

Problem –1 : To Print first N prime numbers that are also fibonacci numbers.

Input : 4
Output : 2 3 5 13

Problem – 2 : To print new string on screen which is generated using following rules
Reverse all odd words
Toggle letter case of every character of even words

Input : This iS a Example of The ABOve DefniTION
Output : siiT Is a eXAMPLE fo tHE evOBA definition

Problem – 3 : Generate following pattern for given number N

Input: 3
Output:
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* *

* * *

* * *

* * *

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Problem – 4 : Print all numbers between given range which are perfect square and sum of digits of that number is also perfect square.

Input: n=1 m=50
Output: 4 9 36

Problem – 2

Write a program to evaluate the given expression string (length<=50) consisting of integer numbers and operators (only “+”, “-“, “*”, and “/”) from left to right, and to display the result on screen.

Input	Output
“3+4*2”	14
“8/2+5”	9
“10-3+6*2/13”	2

Problem – 1

Write a program to print following pattern at center of screen for a given number N.

Input: 2	Input: 1
Output	Output

				B								A					
			A		C						Z		B				
		Z		D		Y			Y		C		X				
	E		X		F		W										
G		V		H		U		I									

Input: 3
Output

						C											
					B		D										
				A		E		Z									
			F		Y		G		X								
		H		W		I		V		J							
	U		K		T		L		S		M						
R		N		Q		O		P		P		O					

Problem – 3

Write a program to print pair of prime numbers having maximum distance between them in the given range by the user. If there are two or more pairs having the same maximum distance, display the first pair.

Input	Process	Output
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Lower Bound: 1 Upper Bound: 10	The prime numbers are 2,3,5,7 The difference between 2 and 3 is 1 The difference between 3 and 5 is 2 The difference between 5 and 7 is 2	3-5
Lower Bound: 10 Upper Bound: 30	The prime numbers are 11,13,17,19,23,29 The difference between 11 and 13 is 2 The difference between 13 and 17 is 4 The difference between 17 and 19 is 2 The difference between 19 and 23 is 4 The difference between 23 and 29 is 6	23-29
Lower Bound: 1 Upper Bound: 100		89-97

Problem – 4

Write a program to accept two strings (≤ 40 characters) from user.

The first string is a vocabulary string that contains all words of some language in ascending order.

The second string is sentence written by user.

Represent the user sentence against the vocabulary string in vector form of numbers such that each number represents the frequency of word of vocabulary in the given string (ignore case).

Input	Output
V=" a and cat dog frog" S="A Dog"	VS=(1, 0, 0, 1, 0)
V=" a and cat dog, frog" S="A Frog and a Cat"	VS=(2, 1, 1, 0, 1)
V=" cat dog" S="Dog dog dog"	VS=(0, 3)
V="ab cd ef" S="ab cd ab cd ab"	VS=(3, 2, 0)
V="ab cd ef" S="cd ab ef ab"	VS=(2, 1, 1)

Problem – 3

Write a program to print all permutation combination of natural numbers for a given length according to following pattern

Input: 2	Input: 3	Input: 4
Output:	Output:	Output:

1 2	1 2 3	1 2 3 4
2 1	1 3 2	1 2 4 3
	2 1 3	1 3 2 4
	2 3 1	1 3 4 2
	3 1 2	1 4 2 3
	3 2 1	1 4 3 2
		2 1 3 4
		2 1 4 3
		...
		...
		4 3 2 1

Problem – 4

Write a program to accept two strings (≤ 40 characters) from user.

Generate a vocabulary string that contains all words of both strings (without repetition) in ascending order (ignore case).

Represent both the strings against this vocabulary in vector form of numbers such that each number represents the frequency of word of vocabulary in the given string.

Input	Vocabulary (need not to be displayed)	Output
S1="A Dog" S2="A Frog and a Cat"	(a, and, cat, dog, frog)	VS1=(1, 0, 0, 1, 1) VS2=(2, 1, 1, 0, 1)
S1="Dog dog dog" S2="Cat"	(cat, dog)	VS1=(0, 3) VS2=(1, 0)
S1="ab cd ab cd ab" S2="cd ab ef ab"	(ab, cd, ef)	VS1=(3, 2, 0) VS2=(2, 1, 1)

Problem – 3

Write a program to print first cycle of numbers that is obtained in following process that starts with a given number N.

Generate a sequence from given number N such that next number in sequence is sum of square of digits of previous number in series.

Stop when any number is repeated in this process and print this first cycle.

Example

Input: 2

Sequence of Numbers (Need not to be displayed):

2 4 16 37 58 89 145 42 20 4 (Stop)

Output:

4 16 37 58 89 145 42 20 4

Problem – 4

Consider that for some users the alphabets contains only five symbols: M, A, G, D, and K (No Lower Case or any other character such as Space character).

You are given N strings (Sequence of Character) consisting of above mentioned symbols (characters) only.

Write a program to sort those given strings in the ascending order.

The order of symbols is same as that of given in first sentence.

Example

Input:	7 AAGDK KDAGD AGDKL DKAKA MKADK DMAKA	Output:	MKADK AAGDK AGDKL DMAKM DMAKA DKAKA KDAGD
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	DMAKM		
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Problem – 2

Write a program to print N steps of following series along with sum for N steps for given number N.

$$1 - 2 * 3! + 3 * 4 * 5! - 4 * 5 * 6 * 7! + \dots$$

Example

Input	Output
2	$1 - 2 * 3! = -11$
3	$1 - 2 * 3! + 3 * 4 * 5! = 1429$
4	$1 - 2 * 3! + 3 * 4 * 5! - 4 * 5 * 6 * 7! + \dots = -452171$

Problem – 3

Write a program to print following pattern at center of screen for a given number N.

Input: 3	Input: 4
Output	Output

			C										D				
		c	C	c								d	D	d			
	C		D		C						D	E		D			
										d	F		F		D		

Input: 5
Output

					E												
				E	e												
			e	f	e												
		E		G		G		E									
	e		h	j		h		e									

Problem – 4

Write a program to print list of tokens in ascending order (ignore case) from a given string according to the given delimiter string. Also print total number of tokens.

Example

Input	Output
Main String="This is my, main string Delimiter String=" "	No. of tokens =5 List of tokens in ascending order is main my, string This
Main String="This is my, main string Delimiter String=", "	No. of tokens=2 List of tokens in ascending order main string This is my
Main String="This.is-my, main string Delimiter String=".-,"	No. of tokens=4 List of tokens in ascending order is main string my This

Print Circular Matrix Clock wise (or anti-clock wise) fro given number N.

Input=4

1	2	3	4
12	13	14	5
11	16	15	6
10	9	8	7

Input=5

1	2	3	4	5
16	17	18	19	6
15	24	25	20	7
14	23	22	21	8
13	12	11	10	9

Print first N numbers which are prime as well as Fibonacci numbers. Note that 1 is not prime.

Input: N=3

Output: 3, 5, 13

