

**Questions**

CMQ7.

Write a C program to display the subject and mark information using Memory Allocation for Structure.

Sample Input:

Enter the number of records: 2

Enter subject 1 and marks:

Science 82

Enter subject 2 and marks:

DSA 73

Sample Output :

Science 82

DSA 73

C Run Save Logout

```
1. #include<stdio.h>
2. struct student
3. {
4.     char subname[50];
5.     int rec;
6.     int marks;
7. };
8. int main()
9. {
    struct student s;
    printf("enter the number of records \n :");
    scanf("%d enter the record \n:");
    printf("%d",s.rec);
    printf("enter subject 1 and marks \n:");
    scanf("%s enter the subname:\n");
    printf("%s",s.subname);
    scanf("%d enter the mark\n");
}
```

science 82

dsa 72

CMQ1

CMQ2

CMQ2

CMQ3

CMQ4

CMQ5

CMQ6

Questions  
CMQ7.

Write a C program to display the subject and mark information using Dynamic Memory Allocation for Structure.

## Sample Input:

```
Enter the number of records: 2
Enter subject 1 and marks:
Science 82
Enter subject 2 and marks:
DSA 73
```

## Sample Output :

```
Science 82
DSA 73
```

C Run Save

```
1. #include<stdio.h>
2. struct student
3. {
4.     char subname[50];
5.     int rec,;
6.     int marks;
7. };
8. int main()
9. {
10.
11.     char subname[50];
12.     int rec,i,marks;
13.     printf(" enter the number of records :");
14.     scanf(" %d enter the record num :",&rec);
15.     for(i=1;i<=rec;i++)
16.     {
17.         struct student s;
18.
19.         printf(" \n enter subject %d :",i);
20.
21.         scanf("%s",&s.subname);
22.
23.         scanf("%d",&s.marks);
24.         printf("\n subject name %s",s.subname);
25.         printf("\n marks %d ",s.marks);
26.
27.     }
28.
29.
30.
31.     return 0;
}
```

## Test Cases

```
Enter the number of records :4 (Any details of subject and marks )
Enter the number of records :A
Enter the number of records :1 (CPP 74.5 )
Enter the number of records :1 (CPP seventy)
Enter the number of records :1 (233 75)
```

CMQ18  
CMQ19  
CMQ20  
CMQ21  
CMQ22  
CMQ23  
CMQ24  
CMQ25  
CMQ26  
CMQ27  
CMQ28

Logout

```
2
science
82
dsa
72
```

```
enter the number of records
enter subject 1
subject name science
marks 82
enter subject 2
subject name dsa
marks 72
```

## Questions

CMQ15.

Write a program in C to swap elements using call by reference.

## Test Cases

- CMQ10
- CMQ11
- CMQ12
- CMQ14
- CMQ16
- CMQ17
- CMQ18

Test Data :

Input the value of 1st element : 5  
Input the value of 2nd element : 6  
Input the value of 3rd element : 7

Expected Output :

The value before swapping are :  
element 1 = 5  
element 2 = 6  
element 3 = 7

C Run Save Logout

```
1. #include<stdio.h>
2. long addtwonumbers(long*,long*);
3. int main()
4. {
5.     long fno,sno,sum;
6.     printf("enter 1st name:\n");
7.     scanf("%d",&fno);
8.     printf(" enter 2nd num:\n");
9.     scanf("%d",&sno);
10.    sum=addtwonumbers(&fno,&sno);
11.    printf("sum of %d and %d is:%d\n",fno,fno,sum);
12.    return 0;
13. }
14. long addtwonumbers(long*n1,long*n2)
15. {
16.     long sum;
17.     sum=*n1+*n2;
18.     return sum;
19. }
```

5

.6

enter 1st name:  
enter 2nd num:  
sum of 5 and 5 is:11



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Questions  
CMQ11.

Write a Program to find the Maximum and Minimum value in a given array of numbers.

