

## SQLite/create.py (Page 1 of 2)

```

1: #!/usr/bin/env python
2:
3: #-----
4: # create.py
5: # Author: Bob Dondero
6: #-----
7:
8: import sys
9: import contextlib
10: import sqlite3
11:
12: #-----
13:
14: DATABASE_URL = 'file:bookstore.sqlite?mode=rwc'
15:
16: def main():
17:
18:     if len(sys.argv) != 1:
19:         print('Usage: python ' + sys.argv[0], file=sys.stderr)
20:         sys.exit(1)
21:
22:     try:
23:         with sqlite3.connect(DATABASE_URL, isolation_level=None,
24:                             uri=True) as connection:
25:
26:             with contextlib.closing(connection.cursor()) as cursor:
27:
28:                 # Use double quotes to delimit Python strings
29:                 # because SQL statements use single quotes.
30:
31:                 #-----
32:
33:                 cursor.execute("DROP TABLE IF EXISTS books")
34:                 cursor.execute("CREATE TABLE books "
35:                                + "(isbn TEXT, title TEXT, quantity INTEGER)")
36:                 cursor.execute("INSERT INTO books "
37:                                + "(isbn, title, quantity) "
38:                                + "VALUES ('123', "
39:                                + "'The Practice of Programming', 500)")
40:                 cursor.execute("INSERT INTO books "
41:                                + "(isbn, title, quantity) "
42:                                + "VALUES ('234', "
43:                                + "'The C Programming Language', 800)")
44:                 cursor.execute("INSERT INTO books "
45:                                + "(isbn, title, quantity) "
46:                                + "VALUES ('345', "
47:                                + "'Algorithms in C', 650)")
48:
49:                 #-----
50:
51:                 cursor.execute("DROP TABLE IF EXISTS authors")
52:                 cursor.execute("CREATE TABLE authors "
53:                                + "(isbn TEXT, author TEXT)")
54:                 cursor.execute("INSERT INTO authors (isbn, author) "
55:                                + "VALUES ('123', 'Kernighan')")
56:                 cursor.execute("INSERT INTO authors (isbn, author) "
57:                                + "VALUES ('123', 'Pike')")
58:                 cursor.execute("INSERT INTO authors (isbn, author) "
59:                                + "VALUES ('234', 'Kernighan')")
60:                 cursor.execute("INSERT INTO authors (isbn, author) "
61:                                + "VALUES ('234', 'Ritchie')")
62:                 cursor.execute("INSERT INTO authors (isbn, author) "
63:                                + "VALUES ('345', 'Sedgewick')")
64:
65:                 #-----

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66:
67:         cursor.execute("DROP TABLE IF EXISTS customers")
68:         cursor.execute("CREATE TABLE customers "
69:                        + "(custid TEXT, custname TEXT, street TEXT, "
70:                        + "zipcode TEXT)")
71:         cursor.execute("INSERT INTO customers "
72:                        + "(custid, custname, street, zipcode) VALUES "
73:                        + "('111', 'Princeton', '114 Nassau St', '08540')")
74:         cursor.execute("INSERT INTO customers "
75:                        + "(custid, custname, street, zipcode) VALUES "
76:                        + "('222', 'Harvard', '1256 Mass Ave', '02138')")
77:         cursor.execute("INSERT INTO customers "
78:                        + "(custid, custname, street, zipcode) VALUES "
79:                        + "('333', 'MIT', '292 Main St', '02142')")
80:
81:         #-----
82:
83:         cursor.execute("DROP TABLE IF EXISTS zipcodes")
84:         cursor.execute("CREATE TABLE zipcodes "
85:                        + "(zipcode TEXT, city TEXT, state TEXT)")
86:         cursor.execute("INSERT INTO zipcodes "
87:                        + "(zipcode, city, state) "
88:                        + "VALUES ('08540', 'Princeton', 'NJ')")
89:         cursor.execute("INSERT INTO zipcodes "
90:                        + "(zipcode, city, state) "
91:                        + "VALUES ('02138', 'Cambridge', 'MA')")
92:         cursor.execute("INSERT INTO zipcodes "
93:                        + "(zipcode, city, state) "
94:                        + "VALUES ('02142', 'Cambridge', 'MA')")
95:
96:         #-----
97:
98:         cursor.execute("DROP TABLE IF EXISTS orders")
99:         cursor.execute("CREATE TABLE orders "
100:                        + "(isbn TEXT, custid TEXT, quantity INTEGER)")
101:         cursor.execute("INSERT INTO orders (isbn, custid, "
102:                        + "quantity) "
103:                        + "VALUES ('123', '222', 20)")
104:         cursor.execute("INSERT INTO orders (isbn, custid, "
105:                        + "quantity) "
106:                        + "VALUES ('345', '222', 100)")
107:         cursor.execute("INSERT INTO orders (isbn, custid, "
108:                        + "quantity) "
109:                        + "VALUES ('123', '111', 30)")
110:
111:         #-----
112:
113:     except Exception as ex:
114:         print(ex, file=sys.stderr)
115:         sys.exit(1)
116:
117: #-----
118:
119: if __name__ == '__main__':
120:     main()

