

# isim 2021

International Symposium on  
IoT and ML for  
Ecosystem Restoration &  
Multihazard Resilience

05<sup>th</sup> to 09<sup>th</sup> of June 2021



# Introduction to Python Programming

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- Python Strings
- Accessing elements
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# Python Strings

- String is a data type in Python
- We can create them simply by enclosing characters in quotes
- Python treats single quotes the same as double quotes
- May contain alphabets, numbers and special characters

```
str1 = "This is python programming"  
print(str1)  
print("hai")
```

```
This is python programming  
hai
```

# Accessing Elements

- Python does not support a character type
- these are treated as strings of length one
- To access substrings, use the square brackets for slicing along with the index or indices to obtain your substring

```
str1 = "python"  
print(str1[0]) #index  
print(str1[-1]) #negative index  
print(str1[1:3]) #slices
```

```
p  
n  
yt
```

# Updating Strings

- Strings are immutable in nature
- Cannot modify a string

```
str1 = "python"  
str1[1]='c'  
print(str1)
```

```
-----  
TypeError                                 Traceback (most recent call last)  
<ipython-input-3-61dc553bdf77> in <module>()  
      1 str1 = "python"  
----> 2 str1[1]='c'  
      3 print(str1)  
  
TypeError: 'str' object does not support item assignment
```

```
str1 = "python"  
print(str1 + ' programming')  
  
python programming
```

Creates a new string

# Common String Operations

- Python mainly contains 3 inbuilt string functions.
  - len()
  - max()
  - min()
- len() - Find out the length of the characters in a string
- min() - Smallest value in a string based on ASCII values
- max() - Largest value in a string based on ASCII values



# In-built String Functions

Operator	Description
+	Concatenation - Adds values on either side of the operator
*	Repetition - Creates new strings, concatenating multiple copies of the same string
[]	Slice - Gives the character from the given index
[ : ]	Range Slice - Gives the characters from the given range
in	Membership - Returns true if a character exists in the given string
not in	Membership - Returns true if a character does not exist in the given string

# In-built String Functions

isalnum()	Returns true if all characters in string are alphanumeric and there is atleast one character
isalpha()	Returns true if all characters in string are alphabetic
isdigit()	Returns true if string contains only number character
islower()	Returns true if all characters in string are lowercase letters
isupper()	Returns true if all characters in string are uppercase letters
isspace()	Returns true if string contains only whitespace characters.

Endswith()	Returns true if the strings ends with the substring
Startswith()	Returns true if the strings starts with the substring
Find()	Returns the lowest index or -1 if substring not found
Count()	Returns the number of occurrences of substring



Thank you !

