

C programming

CSA0265

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TEAM 6

AFTERNOON

Questions
CEQ42.

Write a program to print hollow Rectangle Dollar pattern?

Test Cases

CEQ37
CEQ38
CEQ39
CEQ4
CEQ40
CEQ41
CEQ42
CEQ43
CEQ44
CEQ45

C Run Save Logout

```
1. #include<stdio.h>
2. int main() {
3.     int i,j,N;
4.     printf("Enter the number of rows:");
5.     scanf("%d",&N);
6.     for(i=1; i<N; i++) {
7.         for(j=1; j<=N; j++) {
8.             if(j==1 || i==N || j==1 || j==N) {
9.                 printf("*");
10.            } else{
11.                printf(" ");
12.            }
13.        }
14.        printf("\n");
15.    }
16.    return 0;
17. }
```

15

Enter the number of rows:

* * * * *
* * * * *
* * * * *

Questions

EQ43.

rite a program to find the sum of digits of N digit number.

ample Input:
nter N value : 3
nter 3 digit number: 143

ample Output:
um of 3 digit number: 8

Test Cases

1. N = 2, 158
2. N = 3, 14
3. N = 4, 0148
4. N = 1, 0004
5. N = 4, 7263

CEQ37
CEQ38
CEQ39
CEQ4
CEQ40
CEQ41
CEQ42
CEQ43
CEQ44
CEQ45

C Run Save Logout 567

```
1. #include<stdio.h>
2. int main() {
3.     int num, sum = 0;
4.     num = 786;
5.     printf("The number is = %d\n", num);
6.     while(num!=0) {
7.         sum += num%10;
8.         num = num/10;
9.     }
10.    printf("sum: %d\n",sum);
11.    return 0;
12. }
```

The number is = 786
sum: 21

Questions

CEQ45.

Write a program to print inverted pyramid pattern.

The screenshot shows a programming interface with a yellow header bar containing 'C', 'Run', 'Save', and 'Logout' buttons. Below the header is a code editor window with the following C code:

```
1. #include<stdio.h>
2. int main() {
3.     int rows = 3, i, j, space;
4.     for(i= rows; i>=1; --i)
5.     {
6.         for(space = 0;
7.             space < rows - i; ++space)
8.             printf(" ");
9.         for(j= i; j<= 2 * i - 1; ++j)
10.            printf("*");
11.        for(j= 0; j< i - 1; ++j)
12.            printf("*");
13.        printf("\n");
14.    }
15.    return 0;
16. }
```

To the right of the code editor is a 'Test Cases' panel with a list of 10 test cases. Test cases 45, 46, 47, 48, and 49 are highlighted in green, indicating they have been run or passed. The other five test cases are in grey. The number '3' is displayed above the green-highlighted test cases. To the right of the test cases is a purple sidebar.

Questions

CEO44.

Write a program to find the square root of a perfect square number(print both the positive and

Sample Input:
Enter the number : 6561Sample Output:
Square Root: 81, -81**Test Cases**

1. 1225
2. 9801
3. 1827
4. -100
5. 0

CEO37

CEO38

CEO39

CEO4

CEO40

CEO41

CEO42

CEO43

CEO44

CEO45

The screenshot shows a C programming interface. The top bar includes tabs for 'C' and 'Run', and buttons for 'Run' and 'Save'. On the right, there's a 'Logout' button. The main area has a yellow header bar with the number '100'. Below it is a dark code editor window containing the following C code:

```
1. #include<stdio.h>
2. #include<math.h>
3. int main() {
4.     int number;
5.     double root;
6.     printf("Enter the number:");
7.     scanf("%d",&number);
8.     root = sqrt(number);
9.     if(floor(root + 0.5) == root) {
10.        printf("Square Root: %d, %d\n", (int) root, -(int) root);
11.    } else {
12.        printf("The number is not a perfect square.\n");
13.    }
14.    return 0;
15. }
```

To the right of the code editor is a light blue panel labeled 'Enter the number:'. The user has typed '10, -10, 0'. The output window at the bottom right shows the program's response: 'Square Root: 10, -10, 0'.

CEQ40.

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

Sample Input:

Enter the word : MOSQUE

Sample Output:

Alphabetical Order: U S Q O M E

1. HYPOTHECATION
2. MATRICULATION
3. MANIPULATION
4. SATISFACTION
5. DEDICATION

CEQ38
CEQ39
CEQ4
CEQ40
CEQ41
CEQ42
CEQ43
CEQ44
CEQ45

The screenshot shows a C programming interface. At the top, there's a toolbar with 'C' (dropdown), 'Run', and 'Save' buttons. To the right of the toolbar is a yellow header bar with the name 'MOHAMMAD'. On the far right of the header is a 'Logout' button. The main area contains the following code:

```
1. #include<stdio.h>
2. #include<string.h>
3. int main() {
4.     char word[50];
5.     int i, j, n;
6.     char temp;
7.     printf("Enter the word:");
8.     scanf("%s",word);
9.     n = strlen(word);
10.    for(i = 0; i < n-1; i++) {
11.        for(j = i+1; j < n; j++) {
12.            if(word[i] < word[j]) {
13.                temp = word[i];
14.                word[i] = word[j];
15.                word[j] = temp;
16.            }
17.        }
18.    }
19.    printf("Alphabetical order: %s\n",word);
20.    return 0;
21. }
```

To the right of the code, the output window shows the result:

Enter the word:Alphabetical order:
OMMMHDAA

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
```

C Run Save

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

3

```
1
22
333
22
1
```

CEQ38
CEQ39
CEQ4
CEQ40
CEQ41
CEQ42
CEQ43
CEQ44
Logout

Questions
CEO4.

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

sample Input:
Enter your age:7

sample output:
you are allowed to vote after 11 years

Test Cases

1. 25	CEQ37
2. Eighteen	CEQ38
3. 12	CEQ39
4. -18	CEQ40
5. 34,5	CEQ41
	CEQ42
	CEQ43
	CEQ44
	CEQ45

C Run Save Logout

```

1. #include<stdio.h>
2. int main()
3. {
4.     int age;
5.     printf("Enter age:");
6.     scanf("%d",&age);
7.     if (age >=18)
8.         printf("you are allowed to vote!");
9.     else
10.        printf("you are not allowed to vote!");
11.        return 0;
12. }
```

21

Enter age:you are allowed to vote!

Questions
CEQ39.

Program to find whether the given number is Armstrong number or not

Sample Input:
Enter number : 153

Sample Output:
Given number is Armstrong number

Test Cases	CEQ07
1. 370 2. 1 3. 371 4. 145678 5. 0.21345	CEQ01 CEQ09 CEQ26 CEQ40 CEQ41 CEQ42 CEQ43 CEQ44 CEQ45

C Run Save Logout

```

1. #include<stdio.h>
2. int main()
3. {
4.     int n,r,sum=0,temp;
5.     printf("enter the number:");
6.     scanf("%d",&n);
7.     temp=n;
8.     while(n>0)
9.     {
10.         r=n%10;
11.         sum = sum + (r*r*r);
12.         n=n/10;
13.     }
14.     if(temp==sum)
15.     printf("armstrong number");
16.     else
17.     printf("not armstrong number");
18.     return 0;
19. }
```

50

enter the number:not armstrong number

Questions
CEQ37

Write a program that finds whether a given character is present in a string or not.
In case it is present it prints the index at which it is present.
Do not use built-in functions to search the character.

Sample Input:
Enter the string: I am a programmer
Enter the character to be searched: p

Sample Output:
P is found in string at index: 8
Note: Check for non-available Character in the given statement as Hidden Test case.

Test Cases

CEQ38
CEQ39
CEQ40
CEQ41
CEQ42
CEQ43
CEQ44
CEQ45

C Run Save Logout

```

1 #include <stdio.h>
2 int main() {
3     char str[100];
4     char ch;
5     int i, index = -1;
6
7     printf("Enter the string: ");
8     gets(str);
9
10    printf("Enter the character to be searched:");
11    scanf("%c", &ch);
12
13    for(i=0; str[i]!='\0';i++) {
14        if(str[i] == ch) {
15            index = i;
16            break;
17        }
18    }
19    if(index == -1) {
20        printf("%c is not found in string.\n", ch);
21    } else {
22        printf("%c is found in string at index: %d\n" , ch, index);
23    }
24
25    return 0;
26 }
```

I am a dancer
d

Enter the string: Enter the character to be searched.d is
found in string at index: 1

CEQ37

Write a program that finds whether a given character is present in a string or not.
In case it is present it prints the index at which it is present.
Do not use built-in find functions to search the character.

Sample Input:
Enter the string: I am a programmer
Enter the character to be searched: p

Sample Output:
P is found in string at index: 8
Note: Check for non-available Character in the given statement as Hidden Test case.

```

1. #include <stdio.h>
2. int main() {
3.     char str[100];
4.     char ch;
5.     int i, index = -1;
6.
7.     printf("Enter the string: ");
8.     gets(str);
9.
10.    printf("Enter the character to be searched:");
11.    scanf("%c", &ch);
12.
13.    for(i=0; str[i]!='\0';i++) {
14.        if(str[i] == ch) {
15.            index = i;
16.            break;
17.        }
18.    }
19.    if(index == -1) {
20.        printf("%c is not found in string.\n", ch);
21.    } else {
22.        printf("%c is found in string at index: %d\n", ch, index);
23.    }
24.
25.    return 0;
26. }
```

I am a dancer
d

Enter the string: Enter the character to be searched:d is found in string at index: 1

CEQ38
CEQ39
CEQ40
CEQ41
CEQ42
CEQ43
CEQ44
CEQ45