

# C programming

**CSA0265**

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**TEAM 6**

**Forenoon**

# Question 1

Questions  
CEQ5

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

Sample Input:  
Number: 14567

Sample Output:  
Reverse Number: 76541

Test Cases

1. -45721

2. 000

3. AD1947

4. 19455

5. 145\*999-144855

CEQ28

CEQ29

CEQ30

CEQ31

CEQ32

CEQ33

CEQ34

CEQ35

CEQ36

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main () {
3.     int n, reverse =0,remainder;
4.     printf("enter an integer: ");
5.     scanf("%d",&n);
6.     while(n !=0){
7.         remainder=n%10;
8.         reverse=reverse*10+remainder;
9.         n/=10;
10.    }
11.    printf("Reversed number= %d\n",reverse);
12.    return 0;
13. }
```

AD1947

enter an integer; Reversed number= 974

# Question 2

Find the nth odd number after n odd numbers.

Sample Input:  
N : 5

Sample output:  
4th Odd number after 4 odd numbers = 15

1. N = 0  
2. N = -6  
3. N = 2021  
4. N = -14.5  
5. N = -196

CEQ30  
CEQ31  
CEQ32  
CEQ33  
CEQ34  
CEQ35

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main () {
3.     int n,count=0,odd=1;
4.     printf("enter n:\n ");
5.     scanf("%d",&n);
6.     for(int count=0;count<n;count++){
7.         odd+=2;
8.     }
9.     printf("the %dth odd number after %d odd numbers is %d\n",n,n,odd);
10.    return 0;
11. }
```

0

enter n:  
the 0th odd number after 0 odd numbers is 3

## Question 3

Questions

CEQ40.

Write a program to arrange the letters of the word alphabetically in reverse order.

Sample Input:  
Enter the word : MDSQIE

Sample Output:  
Alphabetical Order: U S Q O M E

Test Cases

1. MYOTHECATION  
2. PATRULGATION  
3. PAMIPULATION  
4. SATISFACTION  
5. DEDICATION

CEQ37  
CEQ38  
CEQ39  
CEQ4  
CEQ41  
CEQ42

G

Run

Save

Logout

```
1 #include <stdio.h>
2 #include <string.h>
3
4 int main() {
5     char word[100];
6     printf("Enter a word: ");
7     scanf("%s", word);
8
9     int n = strlen(word);
10
11     for(int i = 0; i < n-1; i++) {
12         for(int j = 0; j < n-1-i; j++) {
13             if (word[j] < word[j+1]) {
14                 char temp = word[j];
15                 word[j] = word[j+1];
16                 word[j+1] = temp;
17             }
18         }
19     }
20
21     printf("Letters arranged alphabetically in reverse order: ");
22     for (int i = n-1; i >= 0; i--) {
23         printf("%c", word[i]);
24     }
25     printf("\n");
26     return 0;
27 }
```

DEDICATION

Enter a word: Letters arranged alphabetically  
in reverse order: ACDDEIINOT

## Question 4

PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View. Enable Editing

Given number is Armstrong number

CE042

Run Save Logout

```
1. #include <stdio.h>
2. #include <math.h>
3.
4. int main()
5. {
6.     int num,originalNum, remainder, n = 0;
7.     float result = 0.0;
8.
9.     printf("Enter an integer: ");
10.    scanf("%d", &num);
11.
12.    originalNum = num;
13.
14.    while (originalNum != 0)
15.    {
16.        originalNum /= 10;
17.        ++n;
18.    }
19.    originalNum = num;
20.
21.    while(originalNum != 0)
22.    {
23.        remainder = originalNum % 10;
24.        result += pow(remainder, n);
25.        originalNum /= 10;
26.    }
27.
28.    if ((int)result == num)
29.        printf("%d is an Armstrong number.", num);
30.    else
31.        printf("%d is not an Armstrong number.", num);
32.
33.    return 0;
34. }
```

370

Enter an integer: 370 is an Armstrong number.

## Question 5

Questions

CEQ38

Write a program to print the below pattern.

1

2 2

3 3 3

4 4 4 4

3 3 3

2 2

1

Test Cases

CEQ37

CEQ38

CEQ39

CEQ40

CEQ41

CEQ42

CEQ43

CEQ44

CEQ45

C

Run

Save

Logout

```
1. #include <stdio.h>
2.
3. void print_pattern(int n) {
4.     for (int i = 1; i <= n; i++) {
5.         for (int j = 0; j < i; j++) {
6.             printf("%d ", i);
7.         }
8.         printf("\n");
9.     }
10.
11.     for (int i = n-1; i >= 1; i--) {
12.         for (int j = 0; j < i; j++) {
13.             printf("%d ", i);
14.         }
15.         printf("\n");
16.     }
17. }
18.
19. int main() {
20.     print_pattern(4);
21.
22.     return 0;
23. }
```

Your Input Goes Here....!!!

1

2 2

3 3 3

4 4 4 4

3 3 3

2 2

1

## Question 6

Questions

Q24

write a program to find whether the person is eligible for vote or not. and if that particular person is not eligible.

