18 Coding questions

Q.1. Prime Numbers

A school students want to check prime numbers within given range, write a c program to help them for the same. Where x will be starting range and y will be ending range, if x is greater than y or x is equal to y print 0, if x is smaller than y print the prime numbers within mentioned range.

A number is said to be prime if it is divisible by 1 and the number itself.

Sample Input 1
50 90

Sample Output 1
53 59 61 67 71 73 79 83 89

Sample Input 2
60 6

Sample Output 2
0

Input Explanation
Input consists of two space separated integer value

First input will be taken as the value for x that is starting value

Second input will be taken as the value for y that is ending value

Output Explanation
Output can consists multiple space seperated integer value based upon input

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	100 150	45 7	15 60	55 3	25 25
Output	101 103 107 109 113 127 131 137 139 149	0	17 19 23 29 31 37 41 43 47 53 59	0	0

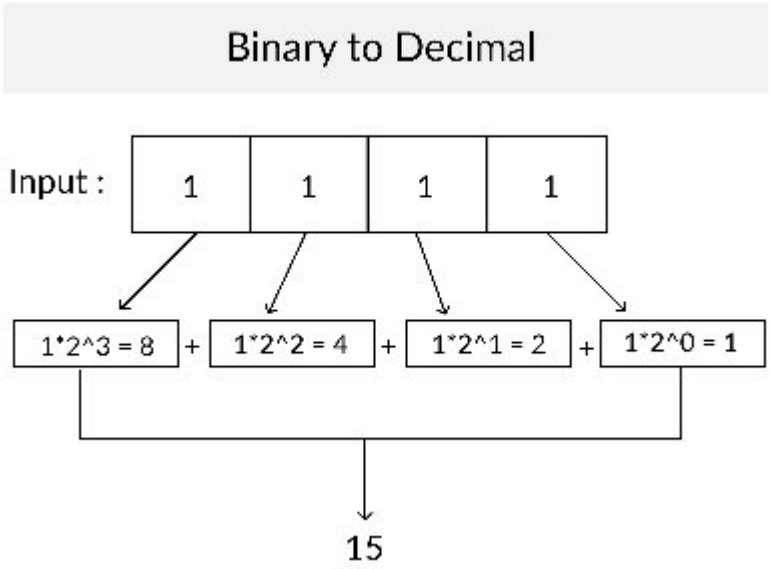
#Solution

```
#include <stdio.h>
int main()
{
    int x, y, i, flag;
    scanf("%d %d",&x, &y);

    if (x > y || x==y)
    {
        printf("0");
    }
    else
    {
        while (x < y)
        {
            flag = 0;
            for (i = 2; i <= x / 2; ++i)
            {
                if (x % i == 0)
                {
                    flag = 1;
                    break;
                }
            }
            if (flag == 0)
            printf("%d ", x);
            ++x;
        }
    }
```

```
    return 0;
}
```

Q.2. Binary to Decimal conversion

Ajit is working in IT company and he is getting binary values from computers, as a human he is not able understand binary values, so help Ajit to understand binary values by converting it into decimal values.



Consider the binary number from the last.

For the above mentioned example,

1 * 2^0 = 1

1 * 2^1 = 2

1 * 2^2 = 4

1 * 2^3 = 6

Decimal number = 1 + 2 + 4 + 6 = 15,

1111 in binary form is represented as 15 in decimal.

Sample Input 1
101011

Sample Output 1
43

Sample Input 2
110110

Sample Output 2
54

Input Explanation
Input consists of single integer value

Output Explanation
Output consists of single integer value

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	111111111	100011	1110011	1011001	100100100
Output	511	35	115	89	292

#Solution

```
#include <stdio.h>
#include<math.h>
int binary_to_decimal(long int n)
{
    int decimal = 0, i = 0, remainder;
    while (n != 0)
    {
        remainder = n % 10;
        n /= 10;
        decimal += remainder * pow(2, i);
        ++i;
```

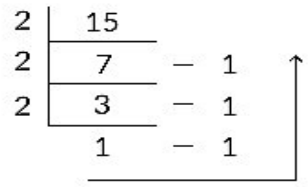
```
    }
    return decimal;
}

int main()
{
    long int n;
    scanf("%ld", & n);
    printf("%d",binary_to_decimal(n));
    return 0;
}
```

Q.3. Decimal to Binary conversion

Computer cannot understand decimal numbers, it understands only zeros and ones. Write a program to help computer by converting decimal number to binary.

