

```

1: import csv
2: # write stocks data as comma-separated values
3: writer = csv.writer(open('stocks.csv', 'wb', buffering=0))
4: writer.writerows([
5:     ('GOOG', 'Google, Inc.', 505.24, 0.47, 0.09),
6:     ('YHOO', 'Yahoo! Inc.', 27.38, 0.33, 1.22),
7:     ('CNET', 'CNET Networks, Inc.', 8.62, -0.13, -1.49)
8: ])
9: # read stocks data, print status messages
10: stocks = csv.reader(open('stocks.csv', 'rb'))
11: status_labels = {-1: 'down', 0: 'unchanged', 1: 'up'}
12: for ticker, name, price, change, pct in stocks:
13:     status = status_labels[cmp(float(change), 0.0)]
14:     print '%s is %s (%s%%)' % (name, status, pct)

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|----|-----|-----------------|--|
| 1 | 0 | LOAD_CONST | 0 (-1) |
| | 3 | LOAD_CONST | 1 (None) |
| | 6 | IMPORT_NAME | 0 (csv) |
| | 9 | STORE_NAME | 0 (csv) |
| 4 | 12 | LOAD_NAME | 0 (csv) |
| | 15 | LOAD_ATTR | 1 (writer) |
| | 18 | LOAD_NAME | 2 (open) |
| | 21 | LOAD_CONST | 2 ('stocks.csv') |
| | 24 | LOAD_CONST | 3 ('wb') |
| | 27 | LOAD_CONST | 4 ('buffering') |
| | 30 | LOAD_CONST | 5 (0) |
| | 33 | CALL_FUNCTION | 258 |
| | 36 | CALL_FUNCTION | 1 |
| | 39 | STORE_NAME | 1 (writer) |
| 5 | 42 | LOAD_NAME | 1 (writer) |
| | 45 | LOAD_ATTR | 3 (writerows) |
| 6 | 48 | LOAD_CONST | 28 (('GOOG', 'Google, Inc.', 505.24, 0.47, 0.09)) |
| 7 | 51 | LOAD_CONST | 29 (('YHOO', 'Yahoo! Inc.', 27.38, 0.33, 1.22)) |
| 8 | 54 | LOAD_CONST | 30 (('CNET', 'CNET Networks, Inc.', 8.62, -0.13, -1.49)) |
| | 57 | BUILD_LIST | 3 |
| | 60 | CALL_FUNCTION | 1 |
| | 63 | POP_TOP | |
| 12 | 64 | LOAD_NAME | 0 (csv) |
| | 67 | LOAD_ATTR | 4 (reader) |
| | 70 | LOAD_NAME | 2 (open) |
| | 73 | LOAD_CONST | 2 ('stocks.csv') |
| | 76 | LOAD_CONST | 21 ('rb') |
| | 79 | CALL_FUNCTION | 2 |
| | 82 | CALL_FUNCTION | 1 |
| | 85 | STORE_NAME | 5 (stocks) |
| 13 | 88 | BUILD_MAP | 3 |
| | 91 | LOAD_CONST | 22 ('down') |
| | 94 | LOAD_CONST | 0 (-1) |
| | 97 | STORE_MAP | |
| | 98 | LOAD_CONST | 23 ('unchanged') |
| | 101 | LOAD_CONST | 5 (0) |
| | 104 | STORE_MAP | |
| | 105 | LOAD_CONST | 24 ('up') |
| | 108 | LOAD_CONST | 25 (1) |
| | 111 | STORE_MAP | |
| | 112 | STORE_NAME | 6 (status_labels) |
| 14 | 115 | SETUP_LOOP | 72 (to 190) |
| | 118 | LOAD_NAME | 5 (stocks) |
| | 121 | GET_ITER | |
| >> | 122 | FOR_ITER | 64 (to 189) |
| | 125 | UNPACK_SEQUENCE | 5 |
| | 128 | STORE_NAME | 7 (ticker) |
| | 131 | STORE_NAME | 8 (name) |
| | 134 | STORE_NAME | 9 (price) |
| | 137 | STORE_NAME | 10 (change) |
| | 140 | STORE_NAME | 11 (pct) |
| 15 | 143 | LOAD_NAME | 6 (status_labels) |

| | | | | |
|----|-----|---------------|-----|-----------------|
| | 146 | LOAD_NAME | 12 | (cmp) |
| | 149 | LOAD_NAME | 13 | (float) |
| | 152 | LOAD_NAME | 10 | (change) |
| | 155 | CALL_FUNCTION | 1 | |
| | 158 | LOAD_CONST | 26 | (0.0) |
| | 161 | CALL_FUNCTION | 2 | |
| | 164 | BINARY_SUBSCR | | |
| | 165 | STORE_NAME | 14 | (status) |
| 16 | 168 | LOAD_CONST | 27 | ('s is s (s%)') |
| | 171 | LOAD_NAME | 8 | (name) |
| | 174 | LOAD_NAME | 14 | (status) |
| | 177 | LOAD_NAME | 11 | (pct) |
| | 180 | BUILD_TUPLE | 3 | |
| | 183 | BINARY_MODULO | | |
| | 184 | PRINT_ITEM | | |
| | 185 | PRINT_NEWLINE | | |
| | 186 | JUMP_ABSOLUTE | 122 | |
| >> | 189 | POP_BLOCK | | |
| >> | 190 | LOAD_CONST | 1 | (None) |
| | 193 | RETURN_VALUE | | |