```

## SQLite/display.py (Page 1 of 2)

```

1: #!/usr/bin/env python
2:
3: #-----
4: # display.py
5: # Author: Bob Dondero
6: #-----
7:
8: import sys
9: import contextlib
10: import sqlite3
11:
12: #-----
13:
14: DATABASE_URL = 'file:bookstore.sqlite?mode=ro'
15:
16: def main():
17:
18:     if len(sys.argv) != 1:
19:         print('Usage: python ' + sys.argv[0], file=sys.stderr)
20:         sys.exit(1)
21:
22:     try:
23:         with sqlite3.connect(DATABASE_URL, isolation_level=None,
24:                             uri=True) as connection:
25:
26:             with contextlib.closing(connection.cursor()) as cursor:
27:
28:                 print('-----')
29:                 print('books')
30:                 print('-----')
31:                 cursor.execute("SELECT * FROM books")
32:                 table = cursor.fetchall()
33:                 for row in table:
34:                     print(row)
35:
36:                 print('-----')
37:                 print('authors')
38:                 print('-----')
39:                 cursor.execute("SELECT * FROM authors")
40:                 table = cursor.fetchall()
41:                 for row in table:
42:                     print(row)
43:
44:                 print('-----')
45:                 print('customers')
46:                 print('-----')
47:                 cursor.execute("SELECT * FROM customers")
48:                 table = cursor.fetchall()
49:                 for row in table:
50:                     print(row)
51:
52:                 print('-----')
53:                 print('zipcodes')
54:                 print('-----')
55:                 cursor.execute("SELECT * FROM zipcodes")
56:                 table = cursor.fetchall()
57:                 for row in table:
58:                     print(row)
59:
60:                 print('-----')
61:                 print('orders')
62:                 print('-----')
63:                 cursor.execute("SELECT * FROM orders")
64:                 table = cursor.fetchall()
65:                 for row in table:

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66:                     print(row)
67:
68:     except Exception as ex:
69:         print(ex, file=sys.stderr)
70:         sys.exit(1)
71:
72: #-----
73:
74: if __name__ == '__main__':
75:     main()