Decimal to Binary

Input : 15



Binary Number : 1111

Considering the same example,

15 / 2 = 7 rem = 1,

7 / 2 = 3 rem = 1,

3 / 2 = 1 rem = 1,

1 / 2 = 0 rem = 1

Binary equivalent of 15 is 1111.

Sample Input 1
100

Sample Output 1
1100100

Sample Input 2
215

Sample Output 2
11010111

Input Explanation
Input consists of single integer value

Output Explanation
Output consists of single integer value

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	334	25	99	123	486
Output	101001110	11001	1100011	1111011	111100110

#Solution

```
#include <stdio.h>

long int decimal_to_binary(int n)

{

    long int binary = 0;

    int remainder, i, flag = 1;

    for (i = 1; n != 0; i = i * 10)

    {

        remainder = n % 2;
```

```
        n /= 2;
        binary += remainder * i;
    }
    return binary;
}
int main()
{
    int n;
    scanf("%d", &n);
    printf("%d",decimal_to_binary(n));
    return 0;
}
```

Q.4. Number of Handshakes

It was Raj's first day at school. His teacher Anu asked the students to meet every other student in the class and to introduce about themselves. The teacher asked them to do handshakes when they meet each other.

If there are n number of students in the class then find the total number of handshakes made by the students.

- Input the number of people (n).
- Find nC2, calculated as n * (n-1) / 2.
- Print the calculated result.

Sample Input 1
15

Sample Output 1
105

Sample Input 2
10

Sample Output 2

45

Input Explanation
Input consists of one integer , which corresponds to the total number of students.

Output Explanation
Output consists of one integer, which corresponds to the total number of handshakes.

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	25	11	17	55	22
Output	300	55	136	1485	231

#Solution

```
#include<stdio.h>

int main()

{

    int num;

    scanf("%d", &num);

    int total = num * (num - 1) / 2;

    printf("%d", total);

    return 0;

}
```

Q.5. Program to find all possible permutations in which 'n' people can occupy 'r' seats in a theatre.

N friends are planning to go to a movie. One among them suggested few movies and all others started to discuss and finally they selected a movie. One among them quickly booked their tickets online, to their surprise they are unable to select their

seats. All of them got confused. Then anyhow, decided to go to the movie. They rushed to reach the theatre on time. Again, they are surprised that no one was there in the theatre. They are the only people about to watch the movie. There is 'r' number of seats in which, 'n' number persons should sit. In how many ways they can sit inside the theatre?

Given the number of people 'n' and the number of seats 'r' as input. The task is to find the different number of ways in which 'n' number of people can be seated in those 'r' number of seats.

For example,

Input:

Number of people: 5

Number of Rows: 3

Output:

The total number of ways in which 'n' people can be seated in 'r' seats = 60.

Calculation:

P(n,r) =P(5,3)

=5! /(5?3)! = 5! / (5 ? 3)!

= 120 / 2 = 60

Sample Input 1
5
3

Sample Output 1
60

Sample Input 2
7
3

Sample Output 2
210

Input Explanation
Input consists of two integer value

First input will be number of people

Second input will be number of Rows

Output Explanation
Output consists of single integer value

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	12 1	11 4	9 3	6 2	4 6
Output	12	7920	504	30	360

#Solution

```
#include<stdio.h>
int fact(long int x)
{
    long int f = 1, i;
    for (i = 1; i <= x; i++)
    {
        f = f * i;
    }
    return f;
}

int main()
{
    long int n, r, p, temp;
    long int num, den;
    scanf("%ld",&r);
    scanf("%ld",&n);
    if (n < r)
```

```
    {
        temp = n;
        n = r;
        r = temp;
    }
    num = fact(n);
    den = fact(n - r);
    p = num / den;
    printf("%ld", p);
}
```

Q.6. Occurrence of digit

Write a program to find the number of times digit m occurs in each and every number from 0 to n. Given a number n as input, count the number of m's occurring in range from 0 to n. (value of range will be from 0 to n)

For example,

Input1: 100

Input2: 3

Output: 20

Total number of 3s that appear from numbers 0 to 100 are {3, 13, 23, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 43, 53, 63, 73, 83, 93}

Sample Input 1
50
5

Sample Output 1
6

Sample Input 2
45
2

Sample Output 2
15

Input Explanation
Input consists of two integer value

First input is ending value of the range

Second input is the single digit value to find the occurrence

Output Explanation
Output consists of integer value

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	99 2	75 1	88 3	15 2	27 7
Output	20	17	19	2	3

