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Questions
CEQ7
Write a program to print the prime numbers. Show First 10 odd Prime numbers.

Sample Output:
N = 3
3
5
7
11
13
17
19
23
29
31

Sample Output:
Print Prime number 1 to 5
3 prime numbers after 5 are: 7, 11, 13

```
#include<stdio.h>
#include<stdbool.h>
bool isPrime(int n)
{
    if(n==1)
    {
        return false;
    }
    for(int i=2;i<=n;i++)
    {
        if(n%i==0)
        {
            return false;
        }
    }
    return true;
}
int main()
{
    int n;
    scanf("%d",&n);
    printf("Enter a position integer:");
    scanf("%d",&n);
    printf("Print all prime numbers are:");
    while(count<n)
    {
        if(isPrime(i))
        {
            printf("%d ",i);
            count++;
        }
        i++;
    }
    printf("\n");
    count=0;
    while(count<n)
    {
        if(isPrime(i))
        {
            count++;
        }
        i++;
    }
    printf("The %d-th prime number is: %d",n,i);
    return 0;
}
```

Your Input Goes Here...!!!

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CEQ5
CEQ6
CEQ7
CEQ8
CEQ9
CMG5
CMG6
CMG7
CMG8

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Questions
CEQ7
Write a program to print the below pattern?

```

      1
     1 2
    1 2 3
   1 2 3 4
  1 2 3 4 5
 1 2 3 4 5 4
 1 2 3 4 3 2
 1 2 3 2 1
 1 2 1
 1

```

5

```
#include<stdio.h>
int main()
{
    int rows,i,j,k,num;
    printf("Enter the number of rows:\n");
    scanf("%d",&rows);
    for(i=1;i<=rows;i++)
    {
        num=1;
        for(j=1;j<=rows-i;j++)
        {
            printf(" ");
        }
        for(k=1;k<=i;k++)
        {
            printf("%d",num);
            num++;
        }
        for(k=1;k<=i-1;k++)
        {
            printf("%d",num-2);
        }
        printf("\n");
    }
    return 0;
}
```

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CEQ5
CEQ6
CEQ7
CEQ8
CEQ9
CMG5
CMG6
CMG7
CMG8

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OK

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HARISHRAM K
192225020

Questions
CEQ8

Write a C Program to Find Even Sum of Fibonacci Series Till number N?

Sample Input: n = 4

Sample Output: 33
(N = 4, So here the Fibonacci series will be produced from 0th term till 8th term: 0, 1, 1, 2, 3, 5, 8, 13,
Sum of numbers at even indexes = 0 + 1 + 3 + 8 + 21 = 33)

Test Cases

CEQ5
CEQ6
CEQ7
CEQ8
CEQ9
CEQ10
CEQ11
CEQ12
CEQ13
CEQ14
CEQ15
CEQ16
CEQ17
CEQ18
CEQ19
CEQ20
CEQ21
CEQ22
CEQ23
CEQ24
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CEQ78
CEQ79
CEQ80
CEQ81
CEQ82
CEQ83
CEQ84
CEQ85
CEQ86
CEQ87
CEQ88
CEQ89
CEQ90
CEQ91
CEQ92
CEQ93
CEQ94
CEQ95
CEQ96
CEQ97
CEQ98
CEQ99
CEQ100

Run Save

4
16

Enter the value of n
Enter the sum of fibonacci series upto n

```
#include<stdio.h>
int main()
{
    int n,a=0,b=1,c=1,evensum=0;
    printf("Enter the value of n:\n");
    scanf("%d",&n);
    while(cc=n)
    {
        c=a+b;
        if(c%2==0)
        {
            evensum+=c;
        }
        a=b;
        b=c;
    }
    printf("Enter the sum of fibonacci series upto %d\n",n,evensum);
    return 0;
}
```

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KULDESHITH VEDHA J
192225008

Questions
CHQ7

Write a program to search the given element using binary search method and display its position in a linear array.

