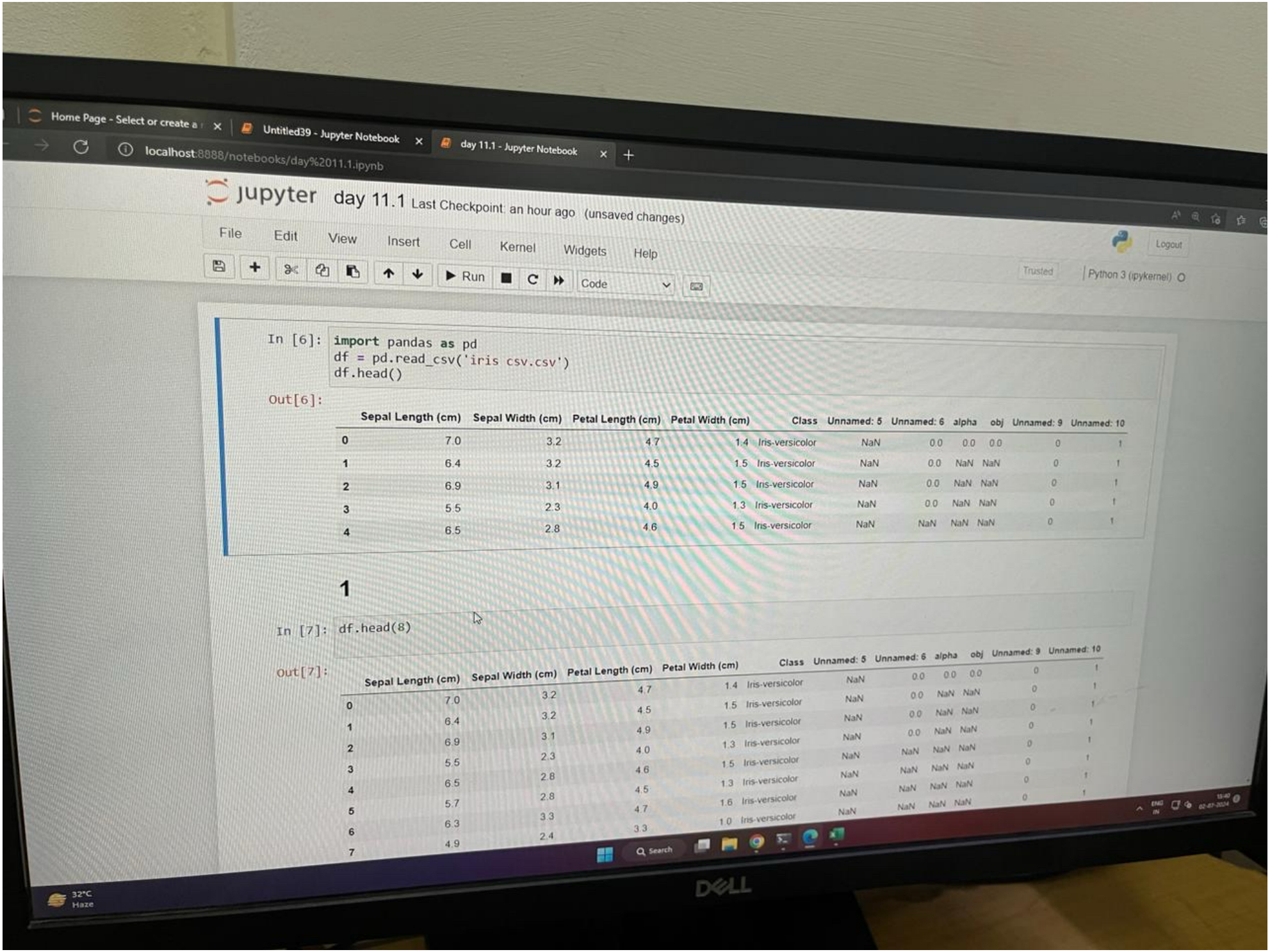
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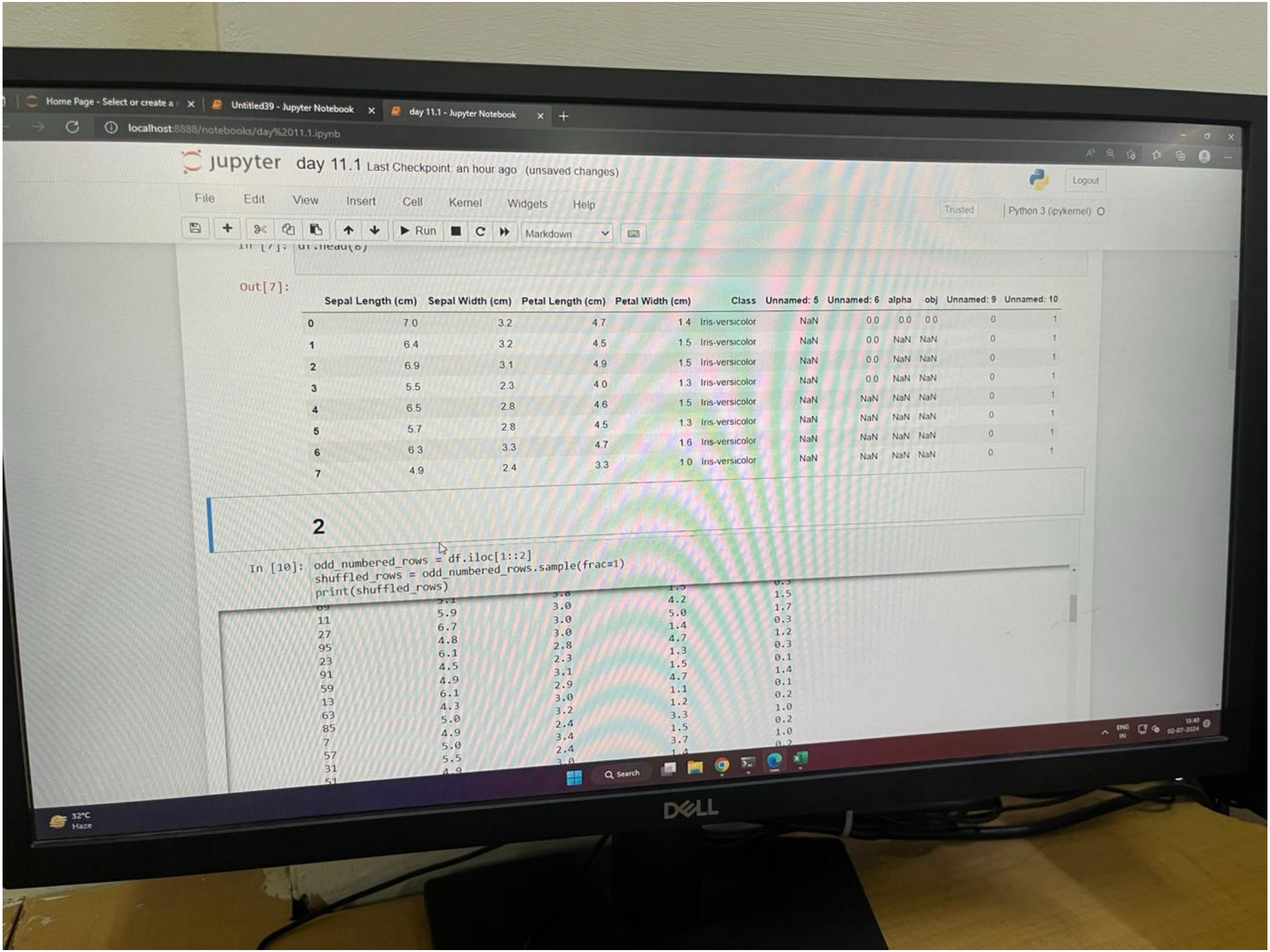
Python 3 (ipykernel)
In [6]:
import pandas as pd
df = pd.read_csv('iris csv.csv')
df.head()
Out[6]:
Sepal Length (cm) Sepal Width (cm) Petal Length (cm) Petal Width (cm) Class Unnamed: 5 Unnamed: 6 alpha obj Unnamed: 9 Unnamed: 10
0 7.0 3.2 4.7 1.4 Iris-versicolor NaN 0.0 0.0 0.0 0 1
1 6.4 3.2 4.5 1.5 Iris-versicolor NaN 0.0 NaN NaN 0 1
2 6.9 3.1 4.9 1.5 Iris-versicolor NaN 0.0 NaN NaN 0 1
3 5.5 2.3 4.0 1.3 Iris-versicolor NaN 0.0 NaN NaN 0 1
4 6.5 2.8 4.6 1.5 Iris-versicolor NaN NaN NaN NaN 0 1
1
In [7]: df.head(8)
Out[7]:
Sepal Length (cm) Sepal Width (cm) Petal Length (cm) Petal Width (cm) Class Unnamed: 5 Unnamed: 6 alpha obj Unnamed: 9 Unnamed: 10
0 7.0 3.2 4.7 1.4 Iris-versicolor NaN 0.0 0.0 0.0 0 1
1 6.4 3.2 4.5 1.5 Iris-versicolor NaN 0.0 NaN NaN 0 1
2 6.9 3.1 4.9 1.5 Iris-versicolor NaN 0.0 NaN NaN 0 1
3 5.5 2.3 4.0 1.3 Iris-versicolor NaN 0.0 NaN NaN 0 1
4 6.5 2.8 4.6 1.5 Iris-versicolor NaN NaN NaN NaN 0 1
5 5.7 2.8 4.5 1.3 Iris-versicolor NaN NaN NaN NaN 0 1
