

>>>

```
RESTART: Project03StockRunner.py
['date', 'close', 'volume', 'open', 'high', 'low']
['2017/04/19', 2.5, 5.0, 1.0, 2.5, 1.0]
['2017/04/18', 0.8, 5.0, 0.5, 4.0, 0.0]
['2017/04/17', 0.6, 5.0, 0.8, 1.0, 0.5]
['2017/04/16', 0.8, 5.0, 0.9, 0.9, 0.8]
```

```
['date ', 'change', 'Volatility']
['2017/04/19', 1.5, 1.5]
['2017/04/18', 0.3, 4.0]
['2017/04/17', -0.2, 0.5]
['2017/04/16', -0.1, 0.1]
```

```
['name', 'total change', 'avg Volatility']
['Test', 1.5, 1.525]
```

>>>

```
RESTART: Project03StockRunner.py
['date', 'close', 'volume', 'open', 'high', 'low']
['2017/04/19', 140.68, 17302160.0, 141.88, 142.0, 140.45]
['2017/04/18', 141.2, 14676420.0, 141.41, 142.04, 141.11]
['2017/04/17', 141.83, 16529130.0, 141.48, 141.88, 140.87]
['2017/04/13', 141.05, 17775510.0, 141.91, 142.38, 141.05]
['2017/04/12', 141.8, 20320420.0, 141.6, 142.15, 141.01]
['2017/04/11', 141.63, 30341520.0, 142.94, 143.35, 140.06]
['2017/04/10', 143.17, 18904680.0, 143.6, 143.8792, 142.9]
['2017/04/07', 143.34, 16658660.0, 143.73, 144.18, 143.27]
['2017/04/06', 143.66, 21131040.0, 144.29, 144.52, 143.45]
['2017/04/05', 144.02, 27649500.0, 144.22, 145.46, 143.81]
['2017/04/04', 144.77, 19865300.0, 143.25, 144.89, 143.17]
['2017/04/03', 143.7, 19970040.0, 143.71, 144.12, 143.05]
['2017/03/31', 143.66, 19576480.0, 143.72, 144.27, 143.01]
['2017/03/30', 143.93, 21189000.0, 144.19, 144.5, 143.5]
['2017/03/29', 144.12, 29174040.0, 143.68, 144.49, 143.19]
['2017/03/28', 143.8, 33348400.0, 140.91, 144.04, 140.62]
['2017/03/27', 140.88, 23531670.0, 139.39, 141.22, 138.62]
['2017/03/24', 140.64, 22355140.0, 141.5, 141.74, 140.35]
['2017/03/23', 140.92, 20299310.0, 141.26, 141.5844, 140.61]
['2017/03/22', 141.42, 25804820.0, 139.845, 141.6, 139.76]
['2017/03/21', 139.84, 39461130.0, 142.11, 142.8, 139.73]
['2017/03/20', 141.46, 21258100.0, 140.4, 141.5, 140.23]
['2017/03/17', 139.99, 43700570.0, 141.0, 141.0, 139.89]
['2017/03/16', 140.69, 19173780.0, 140.72, 141.02, 140.26]
['2017/03/15', 140.46, 25676720.0, 139.41, 140.7501, 139.025]
['2017/03/14', 138.99, 15281850.0, 139.3, 139.65, 138.84]
['2017/03/13', 139.2, 17048800.0, 138.85, 139.43, 138.82]
['2017/03/10', 139.14, 19578920.0, 139.25, 139.3571, 138.64]
['2017/03/09', 138.68, 22117750.0, 138.74, 138.79, 137.05]
['2017/03/08', 139.0, 18695500.0, 138.95, 139.8, 138.82]
['2017/03/07', 139.52, 17439210.0, 139.06, 139.98, 138.79]
['2017/03/06', 139.34, 21229890.0, 139.365, 139.77, 138.5959]
['2017/03/03', 139.78, 21555370.0, 138.78, 139.83, 138.59]
['2017/03/02', 138.96, 26170690.0, 140.0, 140.2786, 138.76]
['2017/03/01', 139.79, 36362440.0, 137.89, 140.15, 137.595]
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['2017/02/28', 136.99, 23446340.0, 137.08, 137.435, 136.7]
['2017/02/27', 136.93, 20222210.0, 137.14, 137.435, 136.28]
['2017/02/24', 136.66, 21754600.0, 135.91, 136.66, 135.28]
['2017/02/23', 136.53, 20762360.0, 137.38, 137.48, 136.3]
['2017/02/22', 137.11, 20769030.0, 136.43, 137.12, 136.11]
['2017/02/21', 136.7, 24487200.0, 136.23, 136.75, 135.98]
['2017/02/17', 135.72, 22163280.0, 135.1, 135.83, 135.1]
['2017/02/16', 135.345, 22539860.0, 135.67, 135.9, 134.8398]
