```
'Output':
Out[29]:
3     Abia
4    Benue
```

Slice Cells by Row and Column from a DataFrame

First let's create a DataFrame. Remember, we use **iloc** when no explicit index or row labels are assigned.

```
my_DF = pd.DataFrame({'age': [15,17,21,29,25], \
            'state_of_origin':['Lagos', 'Cross River', 'Kano', 'Abia',
            'Benue']})
my_DF
'Output':
   age state_of_origin
0   15           Lagos
1   17     Cross River
2   21            Kano
3   29            Abia
4   25           Benue
# select the third row and second column
my_DF.iloc[2,1]
'Output': 'Kano'
# slice the first 2 rows - indexed from zero, excluding the final index
my_DF.iloc[:2,]
'Output':
   age state_of_origin
0   15           Lagos
1   17     Cross River
# slice the last three rows from the last column
my_DF.iloc[-3:,-1]
'Output':
2     Kano
3     Abia
4    Benue
Name: state_of_origin, dtype: object
```

DataFrame Manipulation

Let's go through some common tasks for manipulating a DataFrame.

Removing a Row/Column

In many cases during the data cleaning process, there may be a need to drop unwanted rows or data variables (i.e., columns). We typically do this using the **drop** function. The **drop** function has a parameter **axis** whose default is 0. If **axis** is set to 1, it drops columns in a dataset, but if left at the default, rows are dropped from the dataset.

Note that when a column or row is dropped, a new **DataFrame** or **Series** is returned without altering the original data structure. However, when the attribute **inplace** is set to **True**, the original DataFrame or Series is modified. Let's see some examples.

```
# the data frame
my_DF = pd.DataFrame({'age': [15,17,21,29,25], \
            'state_of_origin':['Lagos', 'Cross River', 'Kano', 'Abia',
            'Benue']})
my_DF
'Output':
   age state_of_origin
0   15           Lagos
1   17     Cross River
2   21            Kano
3   29            Abia
4   25           Benue
# drop the 3rd and 4th column
my_DF.drop([2,4])
'Output':
   age state_of_origin
0   15           Lagos
1   17     Cross River
3   29            Abia
# drop the `age` column
my_DF.drop('age', axis=1)
```