf("Colombo average tmp: %.1f", avgTemp[0]);
    printf("\n");

    printf("Colombo average tmp: %.1f", avgTemp[1]);

    return 0;
}
```

07.

Question 1

Not yet answered

Marked out of 10.00

Flag question

A chocolate manufacturing company has three machines to produce chocolate balls. 5 chocolate balls from each machine were taken to check the average size of the chocolate balls produce from each machine.

Write a C program to do the following.

1. Declare an array called **size** with 3 rows and 5 columns.
2. Input the size of the chocolate balls from the key board and store the sizes in the array called **size**. Assume that each row in the array represent the size of chocolate balls from one machine.

22	22.5	22.3	22.1	21.9
22.6	22.5	22.4	22.2	22.5
22.3	22.1	22.3	22.3	22.4

3. Find the average size of balls of each machine and store the result in another array called **avgSize**.
4. Display the average size of each machine.

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

```
int main (void){
```

```
    float size[3][5];
```

```
    int x, y;
```

```
    float avgSize[3] = {0};
```

```
    for(y=0; y<3; ++y){
```

```
        for (x=0; x<5; ++x ){
```

```
            printf("Enter %d machine %d chocolate ball size: ", y+1, x+1);
```

```
            scanf("%f", &size[y][x]);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    printf("\n");
```

```
    for(y=0; y<3; ++y){
```

```
        for (x=0; x<5; ++x ){
```

```
            printf("%.1f \t", size[y][x]);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    for(x=0; x<3; ++x){
```

```
        avgSize[x] = (size[x][0] + size[x][1] + size[x][2] + size[x][3] + size[x][4]) / 5.0;
```

```
}

printf("\n");

for(x=0; x<3; ++x){
    printf("%d machine chololate ball average size: %.1f", x+1, avgSize[x]);
    printf("\n");
}

return 0;
}
```

08.

The screenshot shows a web browser window with multiple tabs. The active tab is titled 'Online Test 5'. The address bar shows the URL: <https://netexam.slit.jk/mod/quiz/attempt.php?attempt=128130&cmid=2929>. The browser's navigation bar includes 'Dashboard', 'Examinations', 'Lockdown Browser', and 'Practice Test'. The user's ID is 'it21004018 Mawaththa W.R.Y it21004018' and the time is '13:30:32'.

Question 1
Not yet answered
Marked out of 10.00
Flag question

An exam consists of 2 components and 5 students participate for the exam. The marks of both components (out of 100) of all the students are stored in an integer 2D array called **marks**. Each row in the array represents component 1 and component 2 marks of a student. A sample of **marks** array is given below.

30	54
46	55
89	85
90	78
64	73

Write a C program to do the following.

1. Declare an array called **marks** with 5 rows and 2 columns.
2. Read the marks of 5 students and store the marks in the **marks** array.
3. Find the final mark of each student and store the result in another array called **finalMark**.
Final mark = component 1 * 40% + component2 * 60%
4. Display the final marks of each student.

Quiz navigation

Finish attempt ...

Time left 0:34:55

1

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

```
int main (void){
```

```
    int marks[2][5];
```

```
    int x, y;
```

```
    float finalMark[5] = {0};
```

```
    for(y=0; y<2; ++y){
```

```
        for (x=0; x<5; ++x ){
```

```
            printf("Enter %d component of %d student: ", y+1, x+1);
```

```
            scanf("%d", &marks[y][x]);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    printf("\n");
```

```
    for(y=0; y<5; ++y){
```

```
        for (x=0; x<2; ++x ){
```

```
            printf("%d \t", marks[x][y]);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    for(x=0; x<5; ++x){
```

```
        finalMark[x] = ((float)marks[0][x] * 40 / 100.0) + ((float)marks[1][x] * 60 / 100.0);
```

```
    }
```



```
printf("\n");

for(x=0; x<5; ++x){
    printf("%d student final marks: %.2f", x+1, finalMark[x]);
    printf("\n");
}

return 0;
}
```