

CSA0265

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Simats C IDE

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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

CMQ1
CMQ10
CMQ11
CMQ12
CMQ13
CMQ14
CMQ15
CMQ16
CMQ17
CMQ18

C

Run

Save

Logout

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

5
1
2
3
4
5

Enter size of array:
Enter the elements:
Min num in array:1

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Questions

CMQ13.

Write a program in C to add numbers using call by reference.

Test Data :
Input the first number : 5
Input the second number : 6

Expected Output :
The sum of 5 and 6 is 11

Test Cases

- X = 0, N = 4
- X = 5, N = 0
- X = -3, N = 3
- X = 0, N = 0
- X = 123, N = 123

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 num:\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,sno,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 num:
Enter 2nd num:
Sum of 5 and 6 is:11

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Questions

CMQ15.

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

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

Test Cases

CMQ1
CMQ10
CMQ11
CMQ12
CMQ13
CMQ14
CMQ15
CMQ16
CMQ17
CMQ18

C

Run

Save

Logout

```
1. #include<stdio.h>
2. void swap(int*,int*,int*);
3. int main()
4. {
5.     int x,y,z;
6.     printf("Enter x and y values:");
7.     scanf("%d%d",&x,&y,&z);
8.     printf("Before swapping\n x:%d \n y:%d \n z:%d",x,y,z);
9.     swap(&x,&y,&z);
10.    printf("After swapping: \n x:%d \n y:%d \n z:%d",x,y,z);
11.    return 0;
12. }
13. void swap(int *a, int *b,int *c)
14. {
15.     int temp;
16.     temp=*a;
17.     *a=*b;
18.     *b=*c;
19.     *c=temp;
20. }
```

5
6
7

Enter x and y values:Before swapping
x:5

Search

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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. !@#\$%
5. 145*999=144855

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int findreverse(int n)
3. {
4.     int sum=0;
5.     while(n!=0)
6.     {
7.         sum=sum*10+n%10;
8.         n/=10;
9.     }
10.    return sum;
11. }
12. int main()
13. {
14.     int number,reverse;
15.     printf("Enter number:");
16.     scanf("%d",&number);
17.     reverse=findreverse(number);
18.     printf("\nReverse order of %d is:%d",number,reverse);
19.     return 0;
20. }
```

14567

Enter number:
Reverse order of 14567 is:76541

Search

ENG IN

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Questions

CMQ10.

Write a Program to display the diagonal elements in a matrix array and also find the sum of them.

Sample input:

```
1 2 3
4 5 6
7 8 9
```

Output:

Diagonal Elements are 1 5 9
Sum of diagonal elements = 15

Test Cases

CMQ10.1
CMQ10.2
CMQ10.3
CMQ10.4
CMQ10.5
CMQ10.6
CMQ10.7
CMQ10.8
CMQ10.9
CMQ10.10

```
1. #include<stdio.h>
int main(){
    int rows,cols,matrix[5][5];
    printf("Enter the number of rows:");
    scanf("%d",&rows);
    printf("Enter the number of cols:");
    scanf("%d",&cols);
    printf("Enter the elements in the matrix:");
    for(int i=0;i<rows;i++){
        for(int j=0;j<cols;j++){
            scanf("%d",&matrix[i][j]);
        }
    }
}
```

```
3
3
1 2 3
4 5 6
7 8 9
```

Questions

CMQ16.

Write a program in C to find the factorial of a given number using pointers.

Test Data :

Input a number : 5

Expected Output :

The Factorial of 5 is : 120

Test Cases

1. N = 0
2. N = -5
3. N = 1
4. N = M
5. N = %

CMQ16.1
CMQ16.2
CMQ16.3
CMQ16.4
CMQ16.5
CMQ16.6
CMQ16.7
CMQ16.8
CMQ16.9
CMQ16.10

Questions

CMQ16.

Write a program in C to find the factorial of a given number using pointers.

Test Data :

Input a number : 5

Expected Output :

The Factorial of 5 is : 120

Test Cases

1. N = 0
2. N = -5
3. N = 1
4. N = M
5. N = %

CMQ16.1
CMQ16.2
CMQ16.3
CMQ16.4
CMQ16.5
CMQ16.6
CMQ16.7
CMQ16.8
CMQ16.9
CMQ16.10

```
1. #include<stdio.h>
int factorial(int *n){
    int fact=120;
    for(int i=1;i<=*n;i++){
        fact *=i;
    }
    return fact;
}
int main(){
    int n,fact;
    printf("Enter the number:");
    scanf("%d",&n);
    fact=factorial(&n);
    printf("The factorial of given number is %d",fact);
}
```

5

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 :

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 = -5,5,30,0,5

4. N = 0,2,2,4,5,8

CMQ15

CMQ16

CMQ17

CMQ18

CMQ19

CMQ20

CMQ21

CMQ22

CMQ23

CMQ24

CMQ25

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 :

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 = -5,5,30,0,5

4. N = 0,2,2,4,5,8

CMQ15

CMQ16

CMQ17

CMQ18

CMQ19

CMQ20

CMQ21

CMQ22

CMQ23

CMQ24

CMQ25

C

Run

Save

Logout

