Task 8

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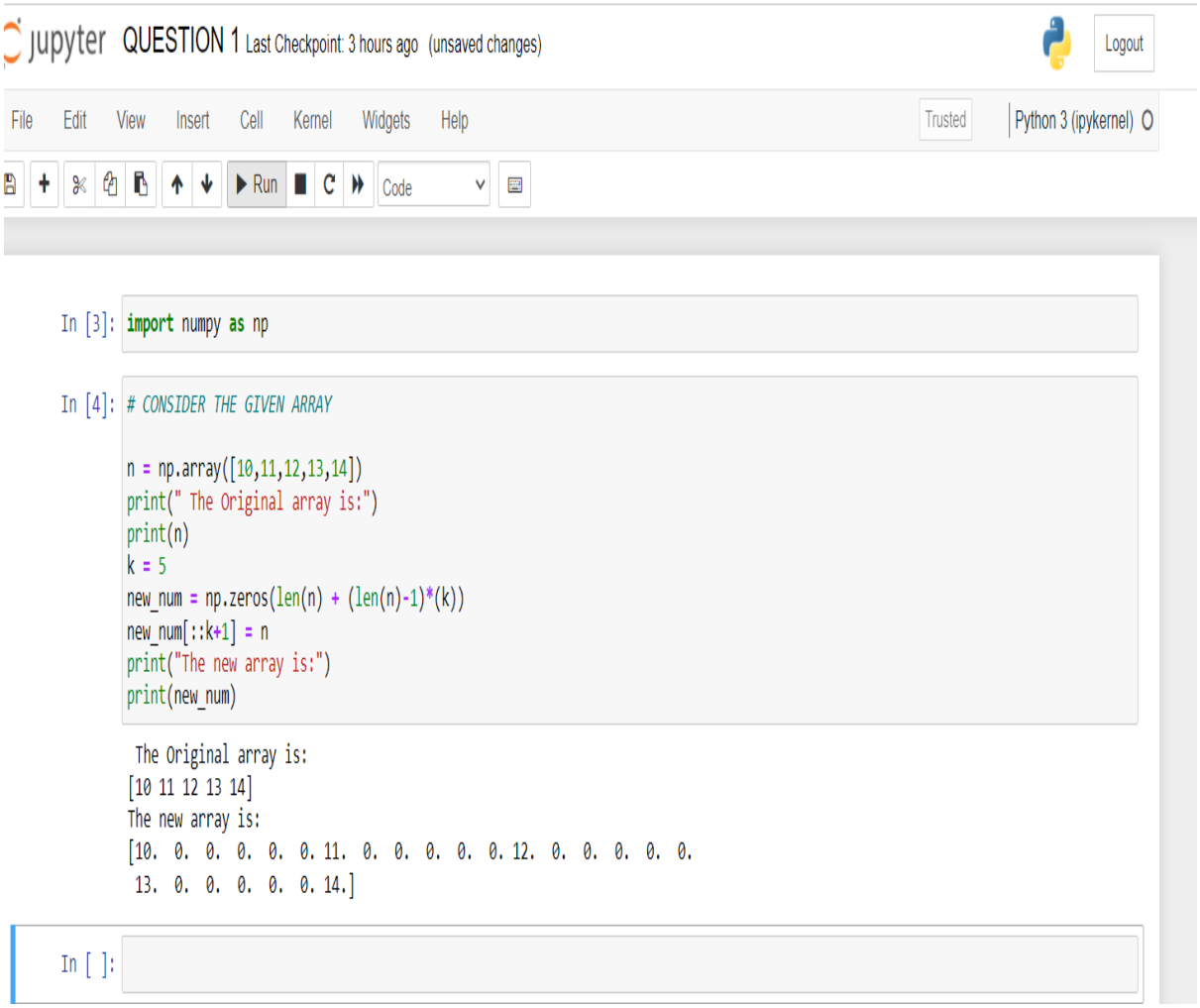