Sample Input:
Array of elements = {16, 18, 27, 10, 23, 11, 19}
Element to search = 23

Sample Output:
Given element 23 is found at 5 th position

Test Cases

CHQ4
CHQ5
CHQ6
CHQ7
CHQ8
CHQ9
CHQ10
CHQ11
CHQ12
CHQ13
CHQ14
CHQ15
CHQ16
CHQ17
CHQ18
CHQ19
CHQ20
CHQ21
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CHQ92
CHQ93
CHQ94
CHQ95
CHQ96
CHQ97
CHQ98
CHQ99
CHQ100

Run Save

Your Input Goes Here.....!!!!

```
#include <stdio.h>
int binarysearch(int arr[],int size ,int key){
    int low = 0,high = size -1,mid;
    while (low <=high){
        mid=(low + high)/2;
        if(arr[mid]==key)
        {
            return mid;
        }
        else if (arr[mid]>key){
            high = mid -1;
        }
        else{
            low = mid +1;
        }
    }
    return -1;
}
int main(){
    int arr[]={1,3,5,7,9,11};
    int size = sizeof (arr)/sizeof (arr[0]);
    int key =7;
    int pos = binarysearch(arr,size,key);
    if (pos ==-1){
        printf("ELEMENT NOT FOUND IN THE ARRAY.\n",pos+1);
    }
    return 0;
}
```

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Questions

CMQ8

Write a C program to display the details of student(Name , Age) by passing structures to a function.

Sample Input :

Enter No.Students: 1

Enter student 1 Name, Age :AAA, 25

Sample Output:

Student 1 details:

Name: AAA

Age : 25

Test Cases

No Student *(Any details of student)

No Student 5

No Student 1 (62, 28)

No Student A

No Student 1 (xxx, 28.2)

CMQ5

CMQ6

CMQ7

CMQ8

CMQ4

CMQ5

CMQ6

CMQ7

CMQ8

Run

Save

Your Input Goes Here...!!!

```
1: #include<stdio.h>
#include<string.h>
struct person
{
    char name[50];
    int age;
};
void displayperson(struct person p)
{
    printf("Name:25\n",p.name);
    printf("Age :%d\n",p.age);
}
int main()
{
    struct person john;
    strcpy(john.name,"John");
    john.age=25;
    displayperson(john);
    return 0;
}
```

Logout

Answer Page 25

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Questions

CMQ8

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

Run

Save

Your Input Goes Here...!!!

```
1: #include<stdio.h>
#include<string.h>
int main()
{
    char text[]="Programming does wonders in the world";
    char longest_word[20]="";
    char current_word[20];
    for(int i=0,j=0;i<strlen(text);i++)
    {
        if(text[i]!=' '||text[i]!='\0')
        {
            current_word[j++]='0';
            j=0;
        }
        if(strlen(current_word)>strlen(longest_word))
        {
            strcpy(longest_word,current_word);
        }
        else
        {
            current_word[j++]='0';
        }
    }
    printf("The longest word in the text is:%s\n",longest_word);
    return 0;
}
```

Logout

Answer Page 25

```
1. #include<stdio.h>
2. #include<stdbool.h>
3. bool isArmstrong(int n)
4. {
5.     long originalNumber=n;
6.     long remainder,result=0;
7.     while(originalNumber>0)
8.     {
9.         remainder=originalNumber%10;
10.        result+=remainder*remainder*remainder;
11.        originalNumber/=10;
12.    }
13.    if(result==originalNumber)
14.    {
15.        return true;
16.    }
17.    else
18.    {
19.        return false;
20.    }
21. }
22. bool isPerfect(int n)
23. {
24.     int sum=0;
25.     for(int i=1;i<=n;i++)
26.     {
27.         if(i!=n)
28.         {
29.             sum+=i;
30.         }
31.     }
32.     if(sum==n)
33.     {
34.         return true;
35.     }
36.     else
37.     {
38.         return false;
39.     }
40. }
41. int main()
42. {
43.     printf("Enter a positive integer:");
44.     int n;
45.     scanf("%d",&n);
46.     if(isArmstrong(n))
47.     {
48.         printf("It is an armstrong number.\n");
49.     }
50.     else
51.     {
52.         printf("It is not an armstrong number.\n");
53.     }
54.     if(isPerfect(n))
55.     {
56.         printf("It is a perfect number.\n");
57.     }
58.     else
59.     {
60.         printf("It is not a perfect number.\n");
61.     }
62.     return 0;
63. }
```

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CHEETHNA S
192225006

Questions

CEQ6.