#Solution

```
#include <stdio.h>
int counts(int n, int m)
{
    int count = 0;
    while (n > 0)
    {
        if (n % 10 == m)
        {
            count++;
        }
        n = n / 10;
    }
    return count;
}
```

```
int count_in_range(int n,int m)
{
    int count = 0;
    for (int i = 2; i <= n; i++)
    {
        count += counts(i,m);
    }
    return count;
}

int main()
{
  int n,m;
  scanf("%d %d", &n, &m);
  printf("%d",count_in_range(n,m));
  return 0;
}
```

Q.7. Number palindrome pattern

To print palindrome pyramid pattern using numbers is discussed here. Given a number n, the task is to print a palindrome pyramid containing n number of rows.

Sample Input 1
5

Sample Output 1
1

1 2 1

1 2 3 2 1

1 2 3 4 3 2 1

1 2 3 4 5 4 3 2 1

Sample Input 2
3

Sample Output 2
1
121
12321

Input Explanation
Input consists of single integer value

Output Explanation
Output consists of number palindrome pattern depending on the input

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	3	4	6	2	5
Output	1 121 12321	1 121 12321 1234321	1 121 12321 1234321 123454321 12345654321	1 121	1 121 12321 1234321 123454321

#Solution

```
#include<stdio.h>
int main()
{
    int i, j, k, l, n;
    scanf("%d", &n);
    for (i = 1; i <= n; i++)
```

```
    {
        for (k = 1; k <= i; k++)
        {
            printf("%d",k);
        }
        for (l = i - 1; l >= 1; l--)
        {
            printf("%d",l);
        }
        printf("\n");
    }
    return 0;
}
```

Q.8. String sorting

Given a string, the task is to sort the string in alphabetical order and display it as output.

Sample Input 1
face

Sample Output 1
acef

Sample Input 2
focus

Sample Output 2
cfosu

Input Explanation
Input consists of character value

Output Explanation
Output consists of sorted character value

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	Complete	return	hello	Welcome	Breakfast
Output	Ceelmopt	enrrtu	ehllo	Wceelmo	aabefkrst

#Solution

```
#include <stdio.h>
#include <string.h>
int main()
{
    char string[100];
    scanf("%s", string);
    char temp;
    int i, j;
    int n = strlen(string);
    for (i = 0; i < n - 1; i++)
    {
        for (j = i + 1; j < n; j++)
        {
            if (string[i] > string[j])
            {
                temp = string[i];
                string[i] = string[j];
                string[j] = temp;
            }
        }
    }
```

```
    printf("%s", string);
    return 0;
}
```

Q.9. Print only alphabet

A string is obtained as input from the user and all the characters other than the alphabets are removed from the string and the output string containing only the alphabets is displayed.

Sample Input 1
We23lc333om@#e

Sample Output 1
Welcome

Sample Input 2
h@#el#$lo

Sample Output 2
hello

Input Explanation
Input consists of string value

Output Explanation
Output consists of string value

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	my@anatomy	Chi123*()tkara	Wel32439(*come	Univer90*()sity	Hor23)*s23e
Output	Myanatomy	Chitkara	Welcome	University	Horse

#Solution

```
#include<stdio.h>

int main()
```

```
{
    char input[150];
    int i, j;
    gets(input);
    for (i = 0; input[i] != '\0'; ++i)
    {
        while (!((input[i] >= 'a' && input[i] <= 'z') || (input[i] >= 'A' && input[i] <= 'Z') ||
input[i] == '\0'))
        {
            for (j = i; input[j] != '\0'; ++j)
            {
                input[j] = input[j + 1];
            }
            input[j] = '\0';
        }
  }
  puts(input);
  return 0;
}
```

Q.10. Occurrence of character

Given a string, the occurrence of each character is displayed as output in sorted form.

