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Wednesday, June 26, 2013

Create empty DataFrame in Pandas

It seems like it should be a simple thing: create an empty DataFrame in the Pandas Python Data Analysis Library. But if you want to create a DataFrame that

- is empty (has no records)
- has datatypes
- has columns in a specific order

...i.e. the equivalent of SQL's CREATE TABLE, then it's not obvious how to do it in Pandas, and I wasn't able to find any one web page that laid it all out. The trick is to use an empty Numpy ndarray in the DataFrame constructor:

```
df=DataFrame(np.zeros(0, dtype=[('ProductID', 'i4'), ('ProductName', 'a50')]))
```

Then, to insert a single record:

```
df = df.append({'ProductID':1234, 'ProductName':'Widget'})
```


UPDATE 2013-07-18: Append is missing a parameter:

```
df = df.append({'ProductID':1234, 'ProductName':'Widget'},ignore_index=True)
```

Posted by Michael Malak at 1:23 PM

Labels: [iPython](#)

1 comment:



Patrick Surry said...
thanks, this was helpful. you can also use pandas columns arg to name the columns, e.g.

```
columns = ['price', 'item']  
pd.DataFrame(data=np.zeros((0,len(columns))), columns=columns)
```

September 18, 2014 at 9:51 AM

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