COMSATS UNIVERSITY

WAH CAMPUS

Tittle: Formula 1 Case Study

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Class/Section: *BSCS/6d*

Submitted To

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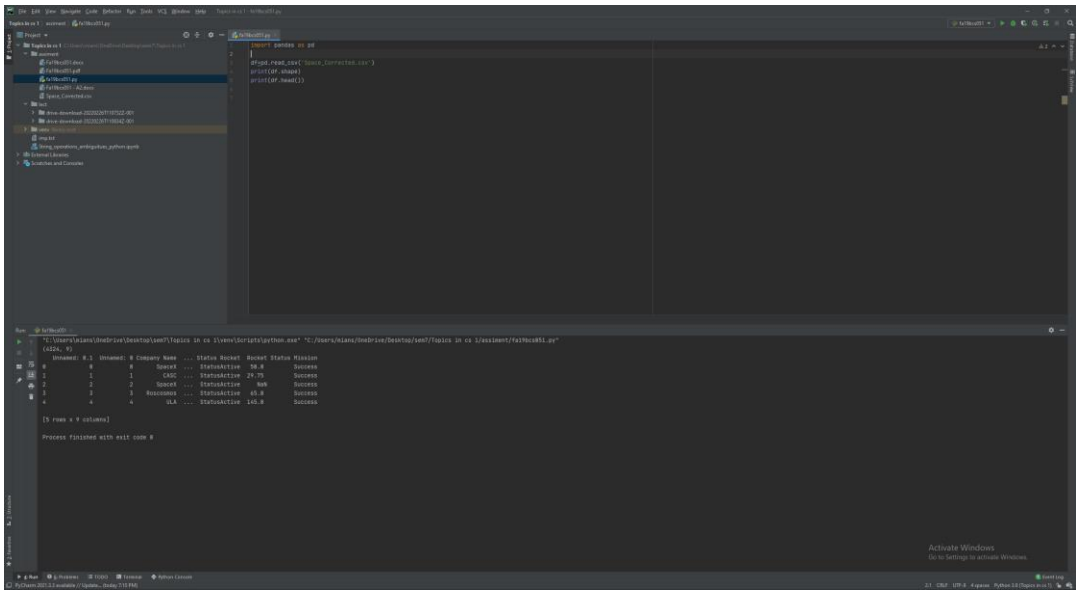
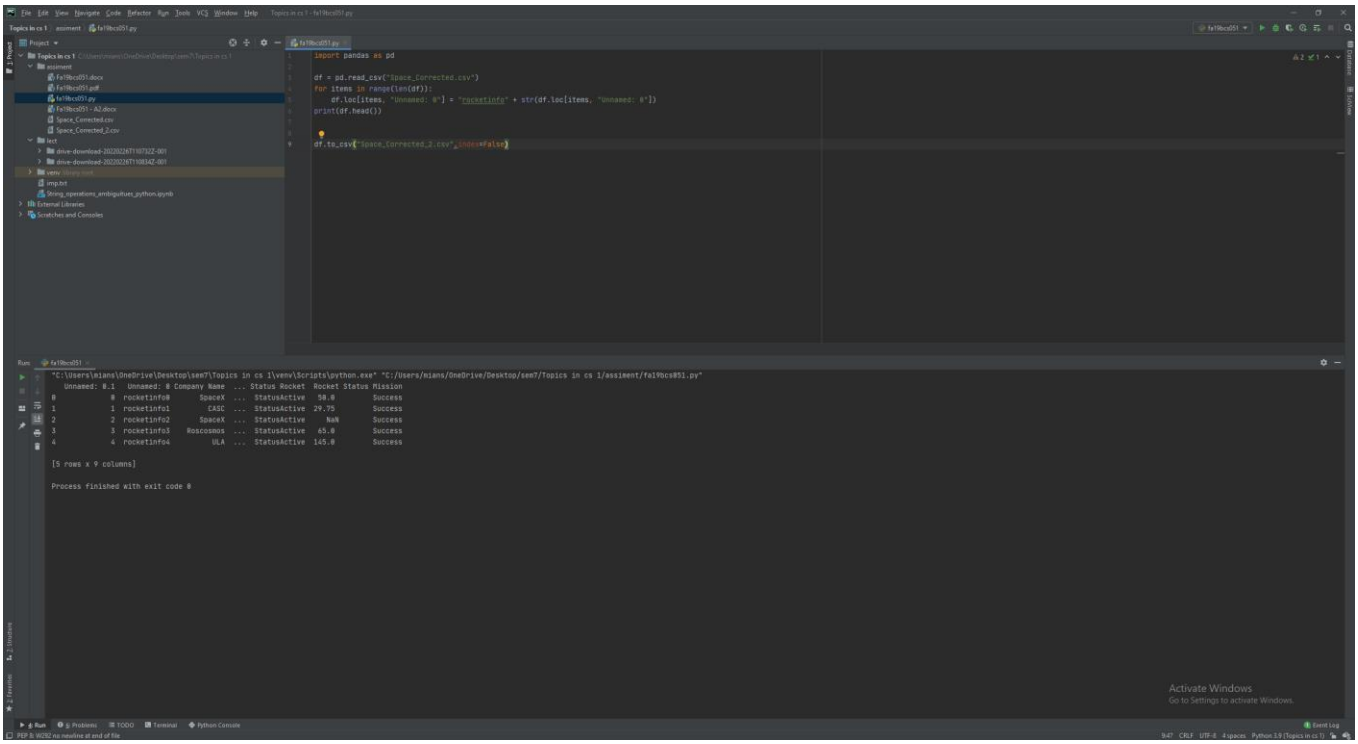
Date of Submission: *27/03/2022*

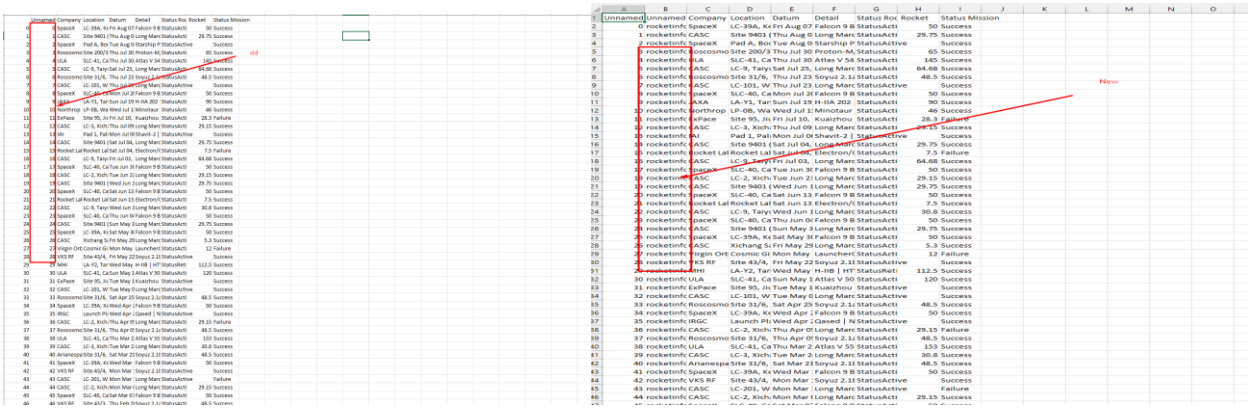
Read using Data Frame



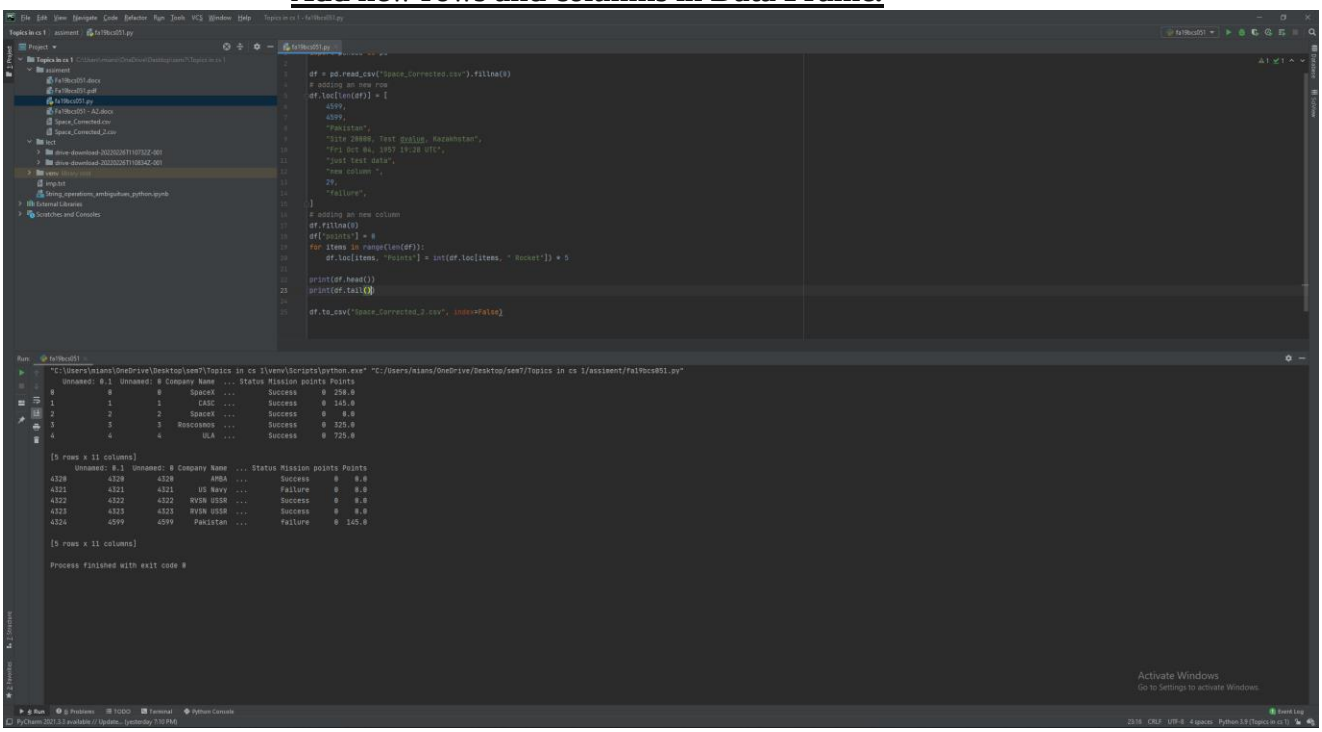
```
import pandas as pd
df=pd.read_csv('Space_Corrected.csv')
print(df.shape)
print(df.head())
```

Assign a particular value to a specific row or a column in a Data Frame.





Add new rows and columns in Data Frame.

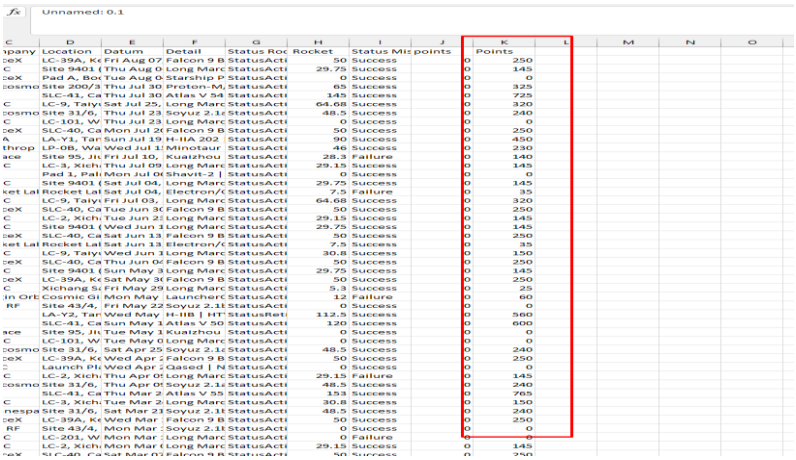


```python
import pandas as pd

df = pd.read_csv("Space_Corrected.csv").fillna(0)
# adding an new row
df.loc[len(df)] = [
    4599,
    4599,
    "Pakistan",
    "Site 20000, Test dvalue, Kazakhstan",
    "Fri Oct 04, 1957 19:28 UTC",
    "just test data",
    "new column ",
    29,
    "failure",
]
# adding an new column
df.fillna(0)
df["points"] = 0
for items in range(len(df)):
    df.loc[items, "Points"] = int(df.loc[items, " Rocket"]) * 5

print(df.head())
print(df.tail())

df.to_csv("Space_Corrected_2.csv", index=False)
```