6 6.3 3.3 4.7 1.6 Iris-versicolor NaN NaN NaN NaN 0 1
7 4.9 2.4 3.3 1.0 Iris-versicolor NaN NaN NaN NaN 0 1
Search
32°C Haze
DELL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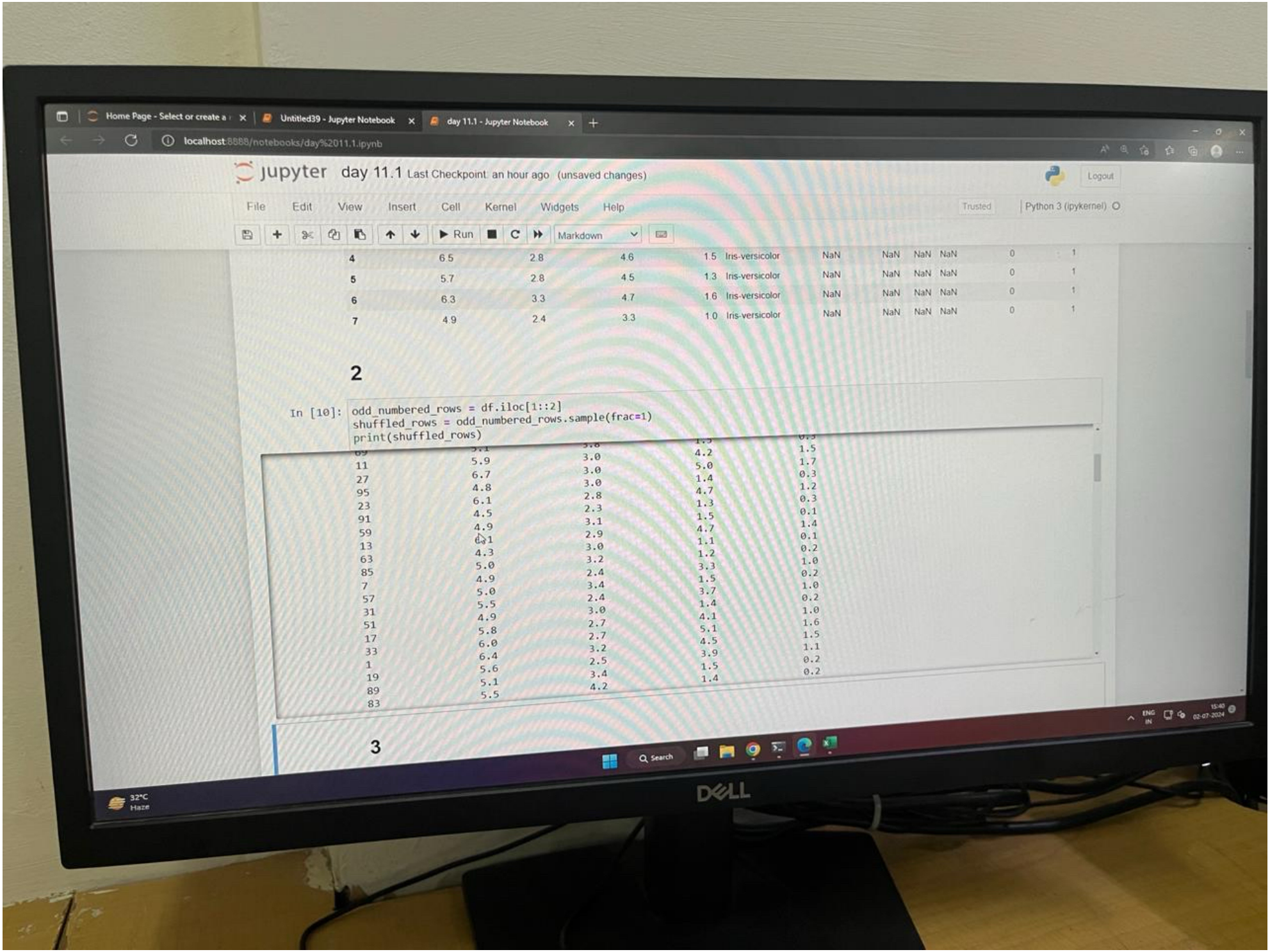
jupyter day 11.1 Last Checkpoint: an hour ago (unsaved changes)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted
Python 3 (ipykernel)
Run
Markdown
In [7]: df.head(8)
Out[7]:
Sepal Length (cm) Sepal Width (cm) Petal Length (cm) Petal Width (cm) Class Unnamed: 5 Unnamed: 6 alpha obj Unnamed: 9 Unnamed: 10
0 7.0 3.2 4.7 1.4 Iris-versicolor NaN 0.0 0.0 0.0 0 1
1 6.4 3.2 4.5 1.5 Iris-versicolor NaN 0.0 NaN NaN 0 1
2 6.9 3.1 4.9 1.5 Iris-versicolor NaN 0.0 NaN NaN 0 1
3 5.5 2.3 4.0 1.3 Iris-versicolor NaN 0.0 NaN NaN 0 1
4 6.5 2.8 4.6 1.5 Iris-versicolor NaN NaN NaN NaN 0 1
5 5.7 2.8 4.5 1.3 Iris-versicolor NaN NaN NaN NaN 0 1
6 6.3 3.3 4.7 1.6 Iris-versicolor NaN NaN NaN NaN 0 1
7 4.9 2.4 3.3 1.0 Iris-versicolor NaN NaN NaN NaN 0 1
2
In [10]: odd_numbered_rows = df.iloc[1::2]
shuffled_rows = odd_numbered_rows.sample(frac=1)
print(shuffled_rows)
11 5.9 3.0 4.2 1.5
27 6.7 3.0 5.0 1.7
95 4.8 2.8 1.4 0.3
23 6.1 2.3 4.7 1.2
91 4.5 3.1 1.3 0.3
59 4.9 2.9 1.5 0.1
13 6.1 3.0 4.7 1.4
63 4.3 3.2 1.1 0.1
85 5.0 2.4 1.2 0.2
7 4.9 3.4 3.3 1.0
57 5.0 2.4 1.5 0.2
31 5.5 3.0 3.7 1.0
51 4.9 1.4 0.2
Search
32°C
Haze
DELL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Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted
Python 3 (ipykernel)
Run
Markdown
4 6.5 2.8 4.6 1.5 Iris-versicolor NaN NaN NaN NaN 0 1
5 5.7 2.8 4.5 1.3 Iris-versicolor NaN NaN NaN NaN 0 1
6 6.3 3.3 4.7 1.6 Iris-versicolor NaN NaN NaN NaN 0 1
7 4.9 2.4 3.3 1.0 Iris-versicolor NaN NaN NaN NaN 0 1
2
In [10]:
odd_numbered_rows = df.iloc[1::2]
shuffled_rows = odd_numbered_rows.sample(frac=1)
print(shuffled_rows)
11 5.9 3.0 4.2 1.5
27 6.7 3.0 5.0 1.7
95 4.8 3.0 1.4 0.3
23 6.1 2.8 4.7 1.2
91 4.5 2.3 1.3 0.3
59 4.9 3.1 1.5 0.1
13 6.1 2.9 4.7 1.4
63 4.3 3.0 1.1 0.1
85 5.0 3.2 1.2 0.2
7 4.9 2.4 3.3 1.0
57 5.0 3.4 1.5 0.2
31 5.5 2.4 3.7 1.0
51 4.9 3.0 1.4 0.2
17 5.8 2.7 4.1 1.0
33 6.0 2.7 5.1 1.6
1 6.4 3.2 4.5 1.5
19 5.6 2.5 3.9 1.1
89 5.1 3.4 1.5 0.2
83 5.5 4.2 1.4 0.2
3
Search
32°C Haze
