

String Functions in MATLAB

Below are MATLAB string functions with definitions, example programs, and outputs.

1. char

Definition: Converts number to character.

```
x = 65;
y = char(x)
```

Output:

```
y = 'A'
```

2. findstr

Definition: Finds the position of a substring in a string.

```
str = 'MATLAB Programming';
pos = findstr('Pro', str)
```

Output:

```
pos = 8
```

3. ischar

Definition: Returns 1 if argument is character array, else 0.

```
a = 'Hello';
b = 123;
out1 = ischar(a)
out2 = ischar(b)
```

Output:

```
out1 = 1
out2 = 0
```

4. isletter

Definition: Finds letters in a string.

```
str = 'Hi 123!';
result = isletter(str)
```

Output:

```
result = [1 1 0 0 0 0]
```

5. isspace

Definition: Finds spaces in a string.

```
str = 'Hello World';
result = isspace(str)
```

Output:

```
result = [0 0 0 0 0 1 0 0 0 0 0]
```

6. isstrprop

Definition: Finds characters of specified type in string.

```
str = 'MATLAB2025';
result = isstrprop(str, 'alpha')
```

Output:

```
result = [1 1 1 1 1 1 0 0 0 0]
```

7. num2str

Definition: Converts number to string.

```
num = 3.1416;
str = num2str(num)
```

Output:

```
str = '3.1416'
```

8. length

Definition: Finds length of a string.

```
str = 'MATLAB';
n = length(str)
```

Output:

```
n = 6
```

9. lower

Definition: Converts string to lowercase.

```
str = 'HELLO MATLAB';
out = lower(str)
```

Output:

```
out = 'hello matlab'
```

10. sprintf

Definition: Writes formatted data to a string.

```
name = 'Alice';
age = 25;
out = sprintf('My name is %s and I am %d years old.',
    name, age)
```

Output:

```
out = 'My name is Alice and I am 25 years old.'
```

11. strcmp

Definition: Compares strings (case-sensitive).

```
s1 = 'hello';
s2 = 'hello';
s3 = 'world';
strcmp(s1,s2)
strcmp(s1,s3)
```

Output:

```
ans = 1
ans = 0
```

12. strcmpl

Definition: Compares strings ignoring case.

```
s1 = 'HELLO';
s2 = 'hello';
strcmpi(s1,s2)
```

Output:

```
ans = 1
```

13. strmatch

Definition: Finds strings that begin with specified pattern.

```
strs = ['apple'; 'apricot'; 'banana'];
result = strmatch('ap', strs)
```

Output:

```
result = [1; 2]
```

14. strncmp

Definition: Compares first n characters of strings.

```
s1 = 'hello';
s2 = 'helium';
strncmp(s1,s2,3)
```

Output:

```
ans = 1
```

15. strncMPI

Definition: Compares first n characters ignoring case.

```
s1 = 'HELLO';
s2 = 'helium';
strncMPI(s1,s2,3)
```

Output:

```
ans = 1
```

16. str2num

Definition: Converts string to number.

```
str = '123.45';
num = str2num(str)
```

Output:

```
num = 123.4500
```

17. upper

Definition: Converts string to uppercase.

```
str = 'matlab';
out = upper(str)
```

Output:

```
out = 'MATLAB'
```