Sample Input 1
google

Sample Output 1
e 1

g 2

l 1

o 2

Sample Input 2
America

Sample Output 2
A 1
a 1
c 1
e 1
i 1
m 1
r 1

Input Explanation
Input consists of string value

Output Explanation
Output consists of space separated character and integer value, depending on the input

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	Hello	MyAnatomy	Microsoft	sitting	kangaroo
Output	H 1 e 1 l 2 o 1	A 1 M 1 a 1 m 1 n 1 o 1 t 1 y 2	M 1 c 1 f 1 i 1 o 2 r 1 s 1 t 1	g 1 i 2 n 1 s 1 t 2	a 2 g 1 k 1 n 1 o 2 r 1

#Solution

```
#include <stdio.h>
```

```
#include <string.h>
int main()
{
    char str[100];
    int i;
    int freq[256] = {0};
    gets(str);
    for (i = 0; str[i] != '\0'; i++)
    {
        freq[str[i]]++;
    }
    for (i = 0; i < 256; i++)
    {
        if (freq[i] != 0)
        {
            printf("%c %d\n", i, freq[i]);
        }
    }
    return 0;
}
```

Q.11. Anagram or not.

Two strings are given as input and those strings have to be checked if they are anagrams or not. Anagram means that both strings contain the same character set, only their order will be different. Therefore, in both strings, the frequency of each letter must be the same.

Sample Input 1
act
cat

Sample Output 1
Anangram

Sample Input 2
team
mat

Sample Output 2
Not Anagrams

Input Explanation
Input consists of two line separated string value (in lowercase only)

Output Explanation
Output consists of single string value

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	cat bat	rat art	den end	dead bread	tab bat
Output	Not Anagrams	Anagram	Anagrams	Not Anagrams	Anagrams

#Solution

```
#include <stdio.h>
int check_anagram(char[], char[]);
int main()
{
    char a[100], b[100];
    scanf("%s", a);
    scanf("%s", b);
    if (check_anagram(a, b) == 1)
        printf("The strings are anagrams\n");
    else
```

```
        printf("The strings are not anagrams\n");
    return 0;
}

int check_anagram(char a[], char b[])
{
    int first[26] = {0}, second[26] = {0}, c = 0;
    while (a[c] != '\0')
    {
        first[a[c] - 'a']++;
        c++;
    }
    c = 0;
    while (b[c] != '\0')
    {
        second[b[c] - 'a']++;
        c++;
    }
    for (c = 0; c < 26; c++)
    {
        if (first[c] != second[c])
        return 0;
    }
    return 1;
}
```

Q.12. Count odd and even.

Given an array of integers, count the total number of odd elements and even elements in the array and display them as output.

Sample Input 1
3
1 2 3

Sample Output 1
Odd: 2
Even: 1

Sample Input 2
5
1 2 3 4 5

Sample Output 2
Odd: 3
Even: 2

Input Explanation
Input consists of two lines

First line input represents size of array

Second line will be multiple space separate integer value, that are elements of array

Output Explanation
Output consists combination of character and integers in two lines

First line will display count of even

Second line will display count of odd numbers

Note: make sure there are no extra spaces in output line

	Test Case 1	**Test Case 2**	**Test Case 3**	**Test Case 4**	**Test Case 5**
Input	4 12 15 16 1	6 99 65 1 3 7 33	3 33 22 11	4 33 74 89 66	5 11 2 4 15 8
Output	Odd: 2 Even: 2	Odd: 6 Even: 0	Odd: 2 Even: 1	Odd: 2 Even: 2	Odd: 2 Even: 3

#Solution

```
#include<stdio.h>
int main()
{
    int n;
    scanf("%d", &n);
    int arr[n];
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &arr[i]);
    }

    int count_odd = 0, count_even = 0;
    for (int i = 0; i < n; i++)
    {
        if (arr[i] % 2 == 1)
            count_odd++;
        else
            count_even++;
    }
    printf("Odd: %d", count_odd);
    printf("\nEven: %d", count_even);
    return 0;
}
```

Q.13. The online math course provided 'MathAtTip' has designed a course for children called Learning Number Recognition and Counting. The assessment part of the course has a question where the student is given a number and a digit. The student needs to find out the total count of the digits present in the number excluding the given digit.

Write a c program to help the student find out the count of the total number of digits present in the number excluding the given digit.

Sample Input 1
5644456 5

Sample Output 1
5

Sample Input 2
55555 5

Sample Output 2
0

Input Explanation
The input consists of two space-separated integers – number and digit,
where the first integer represents the number and the second integer represents the digit given to the student.

Output Explanation
Print an integer representing the count of the total number of digits present in the number excluding the given digit.