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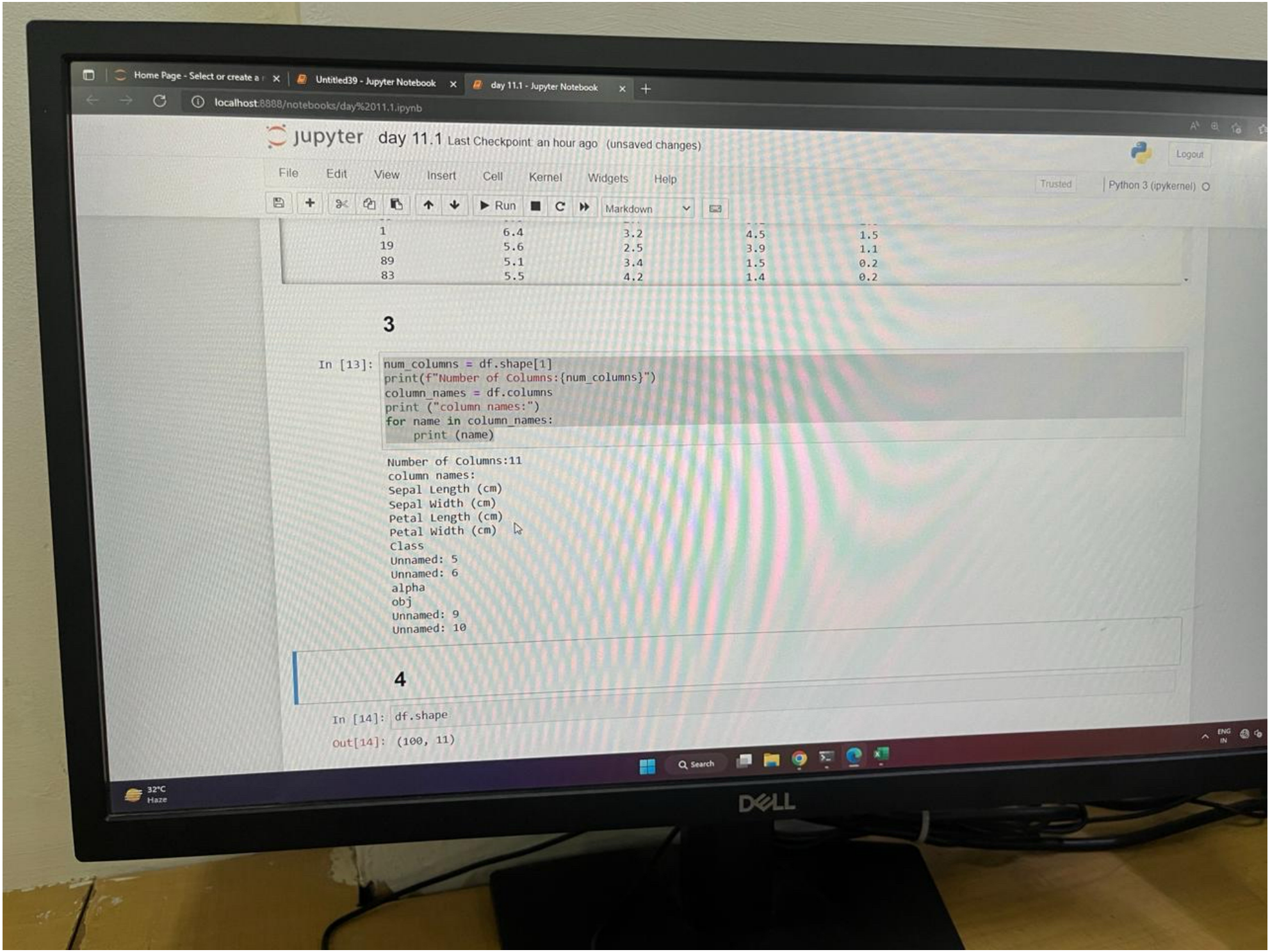
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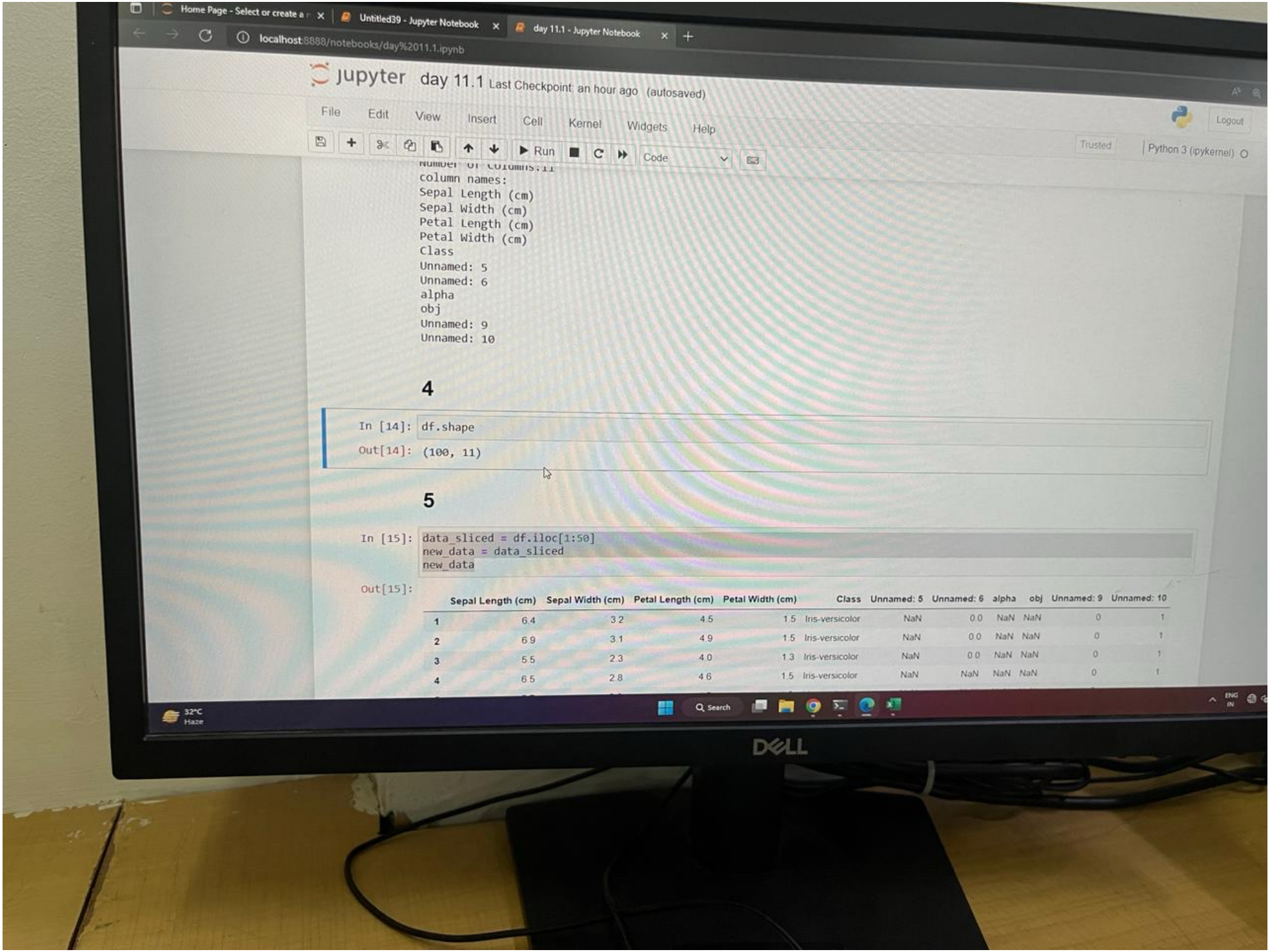
Python 3 (ipykernel)
Run
Markdown
1 6.4 3.2 4.5 1.5
19 5.6 2.5 3.9 1.1
89 5.1 3.4 1.5 0.2
83 5.5 4.2 1.4 0.2
3
In [13]:
num_columns = df.shape[1]
print(f"Number of Columns:{num_columns}")
column_names = df.columns
print ("column names:")
for name in column_names:
print (name)
Number of Columns:11
column names:
Sepal Length (cm)
Sepal Width (cm)
Petal Length (cm)
Petal Width (cm)
Class
Unnamed: 5
Unnamed: 6
alpha
obj
Unnamed: 9
Unnamed: 10
4
In [14]:
df.shape
Out[14]:
(100, 11)
32°C
Haze
Search
ENG
IN
DELL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Code
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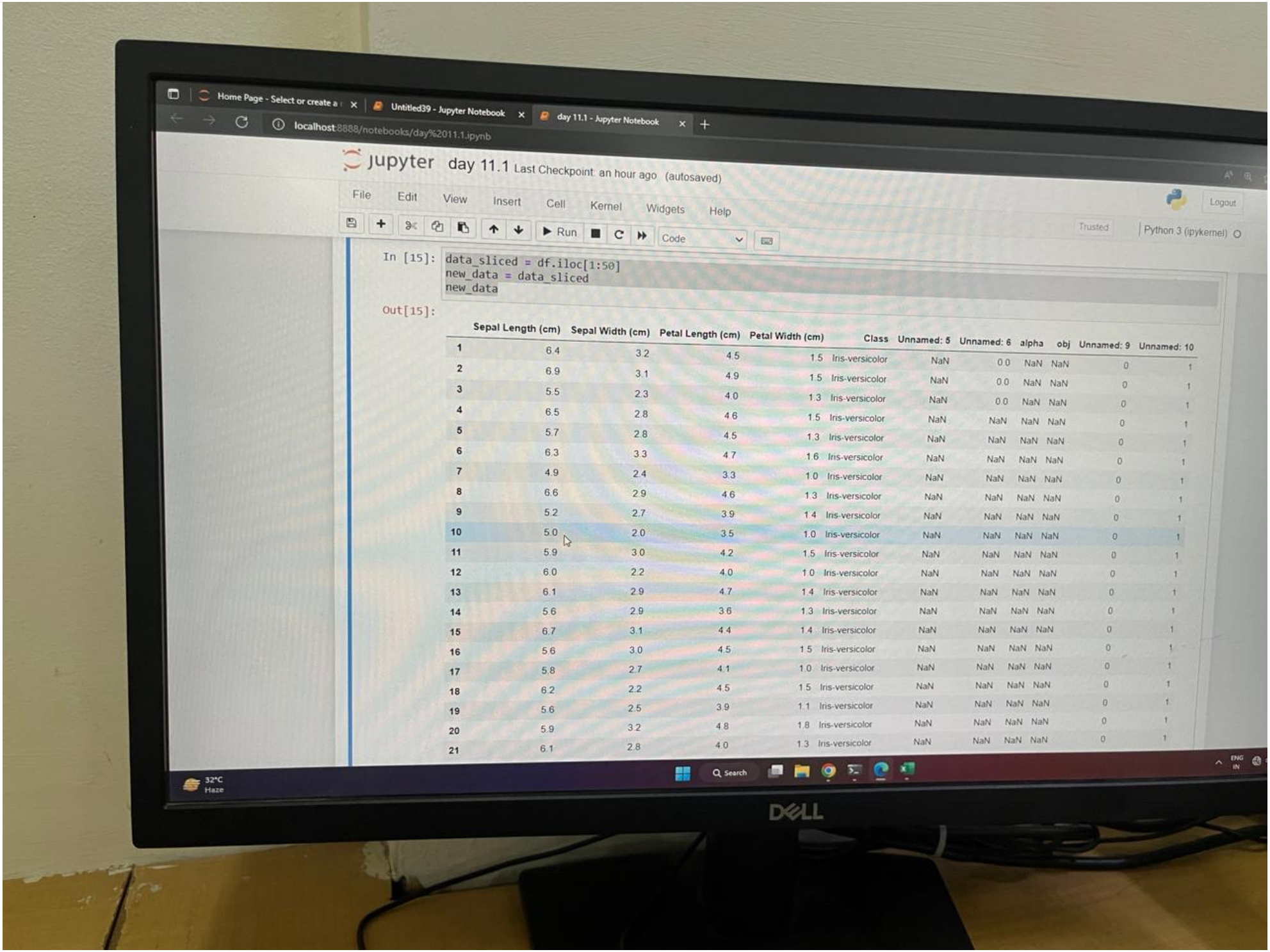
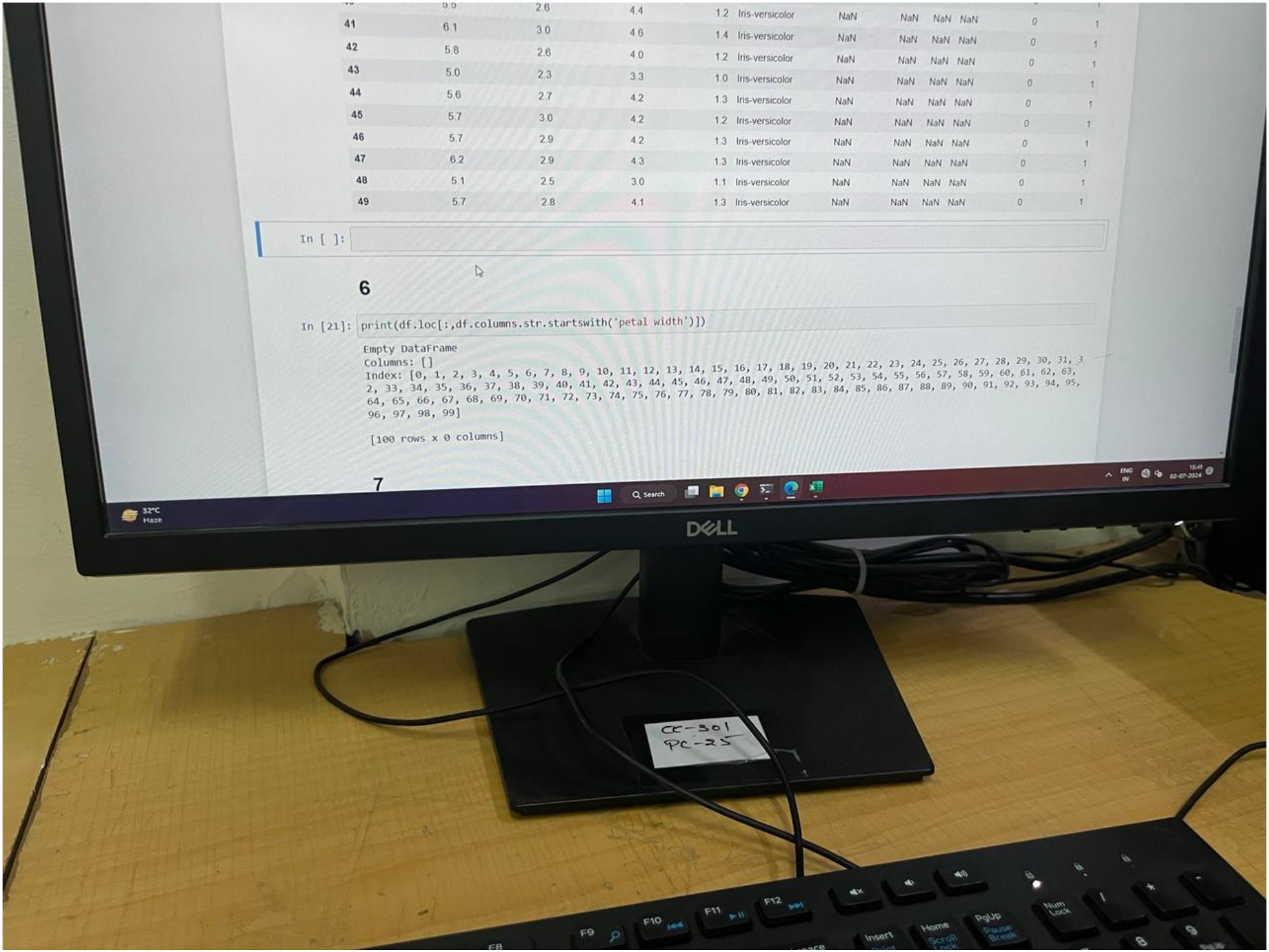
Python 3 (ipykernel)
column names:
Sepal Length (cm)
Sepal Width (cm)
Petal Length (cm)
Petal Width (cm)
Class
Unnamed: 5
Unnamed: 6
alpha
obj
Unnamed: 9
Unnamed: 10
4
In [14]: df.shape
Out[14]: (100, 11)
5
In [15]: data_sliced = df.iloc[1:50]
new_data = data_sliced
new_data
