

```
In [1]: ## How to do string munging in Pandas
def Snippet_110():
    print()
    print(format('How to do string munging in Pandas', '^82'))
    import warnings
    warnings.filterwarnings("ignore")
    # load libraries
    import pandas as pd
    import numpy as np
    import re as re
    # Create dataframe
    raw_data = {'first_name': ['Jason', 'Molly', 'Tina', 'Jake', 'Amy'],
                'last_name': ['Miller', 'Jacobson', 'Ali', 'Milner', 'Cooze'],
                'email': ['jas203@gmail.com', 'momomolly@gmail.com', np.NAN,
                          'battler@milner.com', 'Ames1234@yahoo.com'],
                'preTestScore': [4, 24, 31, 2, 3],
                'postTestScore': [25, 94, 57, 62, 70]}
    df = pd.DataFrame(raw_data, columns = ['first_name', 'last_name', 'email',
                                          'preTestScore', 'postTestScore'])

    print(); print(df)
    # Which strings in the email column contains 'gmail'
    print(); print(df['email'].str.contains('gmail'))
    # Create a regular expression pattern that breaks apart emails
    pattern = '([A-Z0-9._%+-]+)@([A-Z0-9.-]+)\.([A-Z]{2,4})'
    # Find everything in df.email that contains that pattern
    print(); print(df['email'].str.findall(pattern, flags=re.IGNORECASE))
    # Create a pandas series containing the email elements
    matches = df['email'].str.match(pattern, flags=re.IGNORECASE)
    print(); print(matches)
Snippet_110()
```

*****How to do string munging in Pandas*****

	first_name	last_name	email	preTestScore	postTestScore
0	Jason	Miller	jas203@gmail.com	4	25
1	Molly	Jacobson	momomolly@gmail.com	24	94
2	Tina	Ali	NaN	31	57
3	Jake	Milner	battler@milner.com	2	62
4	Amy	Cooze	Ames1234@yahoo.com	3	70

```
0    True
1    True
2    NaN
3    False
4    False
Name: email, dtype: object
```

```
0    [(jas203, gmail, com)]
1    [(momomolly, gmail, com)]
2    NaN
3    [(battler, milner, com)]
4    [(Ames1234, yahoo, com)]
Name: email, dtype: object
```

```
0    True
1    True
2    NaN
3    True
4    True
Name: email, dtype: object
```

In []: