STRING

1. Take a string from the user and check if it is a palindrome.

Input	Output
eye	Palindrome
whatever	Not a palindrome
1234567654321	Palindrome
meme	Not a palindrome

2. Count the number of characters, words, letters, vowels, digits and symbols in a string.

Input	Output
I am 100% retarded.	Characters: 19 Words: 4 Letters: 11 Vowels: 5 Digits: 3 Symbols: 2
What the $#%@!	Characters: 14 Words: 3 Letters: 7 Vowels: 1 Digits: 0 Symbols: 5

3. Take a string from the user then replace all the vowels in that string with asterisks *.

Input	Output
Wish you were here.	W*sh y** w*r* h*r*.
Trololololo	Tr*l*l*l*l*
Erlich Bachman	*rl*ch B*chm*n
poop	P**P

4. Take the name of the user and store it in a single string. Print the last name followed by a comma, and then print the first letter of the first name followed by a dot.

Input	Output
Josna Begom	Begom, J.
Ali G Star	Star, A.
Shamsu Choudhuri	Choudhuri, S.

5. Take 5 names from the user, store them in an array. Then sort the names in ascending order based on the full name. Print the sorted array.

Input	Output
Josna Begom Ali G Star Shamsu Choudhuri Bilkis Haved Jossain	Ali G Star Bilkis Haved Jossain Josna Begom Shamsu Choudhuri

6. Take 5 names from the user, store them in an array. Then sort the names in ascending order based on the **last** name. Print the sorted array.

Input	Output
Josna Begom Ali G Star Shamsu Choudhuri Bilkis Alom Haved Jossain	Bilkis **Alom** Josna **Begom** Shamsu **Choudhuri** Haved **Jossain** Ali G **Star**

7. Take a string from the user, print the reverse string.

Input	Output
Whatever	revetahW
12345	54321
Magic Mushroom	moorhsuM cigaM

8. Take a sentence or paragraph from the user and print only the first letters of each word in that sentence/paragraph.

Input	Output
`Shine on you crazy diamond. Floyd`	`SoycdF`
There is always some madness in love. But there is also always some reason in madness.	`TiasmilBtiaasrim`
`Dependent University Bangladesh`	`DUB ( ডাব )`

9. Take a string from the user and count the number of uppercase and lowercase letters.

Input	Output
Alan Watts	`Uppercase letters: 2` `Lowercase letter: 7`
Fyodor Mikhailovich Dostoevsky	`Uppercase letters: 3` `Lowercase letter: 25`

10. Take a string from the user and change the lowercase letters to uppercase and uppercase letters to lowercase.

Input	Output
`B. F. Skinner`	`b. f. sKINNER`
Sigmund Freud	`sIGMUND fREUD`
Carl G. Jung	`cARL g. jUNG`

11. Take a sentence and print the words in reverse order.

Input	Output
`Sacha Baron Cohen`	`Cohen Baron Sacha`
Teacheth man that which he already kneweth	`kneweth already he which that man Teacheth`
Up Down University	University Down Up

12. Check if an email address is valid or not. A valid email address will have the format: xxxxxxx@xxxxx.xxx. The email address must contain a part before the at (@), another part between at (@) and the dot (.) and the last part after the dot (.).

Input	Output
mofis@something.com	Valid
@bilkis@whatever.bd	Invalid
beauty.gmail@com	Invalid
shamsu@rubbish.org	Valid
haved@jossain.com.	Invalid
abc.gmail.com	Invalid
x@y.z	Valid

13. Write a program to check if a string is a valid integer or not.

Input	Output
12314	Valid
543x123	Invalid
188-45	Invalid
0	Valid
-3453	Valid
+15	Valid
1423+	Invalid

14. Write a program that checks if a date is valid or invalid. The date must follow DD/MM/YYYY format. If you don't know what that is, look it up on the Internet.

Input	Output
05/08/2049	Valid
31/12/3019	Valid
45/10/2000	Invalid
13/15/1995	Invalid
5/07/19	Invalid
20/11/0000	Invalid
05/07/0017	Valid
01/02/12345	Invalid

15. Write a program to check if an identifier is valid or invalid. Identifier is the name of a variable/class/function.

Input	Output
abc	Valid
x	Valid
asd 123	Invalid
4ever	Invalid
x5a	Invalid
_v_	Valid
int	Invalid
Float	Valid
while	Invalid
ifelse	Valid
Sum total	Invalid
Average-value	Invalid