Out[15]:
Sepal Length (cm) Sepal Width (cm) Petal Length (cm) Petal Width (cm) Class Unnamed: 5 Unnamed: 6 alpha obj Unnamed: 9 Unnamed: 10
1 6.4 3.2 4.5 1.5 Iris-versicolor NaN 0.0 NaN NaN 0 1
2 6.9 3.1 4.9 1.5 Iris-versicolor NaN 0.0 NaN NaN 0 1
3 5.5 2.3 4.0 1.3 Iris-versicolor NaN 0.0 NaN NaN 0 1
4 6.5 2.8 4.6 1.5 Iris-versicolor NaN NaN NaN NaN 0 1
32°C Haze
Search
DELL



	Sepal Length (cm)	Sepal Width (cm)	Petal Length (cm)	Petal Width (cm)	Class	Unnamed: 5	Unnamed: 6	alpha	obj	Unnamed: 9	Unnamed: 10
1	6.4	3.2	4.5	1.5	Iris-versicolor	NaN	0.0	NaN	NaN	0	1
2	6.9	3.1	4.9	1.5	Iris-versicolor	NaN	0.0	NaN	NaN	0	1
3	5.5	2.3	4.0	1.3	Iris-versicolor	NaN	0.0	NaN	NaN	0	1
4	6.5	2.8	4.6	1.5	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
5	5.7	2.8	4.5	1.3	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
6	6.3	3.3	4.7	1.6	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
7	4.9	2.4	3.3	1.0	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
8	6.6	2.9	4.6	1.3	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
9	5.2	2.7	3.9	1.4	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
