1. Say Hello

Input String and print with out “Hello”

Input	Output
oop	Hello oop
java	Hello java

2. Multiply 2 number

Read in a float and Multiply it between two float and print out the result

Input	Output
4.5	4.5 * 1.3 = 5.85
1.3	
1.7	1.7 * 3.2 = 5.44
3.2	

3. Shortest word

Read in 5 words (one per line) and print out the one that is the shortest (has the fewest characters).

Input	Output
hi	i
i	
love	
oop	
somuch	

4.Your age On Mars

Venus takes 224.70 Earth days to complete one orbit around the Sun (compared to Earth which takes 365.25 days). The program should input your age on Earth (integer) and output your age on Venus to 3 decimal places.

Input	Output
18	29.259
20	32.510

5. Leap years

Write a Java program to check the Leap Year if a leaf years print true but no print false

Input	Output
4	true
100	false
2500	false

6. Divide

Write a program to get 2 integers with out space n and m values respectively, and then have the program display numbers in the range 1 - n that are evenly divisible by m.

Input	Output
15	5
5	10
	15
21	3
3	6
	9
	12
	15
	18
	21

7. Planet names

Write a program that takes a planet name and outputs information about that planet. The program should accept input in any case (e.g. “Mars” == “mars” == “MARS”).

Input	Output
Mars	Mars is the 4th planet from the Sun.
venus	Venus is the 2nd planet from the Sun.

8. Doubled

Write program input integer for set the round and output is Double value of each round number By default is 1

Input	Output
1	1
2	2
3	4
5	16

9. Square Sequence

The sequence of square numbers is 1^2, 2^2, 3^2, 4^2, ..., n^2. Read in the number n and print out the sequence of square numbers up to the n-th item.

Input	Output
4	1 4 9 16
10	1 4 9 16 25 36 49 64 81 100

10.Factorial

Read in a number. Print out the factorial. (5! = 5 * 4 * 3 * 2 * 1 = 120)

Input	Output
3	6
5	120

11. A lot of As

Write a program that counts the number of As in one line of input

Input	Output
it was a happy day in America	6
all afternoon and evening	3

12. Square

Write a program that inputs 1 integer and then draws a star using *

Input	Output
2	** **
4	**** **** **** ****

13. Discrete Pyramids

George Boole liked to build pyramids. However, he would only build pyramids with cubes of size 1x1x1. Here are some example pyramids built by George: Your task is to write a program that calculates the number of cubes that George would need to build a pyramid of height n. The input is the height n (1 <= n < 100) and the output is the number of cubes.

Input	Output
2	5
5	55
10	385

14. Select The Character

Read in a string and an integer. Print out the x-th character of the string, where x is the integer from the user input. If the integer is greater than the length of the string then print “error".

Input	Output
potato 3	t
mushroom 1	m

15. Automated canteen

The Dean would like students to help write a program to calculate the change. By calculating the minimum amount of coins for changing money Here we have 5 types of coins: 20, 10, 5, 2, and 1.

The program will receive two values: the price of the item to be paid and the amount received. And display the result as the number of coins in the change of money according to the coin type

Input	Output
65 80	0 1 1 0 0
82 100	0 1 1 1 1
13 50	1 1 1 1 0

16. Word Cut

Read in a list of words. For each word, print out the second, third and fourth characters. When the program reaches the word "quit" then stop.

Input	Output
hello	ell
there	her
everyone	ver
quit	

17 Count the vowels

Write a program To count the number of characters (a, e, i, o, u)

Input	Output
ant	1
hello	2

18 Word Shortener

Read in a list of words. For each word, print out the first and last character. When the program reaches the word "quit" then stop.

Input	Output
hello	ho
there	te
everyone	ee
quit	

19 Abbreviator

Write a program that reads in one word per line and generates an abbreviation. Print out the first letter of each word followed by a dot (.). The end of the input is marked by word (outloop).

Input	Output
Class	C.L.S.S.
Late	
Start	
Sleeping	
outloop	

20. Total characters

Read in lines of input until "stop". Print out the number of characters in the words, not including "stop".

Hint: you might want to use a do-while or while loop containing a nextLine to read input.

Input	Output
hello there stop	10
how are you today stop	14

21. How many semi-colons?

Read in a string, count how many semi-colons (";") in the string and print out the result.

Input	Output
apple; pears; bananas	2
ant; how are you	1

22. Count the words

Read in a sentence (line of words), count how many words in the sentence and print out the result.

If the input is "happy new year everyone" then there are 4 words.

Input	Output
happy new year everyone	4
let us code together in 2020	6

23. Numbers Between

Read in 2 integers (one on each line) and then print out all the numbers between the 2 numbers

Input	Output
1 5	2,3,4
10 5	6,7,8,9

24.Fibonacci

Print the Fibonacci sequence. The number of items to print is determined by an integer read in on the input. If the input is 0 then print nothing.

Input	Output
1	1
5	1 1 2 3 5
7	1 1 2 3 5 8 13

25. Four quadrants of a 2D space

Read in two integers that represent a vector (x, y) in a 2D space. Print out the quadrant number where the point is. The input vector will always have exactly 1 quadrant. Ignore the case of points that are along the axis (e.g. 0,y and x,0 are not valid inputs).

Input	Output
-4 -3	Quadrant II
1 2	Quadrant I

26. TimeSquare

Write a program that inputs 4 numbers and returns the smallest and the highest.

Input	Output
1	Min : 1
2	Max : 4
3	
4	
7	Min : 3
3	Max : 12
12	
5	

27. Max_value_number

Input the value no more than 5 integers separated by space and find the max value if input more than 5 print max input

Input	Output
5 8 9 12 3	12
3 7 5	7
1 5 7 8 9 2	max input

28. Optimus Prime

A prime number is a positive integer that has two positive divisors, 1 and itself. For example, 7 is a prime. Since it can only be formed by 1 * 7 (itself), 8 is not prime, because 8 is not formed by only 1 * 8, 2 * 4 can also cause 8, etc.

Students write a program to check the prime value by accepting an Input as an integer - display the 'Y' result if that number is a prime number. If not, display the 'N' result.

Input	Output
5	Y
8	N

29 Great fun base numbers (maybe)

Write a program to convert a number from 2 to base 10.

Input	Output
1001	9
1100001	97

30. Remove duplicate characters

Input 1 string and output show duplicate characters with ,

Input	Output
hello	h,e,l,o
ant	a,n,t

31. Receive_unlimited_values

Write a program that reads strings into an array. When the input ends (with a *), print all the strings on one line, separated by a space.

Input	Output
hi	hi i love oop
i	
love	
oop	
*	
how	how are you today
are	
you	
today	
*	

32. Reverse list

Write a program that reads in a list of strings (one per line) and prints them out in reverse order.

Input	Output
hello	everyone
everyone	hello
*	
ant	cat
bird	bird
cat	ant
*	

33. Middle of the array

Read in a list of strings and print out the one in the middle (or the two in the middle).

Input	Output
alpha	beta
beta	delta
delta	
gamma	
*	

34. Reverse numbers

Write a program that reads in integers and prints them in reverse order.

Input	Output
1 4 2 3	3 2 4 1
9 4 7	7 4 9

35. Less than last

Write a program that reads in a list of integers. Print out all the integers that are less than the last element of the list. Example, if the input is 3 8 5 7 then the last element is 7, so print out 3 5.

Input	Output
3 8 5 7	3 5
1 2 3 4 5 6 7	1 2 3 4 5 6
10 6 3 5 8	6 3 5

36. Number removal

Write a program that reads in a list of integers and then prints out the numbers 1 to 30 NOT including the numbers from the input.

Input	Output
1 2 3 4 5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
1 2 3 4 5 6 19 20 22 25 27 28 29	7 8 9 10 11 12 13 14 15 16 17 18 21 23 24 26 30

37. Palindrome checking

Input the String Is it a palindrome if the reverse of a string is the same as the input it receives

Output is True but no Output is false

Input	Output
abba	true
abbc	false
dcccd	true

38. Palindrome Number

Read in a number and check if it is a palindrome or not.

Input	Output
1212	true
3345433	true
1212	false

39.A Small Matter Of Case

Write a program that reads two words and returns whether they are the same or different (ignoring the case).

Input	Output
bird Bird	same
Fish Fishh	different

40. Seas and Esses

Check to see if a string has the same amount of 'C's and 'S's (uppercase only).. The string can contain any character.

Input	Output
CCSS	true
CSCSC	false
aCSbcdeCSf	true

41. Looking for a long word

Given an array of strings, return the first word that is longer than 6 letters. If no such word is found then print nothing.

Input	Output
find,what,you,are,looking,for	looking
what,may,be,the,oldest,always,hurts,the,same	

42. All the long uns

Given an array of strings, return all the words that are longer than 7 letters. Print one per line.

Input	Output
jumped,over,the,lazy,sleeping	sleeping
unconscious,with,shallow,breath,weloveoop	unconscious
	weloveoop

43.All are equal

Given an array of integers, return true if all integers in the array are equal.

Input	Output
1,1,2,1	false
2,2,2	true

44.One two three

Given an array of integers, return true if the sequence of numbers 1, 2, 3 appears anywhere in the array

Input	Output
6,1,2,3,9	true
6,1,2,9,3	false
5,1,1,9,3	false

45.Decreased odds and even

Given an array of integers, return an array where any odd numbers of the input array are changed to the nearest lower even number. where any even numbers of the input array are changed to the nearest highest odd number

Input	Output
2,3,4,5	3,2,5,4
6,1,2,9,3	7,0,3,8.2

46. Chatbot Check Room

The chatbot can answer the question “Where is X” where X is a room number in the ranges of: 101-118, 201-218, 301-318, 401-418, 501-518.

The chatbot answers “Floor Y” where Y is the floor number of the room. If the room number is not in the ranges above then it answers “Invalid room”.

The input ends when the user enters “quit”.

Input	Output
where is 313	floor 3
where is 108	floor 1
where is 608	Invalid room
bye	

47. Whole numbers between reals

Read in two real numbers (type double). Print out every integer in between (exclusive) in ascending order.

Hint: you can use Math.floor(1.23) to get 1.0 and Math.ceil(1.23) to get 2.0.

Input	Output
-1.5 7.25	-1 0 1 2 3 4 5 6 7
8.333 3.0	4 5 6 7 8

48. Adding any-D vectors

Write a program that adds two vectors of any dimension d.

The first line of the input contains the integer d. The remaining d lines each contain 2 integers, the first column is vector 1 and the second column is vector 2 The output contains vector 1, vector 2 and the result of adding the vectors. The + and = should be on the last line of the output.

Input	Output
2	[1] [2] [3]
1 2	[3] + [4] = [7]
3 4	

49. Alphabetize

Write a program input string and separated by , output Words in a sequence separated by, after the alphabetical order.

Input	Output
cat,ant,pig,fish	ant,cat,fish,pig
car,bike,motorcycle,boat	bike,boat,car,motorcycle
bike,boat,car,motorcycle	Sunday,Tuesday,monday,Wednesday

50 Word count the sequel

Write a program that reads in many lines of text and counts the number of words and punctuation marks (including: ,.?!). The input ends with the line ***

Input	Output
where would you like	7 words
to go today?	1 punctuation mark
***	
Today... Well, I need a	11 words
coffee and a bar of	5 punctuation marks
chocolate!	
***	

51 Remove duplicates

Given an array of integers, return an array with the duplicates removed.

Input	Output
1,2,1,3	1,2,3
5,3,3,7,5	5,3,7
2,6,8,12	2,6,8,12
2,1,2,3,2,4	2,1,3,4

52 Common text

Find the common strings between two arrays. Print the results sorted (a-z)

Input	Output
a,c,d,e c,f,e,g,a	a,c,e
c,g,a,c,e g,e,c	c,e,g

53 Check bracket

Write a program for checking the brackets

Input	Output
({})	correct
({}[]){()}[	incorrect
({)}	incorrect

54. Array 2 dimension

Write a program input integer two digit and separated by Create Array 2 dimension The value of the elements in the i and column j of
the array should be i * j.

Input	Output
3,5	[0,0,0,0,0],[0,1,2,3,4],[0,2,4,6,8]
4,6	[0,0,0,0,0,0],[0,1,2,3,4,5],[0,2,4,6,8,10],[0,3,6,9,12,15]

55. Count number repeated.

Input int and separated by spacebar and put in list And output to create a dictionary to show the count of each number

Input	Output
1 1 2 2 1	{1:3},{2:2}
1 3 4 5 6 6 6 1 2	{1:2},{2:1},{3:1},{4:1},{5:1},{6:3}

56. Folding

Write a program input integer two value and separated by spacebar as a set of numbers. And Division range

Input	Output
123456789 2	12 34 56 78 9 189
245754765 3	245 754 765 1764

57. Exponent of number Find Center

Write a program input integer three value and separated by spacebar and first 2 number should be Exponent and number 3 to find the center of the value If you do not fit in the middle of the middle, take the middle position

Input	Output
44 2 2	1936 93
35 3 4	42875 4287

58. Sort and split list

Input the String separated by ; and , The first String brach with ; And The Second brach with , will get list 2 dimensions. and output list 2 dimensions that are sorted in order of the first numbers and are 1 far apart

Input	Output
1,3;7,9	[[1,2],[2,3],[7,8],[8,9]]
10,13;1,3	[[1,2],[2,3],[10,11],[11,12],[12,13]]