Write a program to print Right Triangle Star Pattern.

Sample Input:: n = 5

Output:

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

Test Cases

CEQ6

CEQ7

CEQ8

CEQ9

CEQ10

CEQ11

CEQ12

CEQ13

CEQ14

CEQ15

CEQ16

CEQ17

CEQ18

CEQ19

CEQ20

CEQ21

CEQ22

CEQ23

CEQ24

CEQ25

CEQ26

CEQ27

CEQ28

CEQ29

CEQ30

CEQ31

CEQ32

CEQ33

CEQ34

CEQ35

CEQ36

CEQ37

CEQ38

CEQ39

CEQ40

CEQ41

CEQ42

CEQ43

CEQ44

CEQ45

CEQ46

CEQ47

CEQ48

CEQ49

CEQ50

CEQ51

CEQ52

CEQ53

CEQ54

CEQ55

CEQ56

CEQ57

CEQ58

CEQ59

CEQ60

CEQ61

CEQ62

CEQ63

CEQ64

CEQ65

CEQ66

CEQ67

CEQ68

CEQ69

CEQ70

CEQ71

CEQ72

CEQ73

CEQ74

CEQ75

CEQ76

CEQ77

CEQ78

CEQ79

CEQ80

CEQ81

CEQ82

CEQ83

CEQ84

CEQ85

CEQ86

CEQ87

CEQ88

CEQ89

CEQ90

CEQ91

CEQ92

CEQ93

CEQ94

CEQ95

CEQ96

CEQ97

CEQ98

CEQ99

CEQ100

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4.     int i,j,rows;
5.     printf("enter no of rows: \n");
6.     scanf("%d",&rows);
7.     for(i=1;i<=rows;i++)
8.     {
9.         for(j=1;j<=i;j++)
10.        {
11.            printf("*");
12.        }
13.        printf("\n");
14.    }
15.    return 0;
16. }
```

5

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Questions
CEQ42

Write a program to print hollow Rectangle Dollar pattern?

Test Cases

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Sample Input:
4
4

Output:
\$ \$ \$ \$ \$
\$ \$ \$ \$ \$
\$ \$ \$ \$ \$
\$ \$ \$ \$ \$
\$ \$ \$ \$ \$

```

1. #include<stdio.h>
2. #include<math.h>
3. int main()
4. {
5.     int rows,cols,i,j;
6.     printf("no of rows: \n");
7.     scanf("%d",&rows);
8.     printf("no of columns: \n");
9.     scanf("%d",&cols);
10.    for(i=1;i<=rows;i++)
11.    {
12.        for(j=1;j<=cols;j++)
13.        {
14.            if(i==1||i==rows||j==1||j==cols)
15.            {
16.                printf("$");
17.            }
18.            else
19.            {
20.                printf(" ");
21.            }
22.            printf("\n");
23.        }
24.        return 0;
25.    }

```

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Questions
CEQ6

Write a program to print Right Triangle Star Pattern.

Sample Input: n = 5

Output:
*
* *
* * *
* * * *
* * * * *

Test Cases

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Sample Input:
5

Output:
*
* *
* * *
* * * *
* * * * *

```

1. #include<stdio.h>
2. int main()
3. {
4.     int i,j,rows;
5.     printf("enter no of rows: \n");
6.     scanf("%d",&rows);
7.     for(i=1;i<=rows;i++)
8.     {
9.         for(j=1;j<=i;j++)
10.        {
11.            printf("*");
12.        }
13.        printf("\n");
14.    }
15.    return 0;
16. }

```

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CHETHNA S 192225006

Questions
CEQ44:
Write a program to find the square root of a perfect square number(print both the positive and negative va
Sample Input:
Enter the number : 6561
Sample Output:
Square Root: 81, -81

Test Cases

1. 1225	<input type="checkbox"/>
2. 9801	<input type="checkbox"/>
3. 1827	<input type="checkbox"/>
4. -100	<input type="checkbox"/>
5. 0	<input type="checkbox"/>

CEQ7
CEQ8

Log out

25

```

1. #include<stdio.h>
2. #include<math.h>
3. int main()
4. {
5.     int num,square_root;
6.     printf("enter a number: \n");
7.     scanf("%d",&num);
8.     square_root=sqrt(num);
9.     if(square_root*square_root==num)
10.    {
11.        printf("square root of %d is %d \n",num,square_root);
12.    }
13.    else
14.    {
15.        printf("%d is not a perfect square \n",num);
16.    }
17.    return 0;
18. }

```

Write a Program
square root of 25 is 5

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CHETHNA S 192225006

Questions
CMQ4:
Write a program to print the all Odd numbers and number of even numbers in between N and N?
Sample Input:
N = 6
N = 15
Sample Output:
All Odd Numbers = 7,9,11,13

Test Cases

1. N = 100, N = 100	<input type="checkbox"/>
2. N = 500, N = 100	<input type="checkbox"/>
3. N = -5, N = 4	<input type="checkbox"/>
4. N = 72, N = -72	<input type="checkbox"/>
5. N = 0, N = 0	<input type="checkbox"/>

CEQ7
CEQ8

Log out

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```

1. #include<stdio.h>
2. int main()
3. {
4.     int m,n,evencount=0;
5.     printf("enter 2 numbers(m,n): \n");
6.     scanf("%d %d",&m,&n);
7.     printf("odd numbers between %d and %d: ",m,n);
8.     for(int i=m;i<n;i++)
9.     {
10.        if(i%2==1)
11.        {
12.            printf("%d ",i);
13.        }
14.        else
15.        {
16.            evencount++;
17.        }
18.    }
19.    printf("\n number of even numbers between %d and %d: %d \n",m,n,evencount);
20.    return 0;
21. }

```

Write a Program
odd numbers between 1 and 10
7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99
number of even numbers between 1 and 100 = 50

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CHETHNA S
192225006

Questions
CEQ43.
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

CEQ43

CEQ44

CEQ45

CEQ46

CEQ47

CEQ48

CEQ49

CEQ50

CEQ51

CEQ52

CEQ53

CEQ54

CEQ55

CEQ56

CEQ57

CEQ58

CEQ59

CEQ60

CEQ61

CEQ62

CEQ63

CEQ64

CEQ65

CEQ66

CEQ67

CEQ68

CEQ69

CEQ70

CEQ71

CEQ72

CEQ73

CEQ74

CEQ75

CEQ76

CEQ77

CEQ78

CEQ79

CEQ80

CEQ81

CEQ82

CEQ83

CEQ84

CEQ85

CEQ86

CEQ87

CEQ88

CEQ89

CEQ90

CEQ91

CEQ92

CEQ93

CEQ94

CEQ95

CEQ96

CEQ97

CEQ98

CEQ99

CEQ100

C

Run

Save

Logout

```

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

```

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CHETHNA S
192225006

Questions
CMQ5.
Write a program to find the number of student users in the college, get the total users, staff users, nonteaching staff 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

CEQ43

CEQ44

CEQ45

CEQ46

CEQ47

CEQ48

CEQ49

CEQ50

CEQ51

CEQ52

CEQ53

CEQ54

CEQ55

CEQ56

CEQ57

CEQ58

CEQ59

CEQ60

CEQ61

CEQ62

CEQ63

CEQ64

CEQ65

CEQ66

CEQ67

CEQ68

CEQ69

CEQ70

CEQ71

CEQ72

CEQ73

CEQ74

CEQ75

CEQ76

CEQ77

CEQ78

CEQ79

CEQ80

CEQ81

CEQ82

CEQ83

CEQ84

CEQ85

CEQ86

CEQ87

CEQ88

CEQ89

CEQ90

CEQ91

CEQ92

CEQ93

CEQ94

CEQ95

CEQ96

CEQ97

CEQ98

CEQ99

CEQ100

C

Run

Save

Logout

```

1. #include<stdio.h>
2. int main()
3. {
4.     int totalusers,studentusers,staffusers,nonteachingstaffusers;
5.     printf("enter total no of users: \n");
6.     scanf("%d",&totalusers);
7.     printf("enter no of staff users: \n");
8.     scanf("%d",&staffusers);
9.     studentusers=totalusers-staffusers;
10.    nonteachingstaffusers=staffusers/3;
11.    printf("no of student users: %d \n",studentusers);
12.    printf("no of non teaching staff users: %d \n",nonteachingstaffusers);
13.    return 0;
14. }

```

88
55

enter total no of users:

