C programming

CSA0265

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TEAM 6

AFTERNOON

Questions
CEQ42.

Write a program to print hollow Rectangle Dollar pattern?

Test Cases

C | Run | Save | | Logout

```c
#include<stdio.h>
int main() {
int i,j,N;
printf("Enter the number of rows:");
scanf("%d",&N);
for(i=1; i<+N; i++) {
for(j=1; j<=N; j++) {
if(j==1 || i==N || j==1 || j==N) {
printf("*");
}
else{
printf(" ");
}
}
printf(" ");
}
return 0;
}
```

```
15
```

```
Enter the number of rows:*           * *
* *          * *          * *          * *          * *
* *          * *          * *          * *          * *
* *          * *          *
```

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

Sample Input:
Enter N value : 3
Enter 3 digit number: 143

Sample Output:
Sum 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

```c
#include<stdio.h>
int main() {
int num, sum = 0;
num = 786;
printf("The number is = %d\n", num);
while(num!=0) {
sum += num%10;
num = num/10;
}
printf("sum: %d\n",sum);
return 0;
}
```

567

The number is = 786
sum: 21

Questions
CEQ45.

Write a program to print inverted pyramid pattern.

Test Cases

| C | Run | Save | | Logout |

```c
#include<stdio.h>
int main() {
int rows = 3, i, j, space;
for(i= rows; i>=1; --i)
{
for(space = 0;
space < rows - i; ++space)
printf(" ");
for(j= i; j<= 2 * i - 1; ++j)
printf("*");
for(j= 0; j< i - 1; ++j)
printf("*");
printf("\n");
}
return 0;
}
```

3

```
*****
***
  *
```

Questions
CEQ44.

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

Sample Input:
Enter the number : 6561

Sample Output:
Square Root: 81, -81

Test Cases

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

| C | Run | Save | | Logout |

```c
#include<stdio.h>
#include<math.h>
int main() {
int number;
double root;
printf("Enter the number:");
scanf("%d",&number);
root = sqrt(number);
if(floor(root + 0.5) == root) {
printf("Square Root: %d, %d, %d\n",(int) root, -(int) root);
} else {
printf("The number is not a perfect square.\n");
}
return 0;
}
```

100

Enter the number: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

C	Run	Save		Logout

```c
#include<stdio.h>
#include<string.h>
int main() {
char word[50];
int i, j, n;
char temp;
printf("Enter the word:");
scanf("%s",word);
n = strlen(word);
for(i = 0; i< n-1; i++) {
for(j = i+1; j < n; j++) {
if(word[i] < word[j]) {
temp = word[i];
word[i] = word[j];
word[j] = temp;
}
}
}
printf("Alphabetical order: %s\n",word);
return 0;
}
```

MOHAMMAD

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 | | Logout |

```c
#include<stdio.h>
int main() {
int n = 3;
for(int i=1; i<=n; i++) {
for(int j=1; j<=i; j++) {
printf("%d",i);
}
printf("\n");
}
for(int i=n-1; i>=1; i--) {
for(int j=1; j<=i; j++) {
printf("%d",i);
}
printf("\n");
}
return 0;
}
```

3

```
1
22
333
22
1
```

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
2. Eighteen
3. 12
4. -18
5. 34.5

CEQ37
CEQ38
CEQ39
CEQ4
CEQ40
CEQ41
CEQ42
CEQ43
CEQ44
CEQ45

C	Run	Save		Logout

```c
#include<stdio.h>
int main()
{
int age;
printf("Enter age:");
scanf("%d",&age);
if (age >=18)
printf("you are allowed to vote!");
else
printf("you are not allowed to vote!");
return 0;
}
```

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

1. 370
2. 1
3. 371
4. 145678
5. 0.21345

CEQ38
CEQ39
CEQ4
CEQ40
CEQ41
CEQ42
CEQ43
CEQ44
CEQ45

| C | Run | Save | | Logout |

```c
#include<stdio.h>
int main()
{
int n,r,sum=0,temp;
printf("enter the number:");
scanf("%d",&n);
temp=n;
while(n>0)
{
r=n%10;
sum = sum + (r*r*r);
n=n/10;
}
if(temp==sum)
printf("armstrong number");
else
printf("not armstrong number");
return 0;
}
```

50

enter the number:not armstrong number

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.

Test Cases

CEQ37
CEQ38
CEQ39
CEQ04
CEQ40
CEQ41
CEQ42
CEQ43
CEQ44
CEQ45

| C | Run | Save | | Logout |

```c
#include <stdio.h>
int main() {
    char str[100];
    char ch;
    int i, index = -1;

    printf("Enter the string: ");
    gets(str);

    printf("Enter the charater to be searched:");
    scanf("%c", &ch);

    for(i=0; str[i]!='\0';i++) {
        if(str[i] == ch) {
            index = 1;
            break;

        }
    }
    if(index == -1) {
        printf("%c is not found in string.\n", ch);
    } else {
        printf("%c is found in string at index: %d\n" , ch, index);
    }
    return 0;
}
```

I am a dancer
d

 Enter the string: Enter the charater 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.

C   Run   Save   Logout

```c
#include <stdio.h>
int main() {
    char str[100];
    char ch;
    int i, index = -1;

    printf("Enter the string: ");
    gets(str);

    printf("Enter the charater to be searched:");
    scanf("%c", &ch);

    for(i=0; str[i]!='\0';i++) {
        if(str[i] == ch) {
            index = 1;
            break;

        }
    }
    if(index == -1) {
        printf("%c is not found in string.\n", ch);
    } else {
        printf("%c is found in string at index: %d\n" , ch, index);
    }
    return 0;
}
```

I am a dancer
d

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