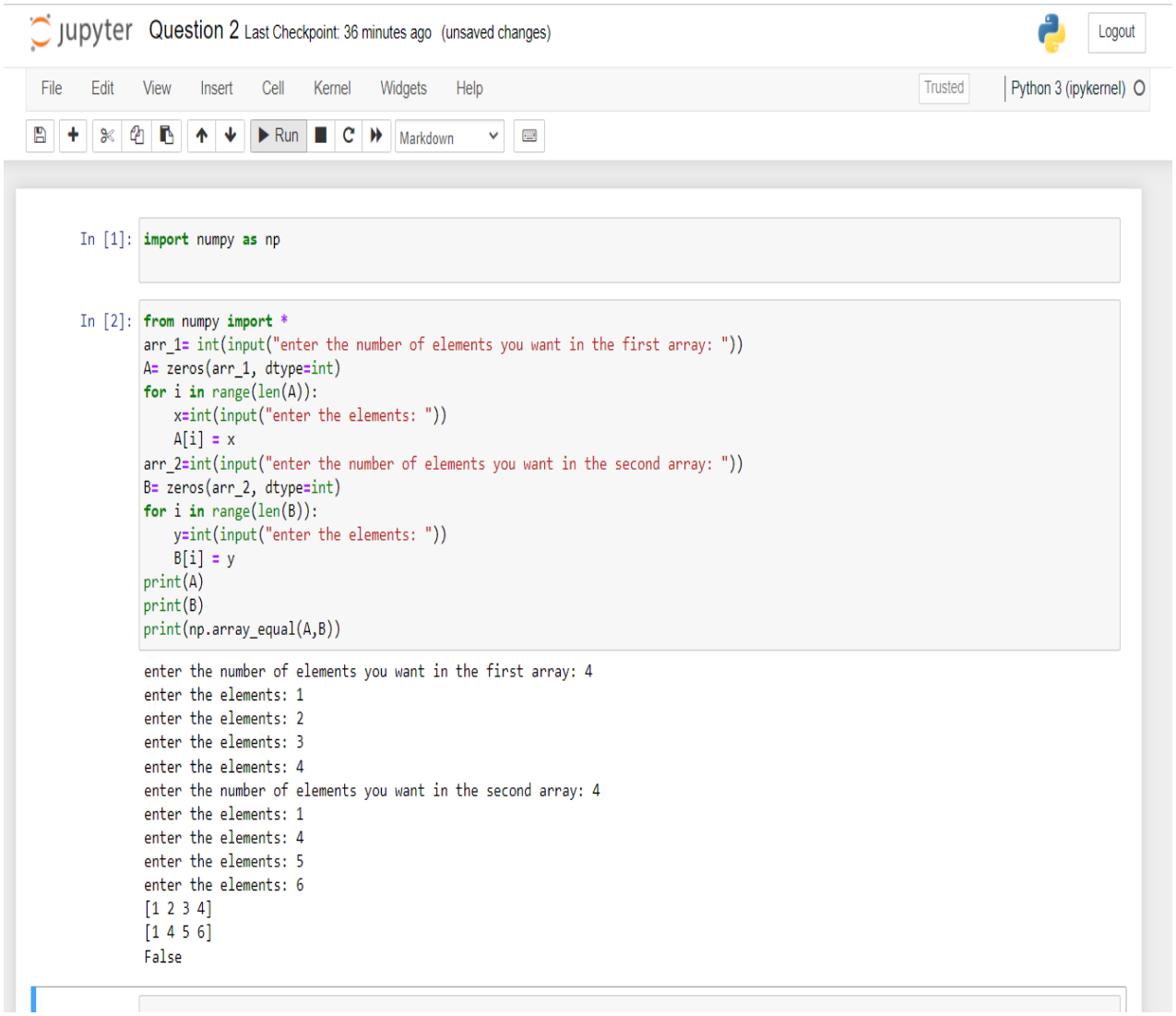
Roll no. :- CSE21035