10	5.0	2.0	3.5	1.0	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
11	5.9	3.0	4.2	1.5	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
12	6.0	2.2	4.0	1.0	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
13	6.1	2.9	4.7	1.4	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
14	5.6	2.9	3.6	1.3	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
15	6.7	3.1	4.4	1.4	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
16	5.6	3.0	4.5	1.5	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
17	5.8	2.7	4.1	1.0	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
18	6.2	2.2	4.5	1.5	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
19	5.6	2.5	3.9	1.1	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
20	5.9	3.2	4.8	1.8	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
21	6.1	2.8	4.0	1.3	Iris-versicolor	NaN	NaN	NaN	NaN	0	1



	5.5	2.6	4.4	1.2	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
41	6.1	3.0	4.6	1.4	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
42	5.8	2.6	4.0	1.2	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
43	5.0	2.3	3.3	1.0	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
44	5.6	2.7	4.2	1.3	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
45	5.7	3.0	4.2	1.2	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
46	5.7	2.9	4.2	1.3	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
47	6.2	2.9	4.3	1.3	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
48	5.1	2.5	3.0	1.1	Iris-versicolor	NaN	NaN	NaN	NaN	0	1
49	5.7	2.8	4.1	1.3	Iris-versicolor	NaN	NaN	NaN	NaN	0	1

In [ ]:

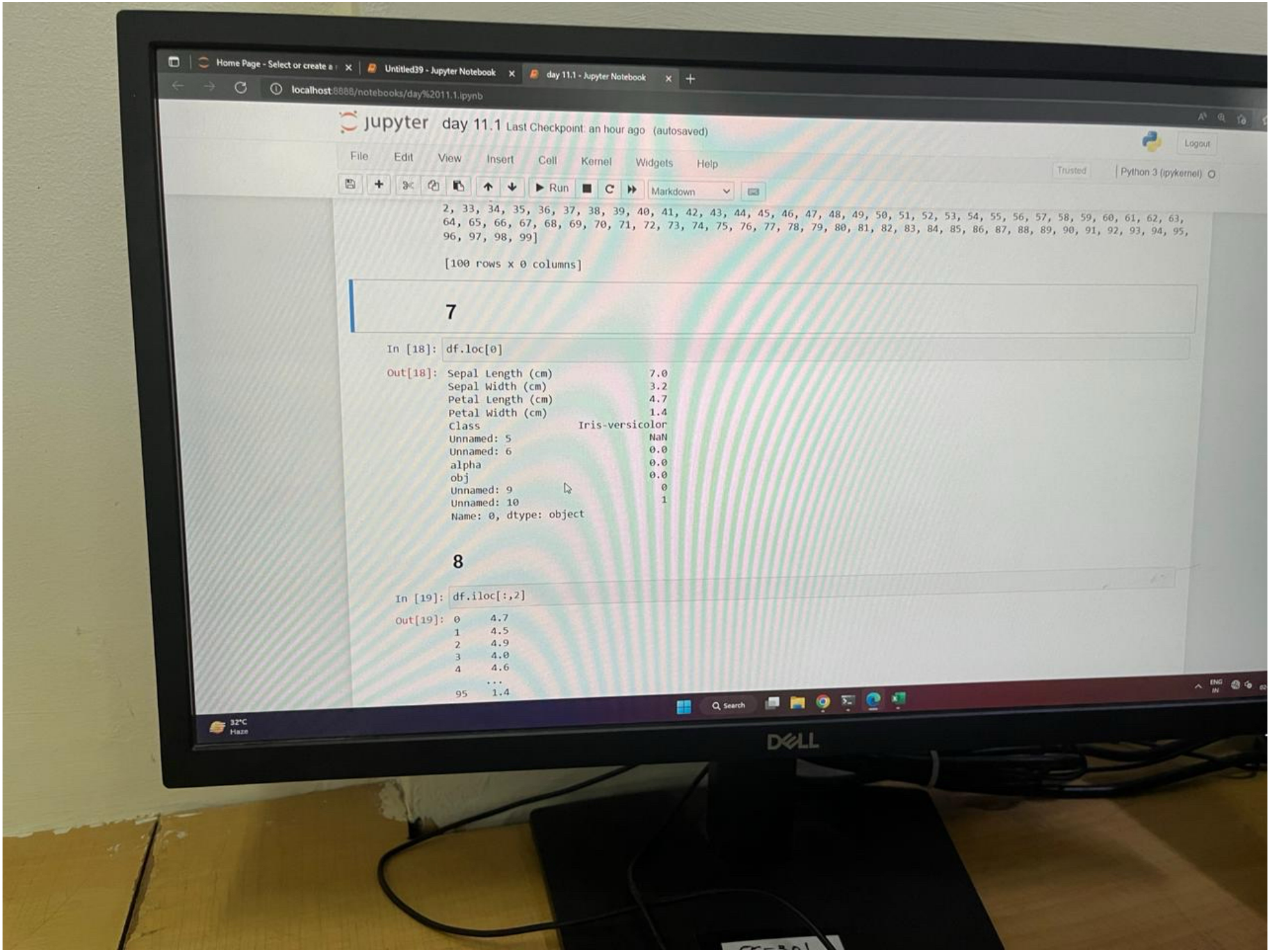
6

In [21]:
```
print(df.loc[:,df.columns.str.startswith('petal width')])
```

```
Empty DataFrame
Columns: []
Index: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 3
2, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63,
64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95,
96, 97, 98, 99]

[100 rows x 0 columns]
```

7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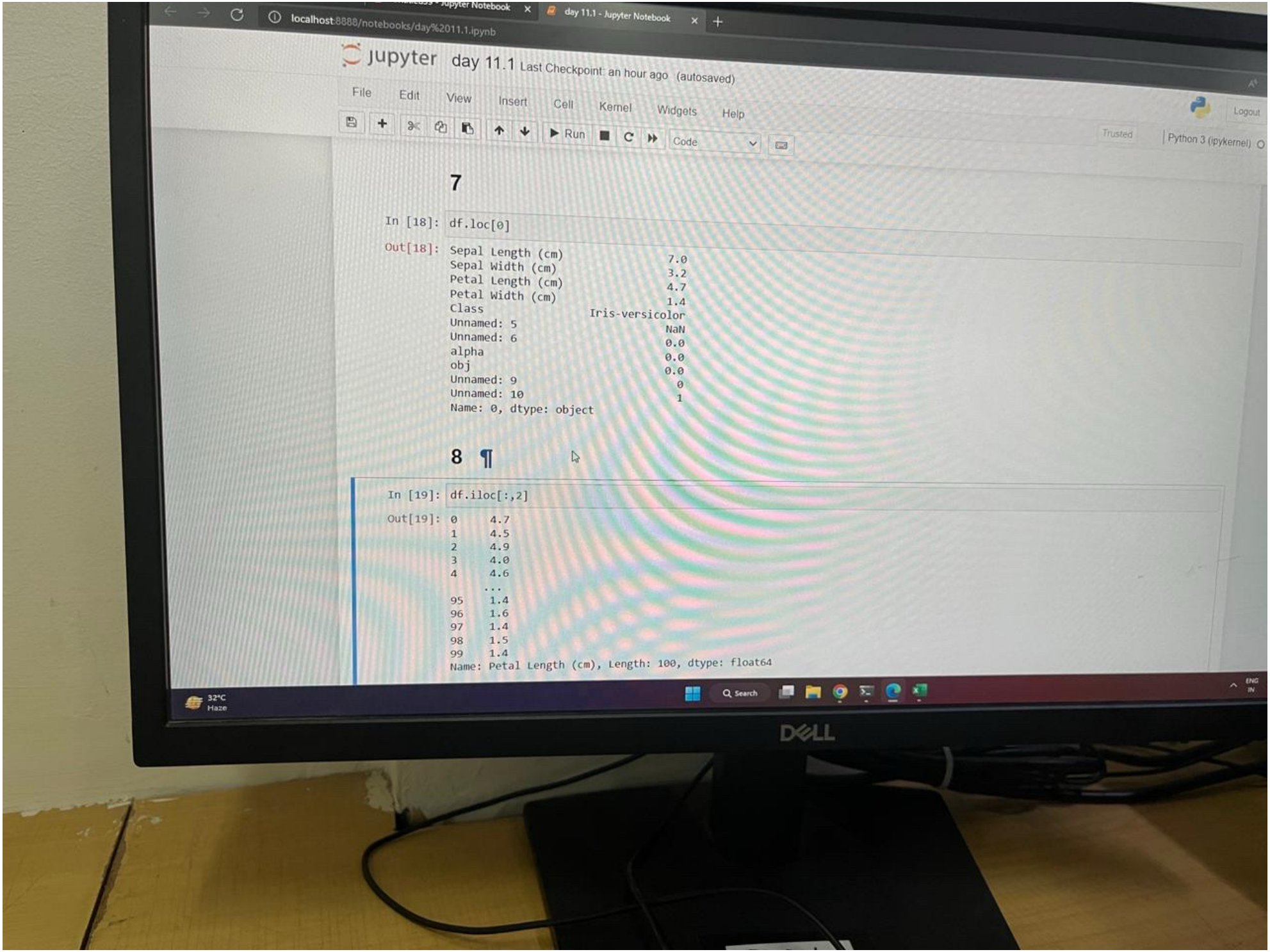
64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95,
96, 97, 98, 99]
[100 rows x 0 columns]
7
In [18]: df.loc[0]
Out[18]: Sepal Length (cm) 7.0
Sepal Width (cm) 3.2
Petal Length (cm) 4.7
Petal Width (cm) 1.4