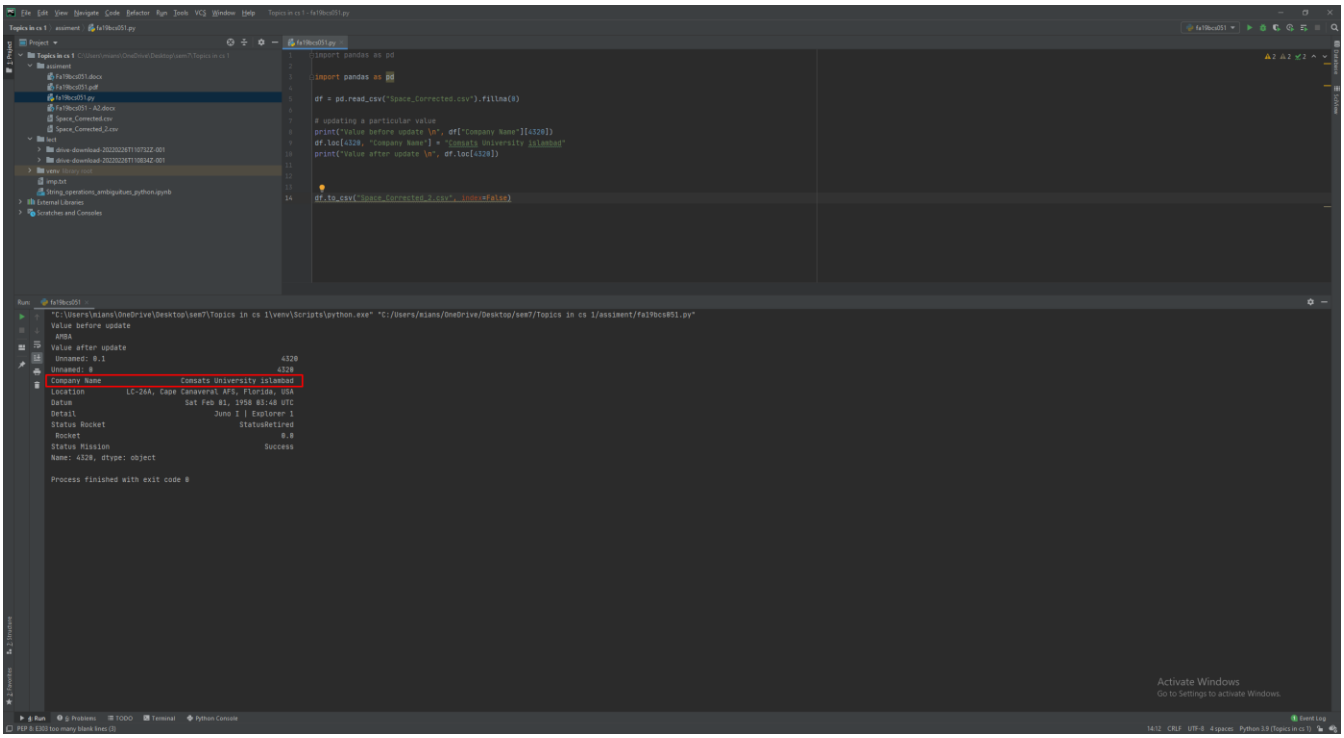
New row added

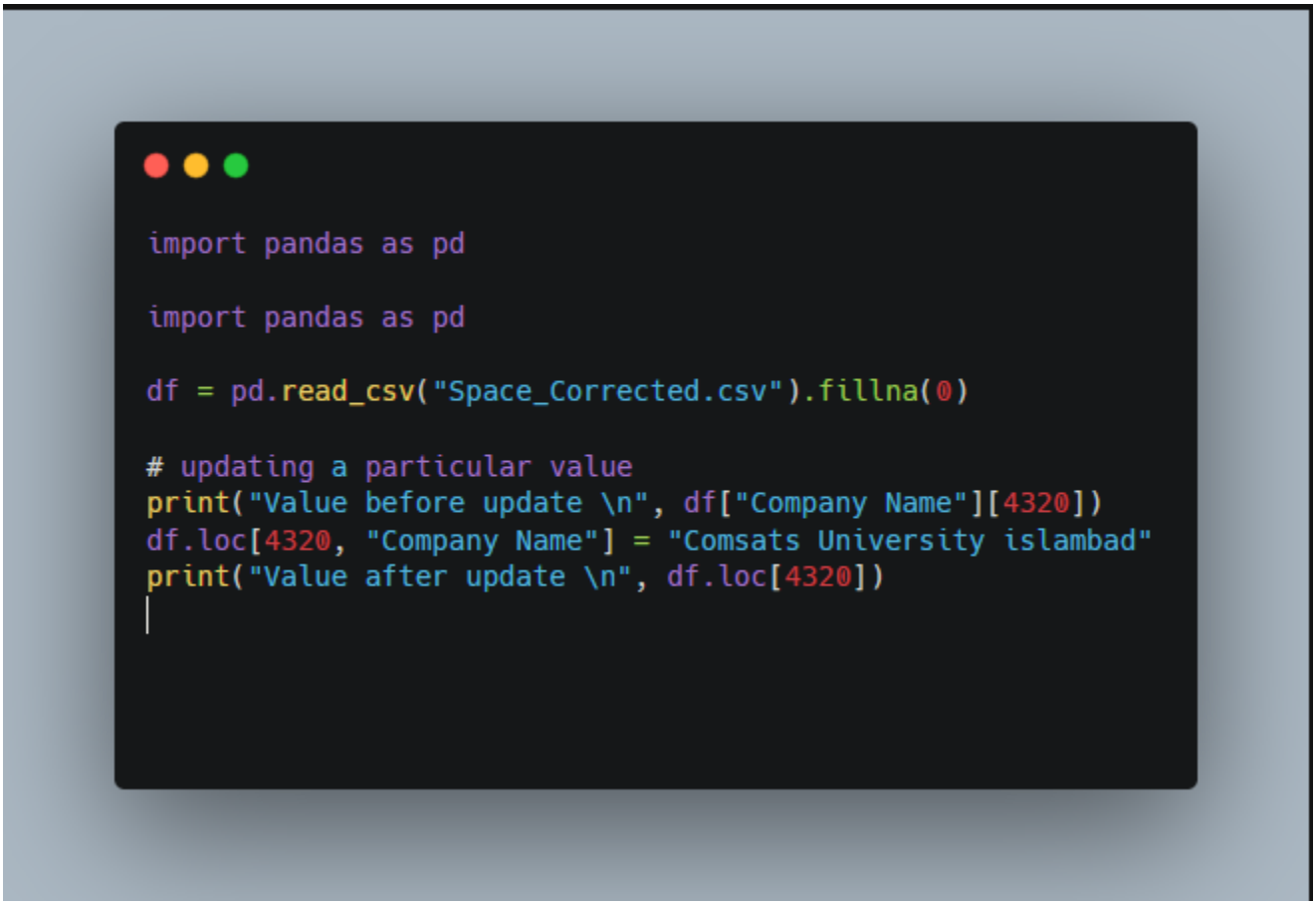
4321	4319	4319	US Navy	LC-18A, Ca	Wed Feb (	Vanguard	StatusRet	0	Failure	0	0
4322	4320	4320	AMBA	LC-26A, Ca	Sat Feb 01	Juno I | Ex	StatusRet	0	Success	0	0
4323	4321	4321	US Navy	LC-18A, Ca	Fri Dec 06,	Vanguard	StatusRet	0	Failure	0	0
4324	4322	4322	RVSN USS	Site 1/5, B	Sun Nov 0	Sputnik 8k	StatusRet	0	Success	0	0
4325	4323	4323	RVSN USS	Site 1/5, B	Fri Oct 04,	Sputnik 8k	StatusRet	0	Success	0	0
4326	4599	4599	Pakistan	Site 20000	Fri Oct 04,	just test d	new colur	29	failure	0	145
4327											
4328											