Sample Input:

Enter no. of elements in an array 5

Enter the elements:

1 2 3 4 5

Output:

Maximum of an array 5

Minimum of an array 1

## Test Cases

- CMQ10
- CMQ11
- CMQ12
- CMQ13
- CMQ14
- CMQ15
- CMQ16
- CMQ17
- CMQ18

C Run Save Logout

```

1. #include <stdio.h>
2. #include <conio.h>
3.
4.
5.
6. int main()
7. {
8.     int a[1000],i,n,min,max;
9.
10.    printf("Enter size of the array : ");
11.    scanf("%d",&n);
12.
13.    printf("Enter elements in array : ");
14.    for(i=0; i<n; i++)
15.    {
16.        scanf("%d",&a[i]);
17.    }
18.
19.    min=max=a[0];
20.    for(i=1; i<n; i++)
21.    {
22.        if(min>a[i])
23.            min=a[i];
24.        if(max<a[i])
25.            max=a[i];
26.    }
27.    printf("minimum of array is : %d\n min");

```

4  
1 2 3 4

Enter size of the array : Enter elements in array : minimum of array is : 1 maximum of array is : 4

## Questions

CMQ4.

Write a program to print the all Odd numbers and number of even numbers.

Sample Input:

M = 6

N = 15

Sample Output:

All Odd Numbers = 7,9,11,13

All Even Numbers = 8,10,12,14

## Test Cases

1. M = 100, N = 100
2. M = 500, N = 100
3. M = -5, N = 4
4. M = 72, N = -72
5. M = 0, N = 0

- CMQ1
- CMQ2
- CMQ2
- CMQ3
- CMQ4
- CMQ5
- CMQ6
- CMQ7**
- CMQ8
- CMQ9

C Run Save

Logout

```
1. #include<stdio.h>
2. void main(){
3. int num,m=20,n=40;
4. clrscr();
5. printf("print odd num: \n");
6. for(num=m;num<=n;num++){
7. if(num%2==1)
8. printf("%d",num);
9. }
10. getch();
11. }
```

6  
15

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## Questions

CMQ1.

A year has 365 days but leap year consists of 366 days. This one day

## Test Cases

1. 04/11/1947
2. 11/15/1936
3. 31/45/1996
4. 64/09/1947
5. 00/00/2000

- CMQ1
- CMQ2
- CMQ2
- CMQ3
- CMQ4
- CMQ5
- CMQ6
- CMQ7
- CMQ8
- CMQ9

Sample Input:

Enter Date : 04/11/1947

Sample Output:

Given year is Non Leap Year

C Run Save

Logout

```
1. #include <stdio.h>
2. int main()
3. {
4. int year;
5. printf("Enter a Year: ");
6. scanf("%d", &year);
7. if (year % 4 == 0)
8. {
9.
10. if (year % 100 == 0)
11. {
12. if (year % 400 == 0)
13. printf("%d is a Leap Year.", year);
14. else
15. printf("%d is Not a Leap Year.", year);
16.
17. } else
```

04/11/1947

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## Questions

CMQ17.

Write a program in C to compute the sum of all elements in an array using pointers.

Test Data :

Input the number of elements to store in the array (max 10) : 5

Input 5 number of elements in the array :

```
element - 1 : 2
element - 2 : 3
element - 3 : 4
element - 4 : 5
element - 5 : 6
```

Expected Output :

Run

Save

```
1. #include<stdio.h>
2. int main(){
3.     int arr[5]={4,5,6,7,8};
4.     int *ptr= arr ;
5.     int sum=0;
6.     for(int i=0;i<=5;i++){
7.         sum+=*(ptr+i);
8.     }
9.     printf("the sum :%d",sum);
10.    return 0;
11. }
```

## Test Cases

- 1. N = 0,1,3,8,7,-5
- 1. N = 5,5,5,5,5,4
- 2. N = -2,2,-2,4,-4
- 3. N = -5,55,30,0,5
- 4. N = 0,2,2,4,5,8

CMQ18  
CMQ19  
CMQ2  
CMQ20  
CMQ3  
 CMQ4  
 CMQ5  
 CMQ6  
 CMQ7  
 CMQ8  
 CMQ9

Logout

Your Input Goes Here...!!!

the sum :30

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## Questions

CMQ14.

Write a program in C to store n elements in an array and print the elements using pointer.

Test Data :

Input the number of elements to store in the array :

Input 5 number of elements in the array :

element - 0 : 5  
element - 1 : 7  
element - 2 : 2  
element - 3 : 9  
element - 4 : 8

Expected Output :

## Test Cases

1. N = 16
2. N = -8
3. N = 0
4. N = -10.01
5. N = 11.22

CMQ10

CMQ18

C Run Save Logout

```
1. #include<stdio.h>
2. int main(){
3. int n,i;
4. printf("enter element ");
5. scanf("%d",&n);
6. int arr[n];
7. printf("enter %d element",n);
8. for(i=0;i<n;i++){
9. scanf("%d",&arr[i]);
10. }
11. int *ptr=arr;
12. printf("element array ");
13. for(i=0;i<n;i++){
14. printf("%d",*(ptr + i));
15. }
16. return 0;
17. }
```

5  
2  
3  
4  
5

enter element enter 5 element element array  
23451

Sample Input :

Number : 14567

Sample Output:

Reverse Number : 76543

3. AD1947

4. !@#%\$%

5. 1457999=144855

```
1. #include<stdio.h>
2. int main()
3. {
4.     int num,rev,n;
5.     printf("enter the number");
6.     scanf("%d",&num);
7.
8.     while(num!=0)
9.     {
10.         n=num%10;
11.         rev=rev*10+n;
12.         num/=10;
13.     }
14.     printf("%d",rev);
15.     return 0;
16. }
```

7896

enter the number6987

Questions  
CMQ20.

Write a program to reverse a number using function?(Get the input from user).

Sample Input:

Number: 14567

Sample Output:

Reverse Number: 76541

Test Cases

1. -45721
2. 000
3. AD1947
4. 1@#%\$%
5. 145\*999=144855

CMQ20

CMQ21

CMQ22

CMQ23

CMQ24

CMQ25

CMQ26

CMQ27

Run Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4. int num,rev,n;
5. printf("enter the number");
6. scanf("%d",&num);
7.
8. while(num!=0)
9. {
10. n=num%10;
11. rev=rev*10+n;
12. num/=10;
13. }
14. printf("%d",rev);
15. return 0;
16. }
```

7896

enter the number6987

13:44  
ENG IN dB ID 01-04-2021

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ions

a program to find the sum and average of the elements in an array

e Input;

of elements = {16, 18, 27, 16, 23, 21, 19}

Sample Output:

140

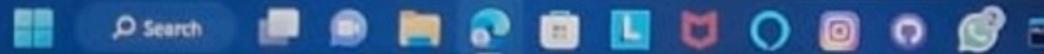
age = 20

Test Cases

Run

Save

```
1. #include<stdio.h>
2. int main()
3. {
4.     int a[50],n,i,sum=0,avg=0;
5.     printf("enter the number of elements in array : ");
6.     scanf("%d",&n);
7.     printf("\nEnter the elements one by one : ");
8.     for(i=1;i<=n;i++)
9.     {
10.         scanf("%d",&a[i]);
11.     }
12.     for(i=1;i<=n;i++)
13.     {
14.         sum=sum+a[i];
15.         avg=sum/n;
16.     }
17.     printf("\nthe sum of elements in array is %d",sum);
18.     printf("\nthe avg of elements in array is %d",avg);
```



# SIMATS | Saveetha School of Engineering

## Questions

CMQ9

Write a program to find the sum and average of the elements in an array

Sample Input:

Array of elements = {16, 18, 27, 16, 23, 21, 19}

Sample Output:

Sum = 180

Average = 20

## Test Cases

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CMQ21  
CMQ212  
CMQ213  
CMQ214  
CMQ215  
CMQ216  
CMQ217  
CMQ218  
CMQ219  
CMQ22  
CMQ23

```
1. #include<stdio.h>
2. int main()
3. {
4.     int a[50],n,i,sum=0,avg=0;
5.     printf("enter the number of elements in array : ");
6.     scanf("%d",&n);
7.     printf("enter the elements one by one : ");
8.     for(i=1;i<n;i++)
9.     {
10.         scanf("%d",&a[i]);
11.     }
12.     for(i=1;i<n;i++)
13.     {
14.         sum=sum+a[i];
15.     }
16.     avg=sum/n;
17.     printf("\nthe sum of elements in array is %d",sum);
18.     printf("\nthe avg of elements in array is %d",avg);
```

7  
16  
18  
27  
16  
23  
21  
19

enter the number of elements in array :  
enter the elements one by one :