```
1. #include<stdio.h>
int main(){
int arr[5];
int *ptr=arr;
int sum=0;
printf("Enter the 5 integer elements");
for(int i=0;i<5;i++){
scanf("%d",ptr+i);
}
for(int i=0;i<5;i++){
sum +=*(ptr+i);
}
printf("The sum of the elements in the array is:%d",sum);
return 0;
```

4
3
5
2
3

Questions

CMQ18.

Write a program in C to check whether a number is a prime number or not using the function.

Test Data :

Input a positive number : 5

Expected Output :

The number 5 is a prime number.

Test Cases

1. N = P

2. N = 0

3. N = -4

4. N = 11

5. N = 7.2

CMQ15

CMQ16

CMQ17

CMQ18

CMQ19

CMQ20

CMQ21

CMQ22

CMQ23

CMQ24

CMQ25

Questions

CMQ18.

Write a program in C to check whether a number is a prime number or not using the f

Test Data :
Input a positive number : 5

Expected Output :
The number 5 is a prime number.

Test Cases

1. N = P
2. N = 0
3. N = -4
4. N = 11
5. N = 7.2

CMQ18

CMQ17

CMQ16

CMQ15

CMQ14

CMQ13

CMQ12

CMQ11

CMQ10

CMQ9

CMQ8

C

Run

Save

Logout

1. #include<stdio.h>
int isprime(int num){
for(int i=2;i<=num/2;i++)
if(num%i==0)
return 0;
return 1;
}
int main(){
int num;
printf("Enter the number");
scanf("%d",&num);
printf("%d %s a prime number.\n",num,isprime(num)? "is":"is not");
return 0;
}

Your Input Goes Here....!!!

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Questions

CMQ19.

Write a program in C to print all perfect numbers in given range using the function.

Test Data :
Input lowest search limit of perfect numbers : 1
Input lowest search limit of perfect numbers : 100

Expected Output :
The perfect numbers between 1 to 100 are :
6
28

Test Cases

1. 17
2. 261
3. 143
4. 84.1
5. -963

CMQ19

CMQ2

CMQ20

CMQ21

CMQ4

CMQ25

CMQ6

CMQ7

CMQ8

CMQ9

1. #include<stdio.h>
2. int isperfect(int num);
3. int main(){
4. int start,end,i;
5. printf("Enter the start number and end number:");
6. scanf("%d %d",&start,&end);
7. printf("The perfect numbers between %d and %d are:",start,end);
8. for(i=start;i<=end;i++){
9. if(isperfect(i)){
10. printf("%d\n",i);
11. }
12. }
13. return 0;
14. }
15. int isperfect(int num){
16. int i,sum=0;
17. for(i=1;i<=num/2;i++){
18. if(num%i==0){
19. sum +=i;
20. }
21. }
22. return (sum==num);
23. }

1 100

Enter the start number and end number:The perfect numbers between 1 and 100 are:6
28

96°F Sunny

Search

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Questions
CMQ4.

Write a program to print the all Odd numbers and number of even numbers in between M and

Sample Input:

$$M = 6$$
$$N = 15$$

Sample Output:

All Odd Numbers = 7,9,11,13

Test Cases

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

- CMQ19
CMQ2
CMQ20
CMQ3
CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CMQ9

Questions
CMQ5.

Write a program to find the number of student users in the college, get the total users,

Sample Input:

Total Users: 856

Staff Users: 126

Sample Output:

Student Users: 688

Test Cases

- ```
1. Total User: 0
2. Total User: -143
3. Total User: 1026, Staff User: 1026
4. Total User: 450, Staff User: 540
5. Total User: 600, Staff User: 450
```

- CMQ19
- CMQ2
- CMQ20
- CMQ3
- CMQ4
- CMQ5
- CMQ6
- CMQ7
- CMQ8
- CMQ9

The screenshot shows a C++ IDE with the following code:

```

1 #include <stdio.h>
2 struct Student
3 {
4 char name[50];
5 int age;
6 };
7 void displayStudentDetails(struct Student s);
8 int main()
9 {
10 struct Student s1;
11 printf("enter name: \n");
12 scanf("%s", s1.name);
13 printf("enter age: \n");
14 scanf("%d", &s1.age);
15 displayStudentDetails(s1);
16 return 0;
17 }
18 void displayStudentDetails(struct Student s)
19 {
20 printf("\n StudentDetails: \n");
21 printf("Name: %s\n", s.name);
22 printf("age: %d\n", s.age);
23 }

```

The output of the program is:

```

enter name:
enter age:
StudentDetails:
Name: chethoa
age: 12

```

**Questions**  
CMQ6.

Write a program to print the longest word in the below text "Programming does wonders in the world".

**Test Cases**

CMQ19  
CMQ2  
CMQ3  
CMQ4  
CMQ5  
CMQ6  
CMQ7  
CMQ8  
CMQ9

```
1. #include <stdio.h>
2. #include <conio.h>
3. #include <string.h>
4. int main()
5. {
6. char a[100],w[50],lw[50];
7. int i,p;
8. printf ("Enter a sentence\n");
9. gets(a);
10. for (i=0;i<strlen(a);i++)
11. {
12. if (a[i]!=' ')
13. {
14. w[p]=a[i];
15. p++;
16. }
17. else
18. {
19. w[p]='\0';
20. if (strlen(w)>strlen(lw));
21. {
22. strcpy(lw,w);
23. }
24. p=0;
25. }
26. }
27. printf("longest word = %s",lw);
28. return 0;
29. }
```

Iam learning programming

Enter a sentence  
longest word = learning

**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

**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)

CMQ19  
CMQ2  
CMQ3  
CMQ4  
CMQ5  
CMQ6  
CMQ7  
CMQ8  
CMQ9