Sample Input:  
Enter your age:7

Sample Output:  
You are allowed to vote after 11 years

Test Cases

1. 25  
2. Eighteen  
3. 18  
4. 18  
5. 18.5

CEQ3P  
CEQ3W  
CEQ3X  
CEQ4E  
CEQ4F  
CEQ4G  
CEQ4H  
CEQ4I  
CEQ4J

Run

Save

25

Log out

```
1 #include <stdio.h>
2 int main() {
3     int age;
4
5     printf("Enter your age:");
6     scanf("%d", &age);
7
8     if (age >= 18) {
9         printf("You are eligible to vote!\n");
10    } else {
11        int years_to_wait=18- age;
12        printf("You are not eligible to vote.you can vote after %d years.\n", years_to_wait);
13    }
14    return 0;
15 }
```

Enter your age:You are eligible to vote!

## Question 7

Questions

CEQ36

Find the nth odd number after n odd number.

Sample Input:  
N : 4

Sample Output:  
4th Odd number after 4 odd numbers = 15

Test Cases

1. N = 0  
2. N = -6  
3. N = 2021  
4. N = -14.5  
5. N = -196

CEQ29  
CEQ30  
CEQ31  
CEQ32  
CEQ33  
CEQ34  
CEQ35

C

Run

Save

Login

```
1. #include<stdio.h>
2. int main() {
3.     int n, nthOddNum;
4.     printf("enter the value of n: ");
5.     scanf("%d", &n);
6.     nthOddNum = (n*2) + 1;
7.     printf("the %dth odd number after %d odd number is %d", n, n, nthOddNum);
8.     return 0;
9. }
```

0

enter the value of n: the 0th odd number after  
0 odd number is 1

## Question 8



**Questions**

CEQ35.

Write a program to find the number of composite numbers in an array of elements

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

Sample Output:  
Number of Composite Numbers = 5

**Test Cases**

1. Array of elements = {26, 28, 37, 26, 33, 31, 29}

2. Array of elements = {1, 5, 1, 6, 2, 7, 1, 6, 2, 3, 2, 1, 1, 1, 19}

3. Array of elements = {0, 160, 180, 270, 160, 230, 210, 190, 0}

4. Array of elements = {200, 180, 180, 270, 270, 270, 190, 200}

5. Array of elements = {100, 100, 100, 100, 100, 100, 100, 100}

CEQ28

CEQ29

CEQ30

CEQ31

CEQ32

CEQ33

CEQ34

CEQ35

CEQ36

C

Run

Save

Logout

```

1. #include<stdio.h>
2. int isComposite(int num) {
3.     int i;
4.     for(i = 2; i <= num/2; i++) {
5.         if(num % i == 0) {
6.             return 1;
7.         }
8.     }
9.     return 0;
10. }
11. int main() {
12.     int arr[] = {26, 28, 37, 26, 33, 31, 29};
13.     int size = sizeof(arr)/sizeof(arr[0]);
14.     int i, count = 0;
15.     for(i = 0; i < size; i++) {
16.         if(isComposite(arr[i])) {
17.             count++;
18.         }
19.     }
20.     printf("The number of composite numbers in the array is %d", count);
21.     return 0;
22. }
23.

```

0,160,180,270,160,230,210,190,0

The number of composite numbers in the array is 4

## Question 9

Questions  
CEQ33.  
Find the factorial of n?  
Sample Input:  
N = 6  
Sample Output:  
6 Factorial = 720

Test Cases  
1. N = 0  
2. N = -5  
3. N = 1  
4. N = Q  
5. N = 3A

CEQ28  
CEQ3  
CEQ30  
CEQ32  
CEQ34  
CEQ35  
CEQ36

C Run Save Logout

```
1 #include<stdio.h>
2 int main(){
3     int n,i,fact=1;
4     printf("Enter the number");
5     scanf("%d",&n);
6     for(i=1;i<=n;i++){
7         fact*=i;
8     }
9     printf("The factorial of given number %d is %d",n,fact);
10    return 0;
11 }
```

6

Enter the numberThe factorial of given number 6 is 720

## Question 10

#### Questions

CEQ28.

Write a program to print the Fibonacci series.

Sample Input:

Enter the n value: 6

Sample Output:

0 1 1 2 3 5

#### Test Cases

Test Condition: Implement negative Fibonacci series

CEQ28  
CEQ29  
CEQ30  
CEQ31  
CEQ32  
CEQ33  
CEQ34  
CEQ35  
CEQ36

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4.     int n1=0, n2=1, n3, i, number;
5.     printf("Enter the number of elements:");
6.     scanf("%d",&number);
7.     printf("\n%d",n1,n2);
8.     for(i=2;i<number;i++)
9.     {
10.        n3=n1+n2;
11.        printf("%d",n3);
12.        n1=n2;
13.        n2=n3;
14.    }
15.    return 0;
16. }
```

5

Enter the number of elements:  
01123