Python(Numpy and pandas)

Q1) Consider the vector[10,11,12,13,14,] how to build a new vector with 5 consecutive zeros interleaved between each value?



Q2) Consider two random arrays A and B , check if they are equal.



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Trusted Python 3 (ipykernel)

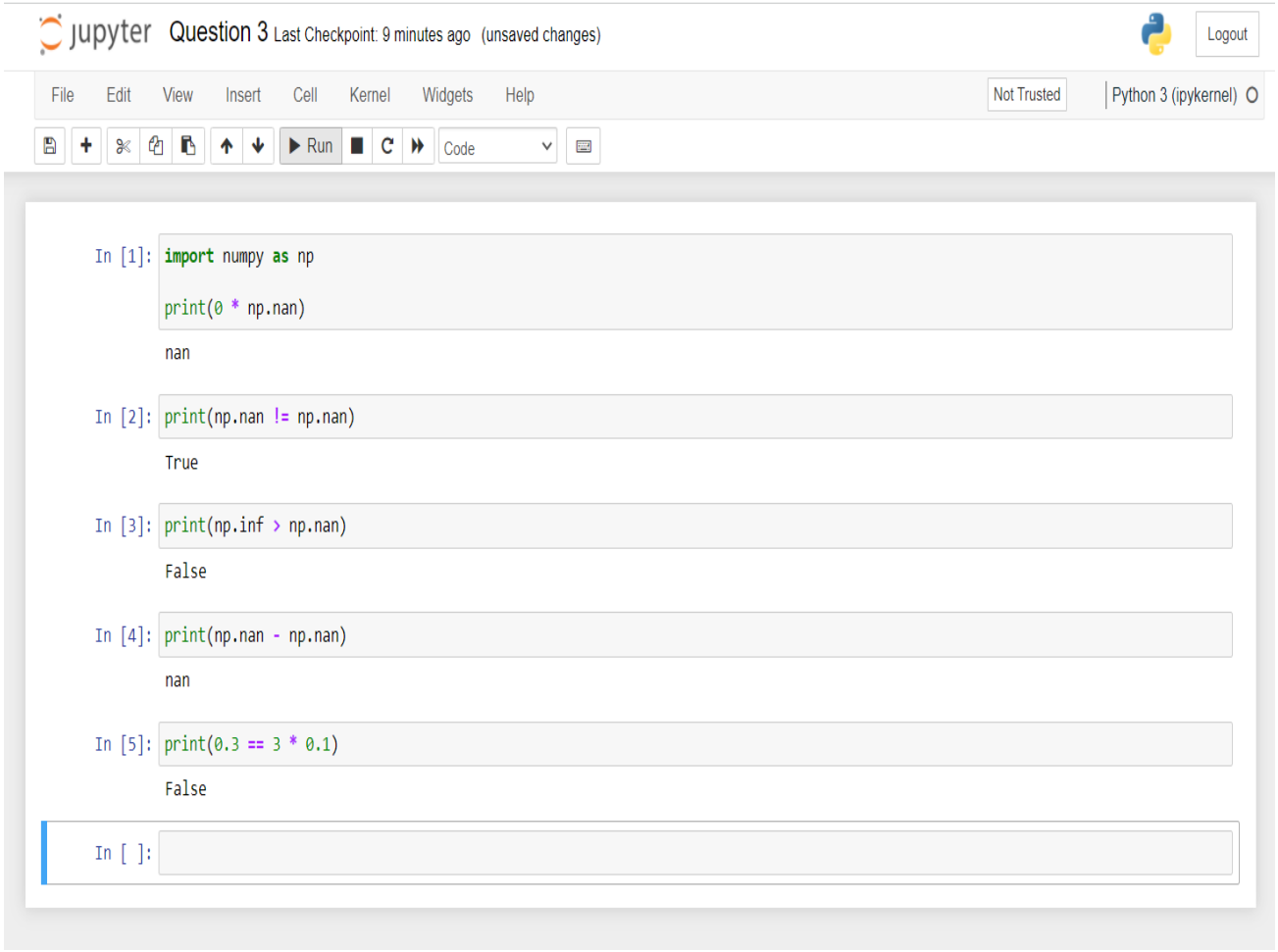
Run Markdown

In [1]:
```
import numpy as np
```

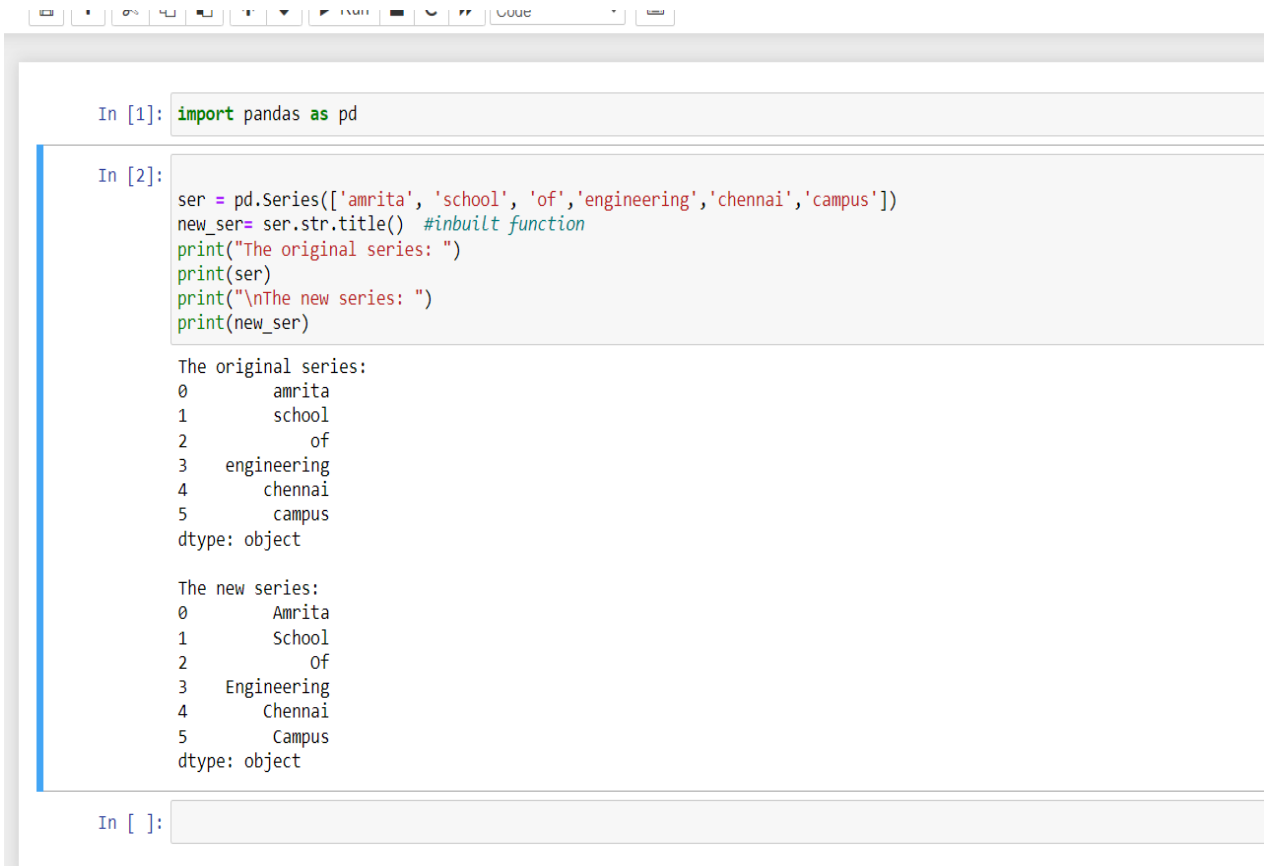
In [2]:
```
from numpy import *
arr_1= int(input("enter the number of elements you want in the first array: "))
A= zeros(arr_1, dtype=int)
for i in range(len(A)):
    x=int(input("enter the elements: "))
    A[i] = x
arr_2=int(input("enter the number of elements you want in the second array: "))
B= zeros(arr_2, dtype=int)
for i in range(len(B)):
    y=int(input("enter the elements: "))
    B[i] = y
print(A)
print(B)
print(np.array_equal(A,B))
```

```
enter the number of elements you want in the first array: 4
enter the elements: 1
enter the elements: 2
enter the elements: 3
enter the elements: 4
enter the number of elements you want in the second array: 4
enter the elements: 1
enter the elements: 2
enter the elements: 3
enter the elements: 4
[1 2 3 4]
[1 2 3 4]
True
```

Q3)What is the result of the following expressions



Q4)Convert the first character of each element in the series to uppercase.



