
System Requirements Specification Index

For

Numpy and Pandas

Version 1.0

Problem Statement : Operations on data using Numpy and Pandas.

Description : Use relevant methods of Numpy and Pandas to perform specified activities which are given in the instructions.

Note: Create the functions in the same name which is mentioned in the question .

Once the deployment is successful click on the IDE button.

Open the URL and give the password

After the IDE Opens we could see some like this .

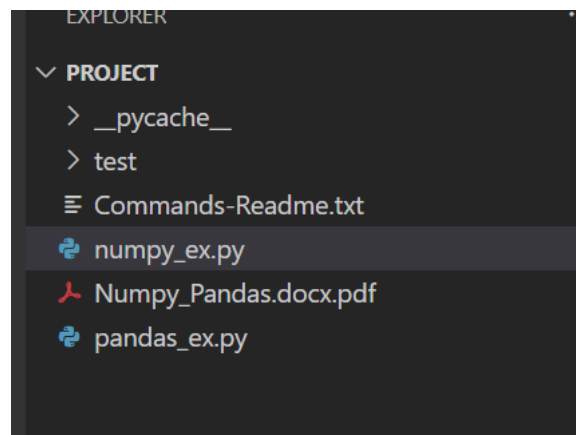


Figure 1 project structure

```
numpy_ex.py X
numpy_ex.py > {} np
1  import numpy as np
2
3  #Checking type of array a
4  def check_type():
5      pass
6  # Square each element of array
7  def find_square():
8      pass
9
10 # Find sum of array
11 def find_sum():
12     pass
13
14 #Find the dimension of array
15 def find_dimension():
16     pass
17
18 #Find the size of array
19 def find_size():
20     pass
21
22 #Find the shape of array
23 def find_shape():
24     pass
25
```

Your code goes
here

The Template contains the following folder structure.

Numpy_Pandas |

|--numpy_ex.py

|--pandas_ex.py

|--test (contains unit test case files for the solution)

numpy_ex.py:

Implement all the methods as specified in the following instructions.

1. Define a 2 Dimension array a=[[1,2],[3,4]] using numpy.
2. Check type of array a and return from the function **check_type()**
3. Calculate and return square of each element of array a from **find_square()** function.
4. Calculate and return sum of array a from **find_sum()** function.
5. Find and return the dimension of array a from **find_dimension()** function.
6. Find and return the size of array a from **find_size()** function.
7. Find and return the shape of array a from **find_shape()** function.
8. Find and return the biggest element of array a from **find_biggest()** function.

pandas_ex.py:

Implement all the methods as specified in the following instructions.

1. In **define_series_with_list()** function define a series with list as [10,20,30,40,50] with its index from 10 to 14 and return element of index 12.
2. In **define_series_with_dict()** function define series with dictionary as keys person1, person2, person3 and values 25, 35, 39 respectively and return age of person2.
3. In **check_size()** function define a series with any 7 elements, Find and return length of the series from the function.
4. In **check_unique()** function define a series with non unique elements and find whether the series is unique or not and return a Boolean value from the function.
5. In **check_lowest()** function define a series as [1,2,4,0] and extract the index position of the lowest value in a Series and return from the function.

Execution Steps to Follow:

1. All actions like build, compile, running application, running test cases will be through Command Terminal.
2. To open the command terminal the test takers, need to go to Application menu (Three horizontal lines at left top) -> Terminal -> New Terminal
3. This editor Auto Saves the code
4. If you want to exit(logout) and continue the coding later anytime (using Save & Exit option on Assessment Landing Page) then you need to use CTRL+Shift+B-command compulsorily on code IDE. This will push or save the updated contents in the internal git/repository. Else the code will not be available in the next login.
5. These are time bound assessments the timer would stop if you logout and while logging in back using the same credentials the timer would resume from the same time it was stopped from the previous logout.
6. To setup environment:
pip install requests pandas numpy

7. To launch application:

```
python3 numpy_ex.py  
python3 pandas_ex.py
```

8. To run Test cases:

```
python3 -m unittest
```

9. Before Final Submission also, you need to use CTRL+Shift+B-command compulsorily on code IDE. This will push or save the updated contents in the internal git/repository for code quality analysis graph.

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