**How to Convert Bytes to String in Python ?**

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[patildhanu4111999](https://www.geeksforgeeks.org/how-to-convert-bytes-to-string-in-python/" \l "article-meta-div)

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In this article, we are going to cover various methods that can convert bytes to strings using Python.

**Convert bytes to a string**

**Different ways to convert Bytes to string in Python:**

* **Using**[***decode()***](https://www.geeksforgeeks.org/python-strings-decode-method/)**method**
* **Using**[***str()***](https://www.geeksforgeeks.org/python-str-function/)**function**
* **Using**[***codecs.decode()***](https://www.geeksforgeeks.org/codecs-decode-in-python/)**method**
* **Using**[**map()**](https://www.geeksforgeeks.org/python-map-function/)**without using the b prefix**
* **Using**[**pandas**](https://www.geeksforgeeks.org/python-pandas-dataframe/)**to convert bytes to strings**

Data types are the classification or categorization of data items. It represents the kind of value that tells what operations can be performed on a particular data. Since everything is an object in Python programming, data types are actually classes and variables are instances (objects) of these classes.

**Method 1: Using**[*decode()*](https://www.geeksforgeeks.org/python-strings-decode-method/)**method**

This method is used to convert from one encoding scheme, in which the argument string is encoded to the desired encoding scheme. This works opposite to the encode.

**Python3**

|  |
| --- |
| # Program for converting bytes  # to string using decode()    data **=** b'GeeksForGeeks'    # display input  **print**('\nInput:')  **print**(data)  print(type(data))    # converting  output **=** data.decode()    # display output  **print**('\nOutput:')  print(output)  print(type(output)) |

**Output:**

Input:

b'GeeksForGeeks'

<class 'bytes'>

Output:

GeeksForGeeks

<class 'str'>

**Time Complexity:**O(1)  
**Auxiliary Space:** O(1)

**Method 2: Using**[*str()*](https://www.geeksforgeeks.org/python-str-function/)**function**

The *str()* function of Python returns the string version of the object.

**Python3**

|  |
| --- |
| # Program for converting bytes to string using decode()  data **=** b'GeeksForGeeks'    # display input  **print**('\nInput:')  print(data)  **print**(type(data))    # converting  output **=** str(data, 'UTF-8')    # display output  print('\nOutput:')  **print**(output)  **print**(type(output)) |

**Output:**

Input:

b'GeeksForGeeks'

<class 'bytes'>

Output:

GeeksForGeeks

<class 'str'>

**Time Complexity:**O(1)  
**Auxiliary Space:** O(1)

**Method 3: Using**[*codecs.decode()*](https://www.geeksforgeeks.org/codecs-decode-in-python/)**method**

This method is used to decode the binary string into normal form.

**Python3**

|  |
| --- |
| # Program for converting bytes to string using decode()    # import required module  **import** codecs    data **=** b'GeeksForGeeks'    # display input  print('\nInput:')  **print**(data)  print(type(data))    # converting  output **=** codecs.decode(data)    # display output  print('\nOutput:')  print(output)  print(type(output)) |

**Output:**

Input:

b'GeeksForGeeks'

<class 'bytes'>

Output:

GeeksForGeeks

<class 'str'>

**Time Complexity:**O(1)  
**Auxiliary Space:** O(1)

**Method 4: Using**[map()](https://www.geeksforgeeks.org/python-map-function/)**without using the b prefix**

In this example, we will use a map() function to convert a byte to a string without using the prefix **b**.

**Python3**

|  |
| --- |
| ascII **=** [103, 104, 105]    string **=** ''.join(map(chr, ascII))  print(string) |

**Output:**

ghi

**Time Complexity:** O(n)  
**Auxiliary Space:**O(n)

**Method 5: Using**[pandas](https://www.geeksforgeeks.org/python-pandas-dataframe/)**to convert bytes to strings**

In this example, we are importing a pandas library, and we will take the input dataset and apply the decode() function.

**Python3**

|  |
| --- |
| **import** pandas as pd  dic **=** {'column' : [ b'Book', b'Pen', b'Laptop', b'CPU']}  data **=** pd.DataFrame(data**=**dic)    x **=** data['column'].str.decode("utf-8")  print(x) |

**Output:**

0 Book

1 Pen

2 Laptop

3 CPU

Name: column, dtype: object