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	775642156 6	23145645 7	443475 4	5644456 5	111111111 1
Output	7	8	3	5	0

#Solution

```
#include<stdio.h>
int excludingDigit(int,int);
int main()
{
   int num,n;
   scanf("%d %d",&num,&n);
   printf("%d",excludingDigit(num,n));
   return 0;
}
int excludingDigit(int num,int n)
```

```
{
    int count=0,digit;
    while(num)
    {
        digit=num%10;
        num=num/10;
        if(digit!=n)
        {
            count++;
        }
    }
    return count;
}
```

Q.14. Shooting Game
The games development company "FunGames" has developed a balloon shooter game. The balloons are arranged in a linear sequence and each balloon has a number associated with it. The numbers on the balloons are in the Fibonacci series. In the game, the player shoots 'k' balloons. The player's score is the sum of numbers on the 'k' balloons. Write a program to generate the player's score.

Example
Input
7
Output
20
Explanation
The Fibonacci sum is 0+1+1+2+3+5+8=20

Sample Input 1
8

Sample Output 1
33

Sample Input 2
0

Sample Output 2
0

Input Explanation
The input consists of an single integer, representing the total number of balloons shot by the player (k).

Output Explanation
Print an integer value representing the player's score. If no balloons are shot then print 0.

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	9	8	4	0	10
Output	54	33	4	0	88

#Solution

```
#include<stdio.h>
int fibo(int n)
{
    int fibs[n];
    fibs[0] = 0;
    fibs[1] = 1;
    int sum=0;
    for(int i=2;i<n;i++)
    {
        fibs[i] = fibs[i-1]+fibs[i-2];
    }
    for(int i=0;i<n;i++)
    {
        sum += fibs[i];
    }
    return sum;
}
int main()
{
    int numBalloons;
    scanf("%d",&numBalloons);
    if (numBalloons==0)
    {
        printf("0");
    }
    else
    {
        int result = fibo(numBalloons);
        printf("%d",result);
    }
}
```

Q.15. Encryption key
The IT giant "SoftCompInfo" has decided to transfer its message through the network using a new encryption technique. The company has decided to encrypt the data using the non-prime number concept. The message is in the form of a number and the sum of non-prime digits present in the message is used as the encryption key. Write a function to determine the encryption key.

Example
Input
45673
Output
10
Explanation
The non-prime digits are 4 and 6. Hence the output is 4+6 = 10.

Sample Input 1
33512

Sample Output 1
0

Sample Input 2
468

Sample Output 2
18

Input Explanation
The input consists of a single integer value

Output Explanation
Output consists single integer value

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	6461	1001	33512	23456	48412
Output	16	0	0	10	12

#Solution

```
#include <stdio.h>
int nonprime(int);
int nonprime(int n)
{
    int digit,i,sum=0,m;
    while(n!=0)
    {
        digit=n%10;
        n=n/10;
        for(i=2;i<digit;i++)
        {
            if(digit%i==0)
            {
                sum=sum+digit;
                break;
            }
        }
    }
    return sum;
}

int main()
{
    int n;
    scanf("%d",&n);
    printf("%d",nonprime(n));
    return 0;
}
```

Q.16. Perfect cube.
The children's toy-making company "ToysFun" is building cubic-shaped learning toys. The company has a list of N dimensions suggested by its designers but they wish to choose only those dimensions for the toys that are perfect cube numbers. To do this, they need to know the total count of perfect cube numbers present in the list of dimensions.
Write a function to help the toy manufacturers find the total count of perfect cube numbers present in the list of dimensions.

Example
Input
9
23 1 8 56 27 67 64 125 232

Output
5
Explanation
The cube numbers are 1, 8, 27, 64, 125. Hence the output is 5.

Sample Input 1
5
23 1 8

Sample Output 1
3

Sample Input 2
3
54 96 81

Sample Output 2
0

Input Explanation
The first line of input consists of an single integer, representing the total number of dimensions selected by the designers (N).

The second line of input consists of N space-separated integers - dimens1, dimens2, ... dimensN-1 representing the value of the dimensions selected by the designers.

Output Explanation
Print an integer value representing the total count of the dimensions that are perfect cube numbers.

	Test Case 1	Test Case 2	Test Case 3	Test Case 4	Test Case 5
Input	3 27 67 64	4 8 9 27 2	5 23 1 8	3 4 9 12 15	5 1 27 8 125 512
Output	2	3	3	0	5

#Solution

```
#include<stdio.h>
int dimens_is_cube(int n)
{
    int i=1;
    int result = 0;
    while(i<=n)
    {
        if(i*i*i == n)
        {
            result = 1;
            break;
        }
        i++;
    }
    return result;
}

int main()
{
    int numDimensions;
    scanf("%d", &numDimensions);
    int dimens[numDimensions];
    for(int i=0;i<numDimensions;i++)
    {
        scanf("%d", &dimens[i]);
    }
    int perfect_cube = 0;
    for(int i=0;i<numDimensions;i++)
    {
        if(dimens_is_cube(dimens[i]))
        {
            perfect_cube++;
        }
    }
    printf("%d",perfect_cube);
```

```
    return 0;
}
```

Q. Mahi has a N*N matrix. He wants to print the jth diagonal. jth diagonal means a diagonal which starts from the (0,j)th cell and goes in the right-diagonal direction.

Give a N*N square matrix, return an array of its jth diagonals. Look at the example for more details.

Q. Suppose you take an input from the user an array size and elements , that array contains n number of elements, array elements might be repetitive. Your job is to print all unique elements

Q.Write a program in C to print an outline diamond pattern using asterisks (*).

Q. Abhi and Chitrang are best friends. Abhi was not sure about which algorithm to apply on a question given by their teacher. So, he was writing down each algorithm he tested till now on a paper separated by '0' to indicate this didn't work. Chaitanya and Chitrang used to call each algorithm by the number of characters present in it. Chitrang wants to help his friend. Hence He wants to know the current algorithm Chaitanya is applying. You have to help Chitrang as Chaitanya is very busy trying to get the solution.

Q.The games development company "FunGames" has developed a balloon shooter game. The balloons are arranged in a linear sequence and each balloon has a number associated with it. The numbers on the balloons are in the Fibonacci series. In the game, the player shoots 'k' balloons. The player's score is the sum of numbers on the 'k' balloons. Write a program to generate the player's score.

Q. Prime Numbers in range

A school students want to check prime numbers within given range, write a c program to help them for the same. Where x will be starting range and y will be ending range, if x is greater than y or x is equal to y print 0, if x is smaller than y prints the prime numbers within mentioned range.

A number is said to be prime if it is divisible by 1 and the number itself.

Q. Program to find all possible permutations in which 'n' people can occupy 'r' seats in a theatre. (10 Marks)

N friends are planning to go to a movie. One among them suggested few movies and all others started to discuss and finally they selected a movie. One among them quickly booked their tickets online, to their surprise they are unable to select their seats. All of them got confused. Then anyhow, decided to go to the movie. They rushed to reach the theatre on time. Again, they are surprised that no one was there in the theatre. They are the only people about

to watch the movie. There is 'r' number of seats in which, 'n' number persons should sit. In how many ways they can sit inside the theatre?

Given the number of people 'n' and the number of seats 'r' as input. The task is to find the different number of ways in which 'n' number of people can be seated in those 'r' number of seats.

Q. Player's score
Developers at the mobile company 'TalkFree' have designed a game for the launch of their new product. In the game, the player is given a number. The player has to find out the difference between the number and the reverse of the number. The difference between the two numbers is the player's score. The number given to the player and the player's score can either be a negative or positive number. Write an function to find the player score.

Q. Number of Distribution
The warehouse of an e-commerce company has limited stock available for each item due to a promotional sale. The company needs to distribute this stock to its distribution center in a particular manner. If the value of the available stock for an item is an even number, then the total stock is divided by 2. If it is an odd number, 1 is subtracted from it. The company wishes to know how many distributions can take place before the stock reaches 0. Write an function to calculate the number of distributions that can take place before the stock reaches 0.

Q. Encryption key
The IT giant "SoftCompInfo" has decided to transfer its message through the network using a new encryption technique. The company has decided to encrypt the data using the non-prime number concept. The message is in the form of a number and the sum of non-prime digits present in the message is used as the encryption key. Write a function to determine the encryption key.

Q. Write a program to calculate and display the sum of the harmonic series for a given value of n:
1 + ½ + 1/3 + ¼ +….. +1/n.
The value of n should be given interactively through the terminal or command line..

Q. Write function to find the maximum and second maximum element in a one-dimensional array,The function should handle duplicates.

Q. Haldiram Mom used to give him pocket money every day based on his performance throughout the day. This pocket money can be negative or positive based on his performance. If it is negative that means Haldiram has to give money back to his mom. If the pocket money is positive that means he performs well today and his mom will give him some money. Your task is to find the maximum pocket money Haldiram has at any contiguous day.

Q . Suppose you are given a number in binary form, your job is to convert the binary number to decimal form.

Q. Write a function in C to find the longest common prefix in a set of strings.