['2017/02/15', 135.51, 35578640.0, 135.52, 136.27, 134.62]
['2017/02/14', 135.02, 33054500.0, 133.47, 135.09, 133.25]
['2017/02/13', 133.29, 22989980.0, 133.08, 133.82, 132.75]
['2017/02/10', 132.12, 20046250.0, 132.46, 132.94, 132.05]
['2017/02/09', 132.42, 28321440.0, 131.65, 132.445, 131.12]
['2017/02/08', 132.04, 22941650.0, 131.35, 132.22, 131.22]
['2017/02/07', 131.53, 38158410.0, 130.54, 132.09, 130.45]
['2017/02/06', 130.29, 26784530.0, 129.13, 130.5, 128.9]
['2017/02/03', 129.08, 24460160.0, 128.31, 129.19, 128.16]
['2017/02/02', 128.53, 33671250.0, 127.975, 129.39, 127.78]
['2017/02/01', 128.75, 111837300.0, 127.03, 130.49, 127.01]
['2017/01/31', 121.35, 47767760.0, 121.15, 121.39, 120.62]
['2017/01/30', 121.63, 30327110.0, 120.93, 121.63, 120.66]
['2017/01/27', 121.95, 20495340.0, 122.14, 122.35, 121.6]
['2017/01/26', 121.94, 26320740.0, 121.67, 122.44, 121.6]
['2017/01/25', 121.88, 32417410.0, 120.42, 122.1, 120.28]
['2017/01/24', 119.97, 23191150.0, 119.55, 120.1, 119.5]
['2017/01/23', 120.08, 21982000.0, 120.0, 120.81, 119.77]
['2017/01/20', 120.0, 29922650.0, 120.45, 120.45, 119.7346]
['2017/01/19', 119.78, 25554290.0, 119.4, 120.09, 119.37]
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['date', 'change', 'Volatility']
['2017/04/19', -1.2, 1.55]
['2017/04/18', -0.21, 0.93]
['2017/04/17', 0.35, 1.01]
['2017/04/13', -0.86, 1.33]
['2017/04/12', 0.2, 1.14]
['2017/04/11', -1.31, 3.29]
['2017/04/10', -0.43, 0.9792]
['2017/04/07', -0.39, 0.91]
['2017/04/06', -0.63, 1.07]
['2017/04/05', -0.2, 1.65]
['2017/04/04', 1.52, 1.72]
['2017/04/03', -0.01, 1.07]
['2017/03/31', -0.06, 1.26]
['2017/03/30', -0.26, 1.0]
['2017/03/29', 0.44, 1.3]
['2017/03/28', 2.89, 3.42]
['2017/03/27', 1.49, 2.6]
['2017/03/24', -0.86, 1.39]
['2017/03/23', -0.34, 0.9744]
['2017/03/22', 1.575, 1.84]
['2017/03/21', -2.27, 3.07]
['2017/03/20', 1.06, 1.27]
['2017/03/17', -1.01, 1.11]
['2017/03/16', -0.03, 0.76]
['2017/03/15', 1.05, 1.7251]
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['2017/03/14', -0.31, 0.81]
['2017/03/13', 0.35, 0.61]
['2017/03/10', -0.11, 0.7171]
['2017/03/09', -0.06, 1.74]
['2017/03/08', 0.05, 0.98]
['2017/03/07', 0.46, 1.19]
['2017/03/06', -0.025, 1.1741]
['2017/03/03', 1.0, 1.24]
['2017/03/02', -1.04, 1.5186]
['2017/03/01', 1.9, 2.555]
['2017/02/28', -0.09, 0.735]
['2017/02/27', -0.21, 1.155]
['2017/02/24', 0.75, 1.38]
['2017/02/23', -0.85, 1.18]
['2017/02/22', 0.68, 1.01]
['2017/02/21', 0.47, 0.77]
['2017/02/17', 0.62, 0.73]
['2017/02/16', -0.325, 1.0602]
['2017/02/15', -0.01, 1.65]
['2017/02/14', 1.55, 1.84]
['2017/02/13', 0.21, 1.07]
['2017/02/10', -0.34, 0.89]
['2017/02/09', 0.77, 1.325]
['2017/02/08', 0.69, 1.0]
['2017/02/07', 0.99, 1.64]
['2017/02/06', 1.16, 1.6]
['2017/02/03', 0.77, 1.03]
['2017/02/02', 0.555, 1.61]
['2017/02/01', 1.72, 3.48]
['2017/01/31', 0.2, 0.77]
['2017/01/30', 0.7, 0.97]
['2017/01/27', -0.19, 0.75]
['2017/01/26', 0.27, 0.84]
['2017/01/25', 1.46, 1.82]
['2017/01/24', 0.42, 0.6]
['2017/01/23', 0.08, 1.04]
['2017/01/20', -0.45, 0.7154]
['2017/01/19', 0.38, 0.72]

['name', 'total change', 'avg Volatility']
['AAPL', 14.7, 1.33784]
```