New Column added



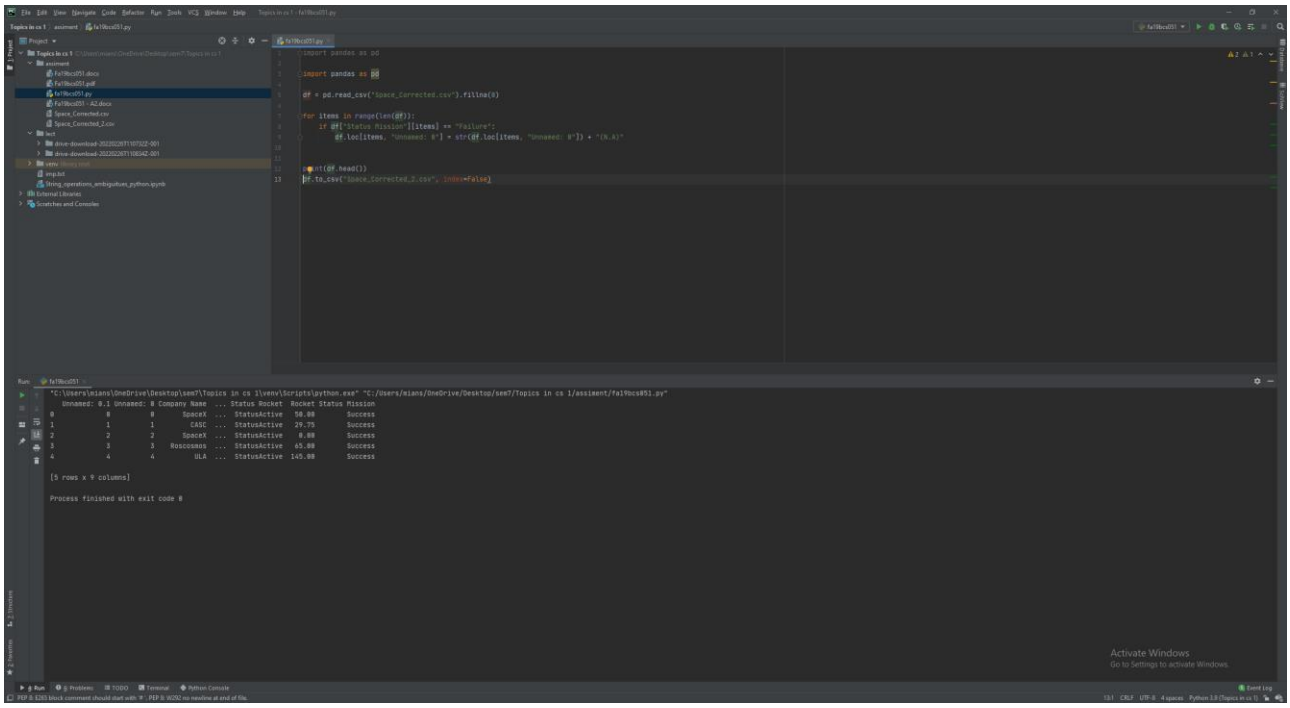
Update or modify a particular value





update or modify a particular row or a column.

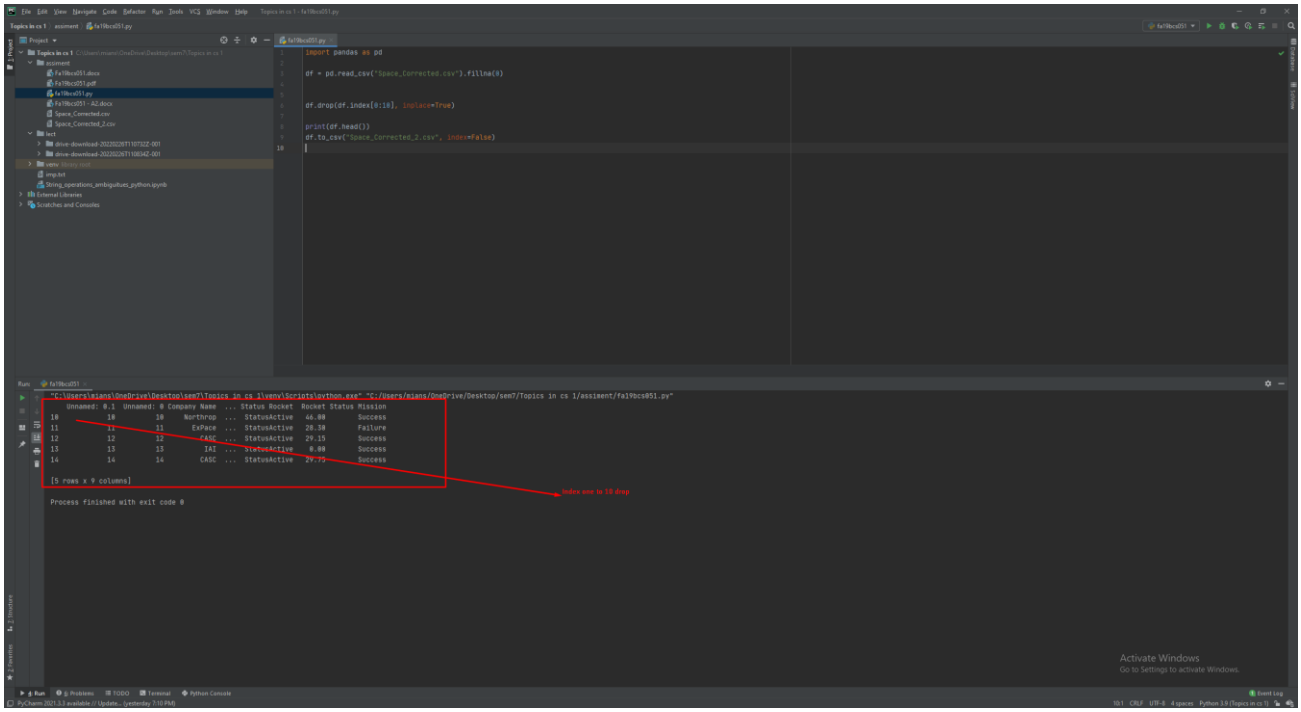
Updating column nu#2



```
import pandas as pd

df = pd.read_csv("Space_Corrected.csv").fillna(0)

for items in range(len(df)):
    if df["Status Mission"][items] == "Failure":
        df.loc[items, "Unnamed: 0"] = str(df.loc[items, "Unnamed: 0"]) + "(N.A)"


print(df.head())
df.to_csv("Space_Corrected_2.csv", index=False)
```

Delete rows and any column as per your understanding.

Deleting row 1-10



```python
import pandas as pd

df = pd.read_csv('Space_Corrected.csv').fillna(0)
print(df.shape)
print(df.head())
print('Assigning a Particular value to column at index2')
for items in range(len(df)):
    df.loc[items, 'Unnamed: 0'] = 'rocketinfo' + str(df.loc[items,
            'Unnamed: 0'])
print(df.head())

# adding an new row

print('Adding a new row')
df.loc[len(df)] = [
    4599,
    4599,
    'Pakistan',
    'Site 20000, Test dvalue, Kazakhstan',
    'Fri Oct 04, 1957 19:28 UTC',
    'just test data',
    'new column ',
    29,
    'failure',
    ]

# adding an new column

print('adding a new column')
df['points'] = 0
for items in range(len(df)):
    df.loc[items, 'Points'] = int(df.loc[items, ' Rocket']) * 5

print(df.head())
print (df.tail())

# updating a particular value

print('Updating company name for index 4320\n')
print ('Value before update \n', df['Company Name'][4320])
df.loc[4320, 'Company Name'] = 'Comsats University islambad'
print ('Value after update \n', df.loc[4320])

# updating row 2

print('Updating row2')
for items in range(len(df)):
    if df['Status Mission'][items] == 'Failure':
        df.loc[items, 'Unnamed: 0'] = str(df.loc[items, 'Unnamed: 0']) \
            + '(N.A)'
print('Dropping rows 0 to 10')
df.drop(df.index[0:10], inplace=True)

print(df.head())
df.to_csv('Space_Corrected_2.csv', index=False)
```

References:

All Space Missions from 1957 | Kaggle