In [1]:
```
import pandas as pd
```

In [2]:
```
ser = pd.Series(['amrita', 'school', 'of','engineering','chennai','campus'])
new_ser= ser.str.title()  #inbuilt function
print("The original series: ")
print(ser)
print("\nThe new series: ")
print(new_ser)
```

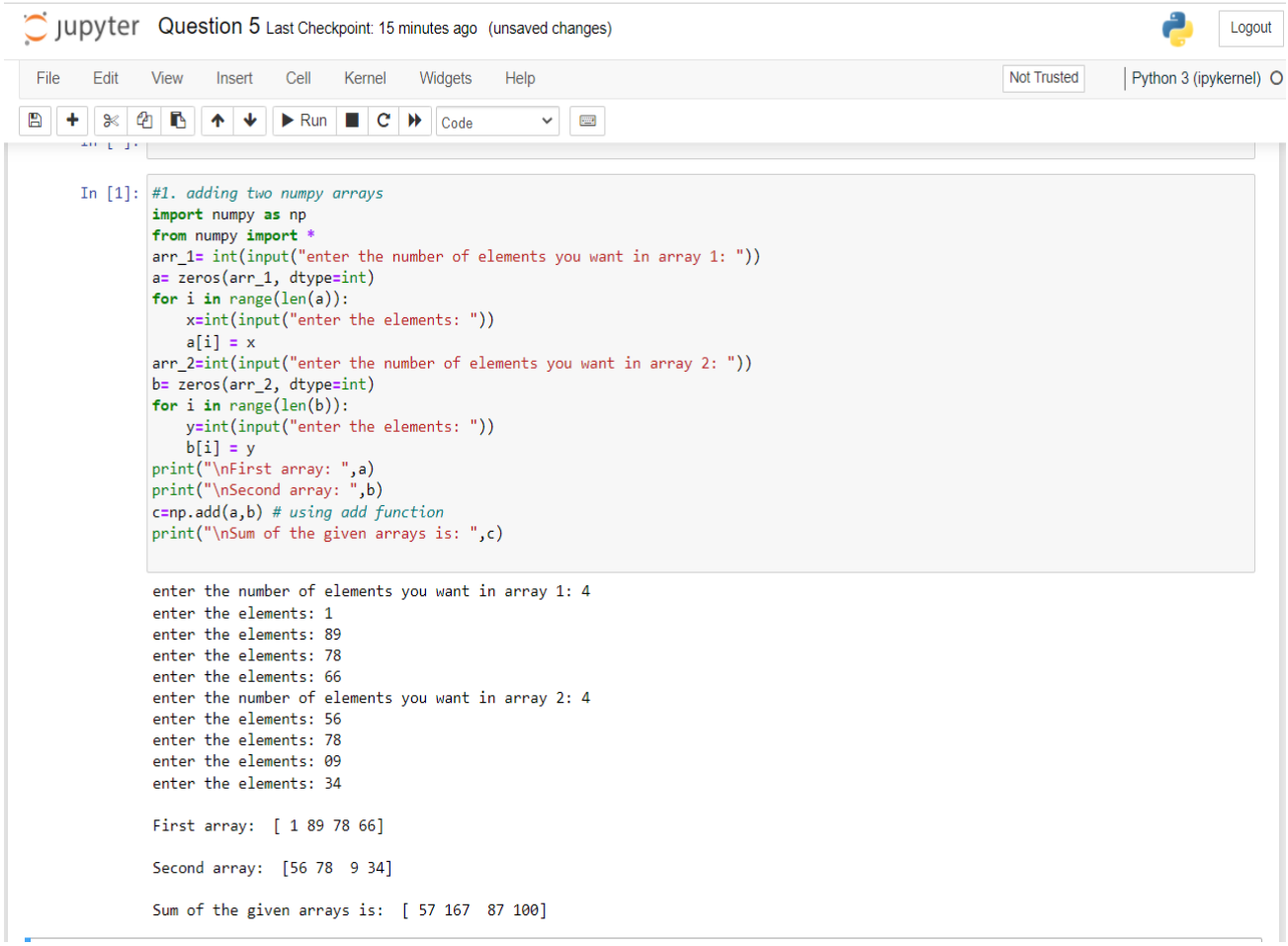
```
The original series:
0         amrita
1         school
2             of
3    engineering
4        chennai
5         campus
dtype: object

The new series:
0         Amrita
1         School
2             Of
3    Engineering
4        Chennai
5         Campus
dtype: object
```

In [ ]:

Q5 Do any two Exercises using Numpy

Do any two exercises using Numpy

1)Addition of to numpy arrays



4)Array datatype conversion