Class Iris-versicolor
Unnamed: 5 NaN
Unnamed: 6 0.0
alpha 0.0
obj 0.0
Unnamed: 9 0
Unnamed: 10 1
Name: 0, dtype: object
8
In [19]: df.iloc[:,2]
Out[19]: 0 4.7
1 4.5
2 4.9
3 4.0
4 4.6
...
95 1.4
32°C Haze
Search
DELL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Python 3 (ipykernel)
7
In [18]: df.loc[0]
Out[18]:
Sepal Length (cm) 7.0
Sepal Width (cm) 3.2
Petal Length (cm) 4.7
Petal Width (cm) 1.4
Class Iris-versicolor
Unnamed: 5 NaN
Unnamed: 6 0.0
alpha 0.0
obj 0.0
Unnamed: 9 0
Unnamed: 10 1
Name: 0, dtype: object
8 ¶
In [19]: df.iloc[:,2]
Out[19]:
0 4.7
1 4.5
2 4.9
3 4.0
4 4.6
...
95 1.4
96 1.6
97 1.4
98 1.5
99 1.4
Name: Petal Length (cm), Length: 100, dtype: float64
32°C Haze
Search
ENG IN
DELL

	1.0	11.0	0.0	0.0	0.0	0.0	0.0	...	0.0	0.0

5 rows × 64 columns

In [ ]:

In [16]:
```
X = df
y = datasets.target
```

In [17]:
```
from sklearn.preprocessing import StandardScaler
scaler = StandardScaler()
X_scaled = scaler.fit_transform(X)

X_scaled
```

In [ ]:
```
from sklearn.model_selection import train_test_split
X_train,X_test,y_train,y_test = train_test_split(X_scaled,y,test_size=0.2,random_state=42)
```