Congratulations! You passed!

Grade received 90% | Latest Submission Grade 90% | To pass 70% or higher

Go to next item

You reached new skill level: Beginner

Data Structures Your score: 57 (↑20) Beginner

Keep going! At a beginner level, you have a working knowledge and are able to pass beginner content. You have limited experience applying it.

1. What is the result of the following lines of code? **1 / 1 point**

```
a=np.array([0,1])
b=np.array([1,0])
np.dot(a,b)
```

- (•) 0
- ( ) 1
- ( ) array([1,1])

Correct
correct

2. How do you perform matrix multiplication on the numpy arrays **A** and **B ?** **1 / 1 point**

- ( ) A+B
- (•) np.dot(A,B)
- ( ) A*B

Correct
correct

3. What values does the variable **out** take if the following lines of code are run? **1 / 1 point**

```

X=np.array([[1,0,1],[2,2,2]])
out=X[0:2,2]
out

```

- ( ) array([1,0])
- (•) array([1,2])
- ( ) array([1,1])

Correct
correct, the first index corresponds to the rows the second index corresponds to the columns

4. What is the value of **Z** after the following code is run? **0 / 1 point**

```

X=np.array([[1,0],[0,1]])
Y=np.array([[2,1],[1,2]])
Z=np.dot(X,Y)

```

- ( ) array([[2,1],[1,2]])

- array([[2,0],[1,0]])
- array([[3,1],[1,3]])

Incorrect
incorrect, the dot function corresponds to matrix multiplication

5. Consider the following text file: **Example1.txt**: **1 / 1 point**

This is line 1

This is line 2

This is line 3

What is the output of the following lines of code?

```
6    print(file_stuff)
```

- This is line 1
- This is line 1

  This is line 2

  This is line 3
- This is line 1

  This is line 2

Correct
Correct

6. Consider the following line of code: **1 / 1 point**

```
3
```

What mode is the file object in?

- read
- write
- append

Correct
Correct, the mode is set to r for read.

7. What do the following lines of code do? **1 / 1 point**

```
1
2  with open("Example.txt","w") as writefile:
3
4    writefile.write("This is line A\n")
5    writefile.write("This is line B\n")
6
```

- Read the file "Example.txt"
- Write to the file “Example.txt”
- Append the file "Example.txt"

Correct
Correct.

8. What task do the following lines of code perform? **1 / 1 point**

```
3    with open('Example3.txt','w') as writefile:
4        for line in readfile:
5            writefile.write(line)
```

```
6
```

- (●) Copy the text from Example2.txt to Example3.txt.
- ( ) Check the mode of the open function for each file object.
- ( ) Print out the content of Example2.txt.

Correct
Correct.

9. Consider the dataframe **df**. How would you access the element in the 1st row 3rd column **1 / 1 point**

- ( ) df.iloc[2,0]
- ( ) df.iloc[1,3]
- (●) df.iloc[0,2]

Correct
correct

10. In the lab, you learned you can also obtain a series from a dataframe **df**, select the correct way to assign the column with the header Length to a pandas series to the variable **x**. **1 / 1 point**

- (●) x=df['Length']
- ( ) x=df[['Length']]
- ( ) x=df.[['Length']]

Correct
correct