```

## SQLite/authorsearch.py (Page 1 of 1)

```

1: #!/usr/bin/env python
2:
3: #-----
4: # authorsearch.py
5: # Author: Bob Dondero
6: #-----
7:
8: import sys
9: import contextlib
10: import sqlite3
11:
12: #-----
13:
14: DATABASE_URL = 'file:bookstore.sqlite?mode=ro'
15:
16: def main():
17:
18:     if len(sys.argv) != 2:
19:         print('Usage: python ' + sys.argv[0] + ' author',
20:               file=sys.stderr)
21:         sys.exit(1)
22:
23:     author = sys.argv[1]
24:
25:     try:
26:         with sqlite3.connect(DATABASE_URL, isolation_level=None,
27:                               uri=True) as connection:
28:
29:             with contextlib.closing(connection.cursor()) as cursor:
30:
31:                 stmt_str = "SELECT books.isbn, title, quantity "
32:                 stmt_str += "FROM books, authors "
33:                 stmt_str += "WHERE books.isbn = authors.isbn "
34:                 stmt_str += "AND author = '" + author + "'"
35:                 cursor.execute(stmt_str)
36:
37:                 table = cursor.fetchall()
38:                 for row in table:
39:                     print('ISBN:', row[0])
40:                     print('Title:', row[1])
41:                     print('Quantity:', row[2])
42:                     print()
43:
44:     except Exception as ex:
45:         print(ex, file=sys.stderr)
46:         sys.exit(1)
47:
48: #-----
49:
50: if __name__ == '__main__':
51:     main()

```

## SQLite/order.py (Page 1 of 1)

```

1: #!/usr/bin/env python
2:
3: #-----
4: # order.py
5: # Author: Bob Dondero
6: #-----
7:
8: import sys
9: import contextlib
10: import sqlite3
11:
12: #-----
13:
14: DATABASE_URL = 'file:bookstore.sqlite?mode=rw'
15:
16: def main():
17:
18:     if len(sys.argv) != 3:
19:         print('Usage: python ' + sys.argv[0] + ' isbn custid',
20:               file=sys.stderr)
21:         sys.exit(1)
22:
23:     isbn = sys.argv[1]
24:     custid = sys.argv[2]
25:
26:     try:
27:         with sqlite3.connect(DATABASE_URL, isolation_level=None,
28:                               uri=True) as connection:
29:             with contextlib.closing(connection.cursor()) as cursor:
30:                 stmt_str = "UPDATE orders SET quantity = quantity+1 "
31:                 stmt_str += "WHERE isbn='" + isbn + "' "
32:                 stmt_str += "AND custid= '" + custid + "'"
33:                 cursor.execute(stmt_str)
34:
35:     except Exception as ex:
36:         print(ex, file=sys.stderr)
37:         sys.exit(1)
38:
39: #-----
40:
41: if __name__ == '__main__':
42:     main()

```

## SQLite/authorsearchprep.py (Page 1 of 1)

```

1: #!/usr/bin/env python
2:
3: #-----
4: # authorsearchprep.py
5: # Author: Bob Dondero
6: #-----
7:
8: import sys
9: import contextlib
10: import sqlite3
11:
12: #-----
13:
14: DATABASE_URL = 'file:bookstore.sqlite?mode=ro'
15:
16: def main():
17:
18:     if len(sys.argv) != 2:
19:         print('Usage: python ' + sys.argv[0] + ' author',
20:               file=sys.stderr)
21:         sys.exit(1)
22:
23:     author = sys.argv[1]
24:
25:     try:
26:         with sqlite3.connect(DATABASE_URL, isolation_level=None,
27:                               uri=True) as connection:
28:
29:             with contextlib.closing(connection.cursor()) as cursor:
30:
31:                 # Create a prepared statement and substitute values.
32:                 stmt_str = "SELECT books.isbn, title, quantity "
33:                 stmt_str += "FROM books, authors "
34:                 stmt_str += "WHERE books.isbn = authors.isbn "
35:                 stmt_str += "AND author = ?"
36:                 cursor.execute(stmt_str, [author])
37:
38:                 table = cursor.fetchall()
39:                 for row in table:
40:                     print('ISBN:', row[0])
41:                     print('Title:', row[1])
42:                     print('Quantity:', row[2])
43:                     print()
44:
45:     except Exception as ex:
46:         print(ex, file=sys.stderr)
47:         sys.exit(1)
48:
49: #-----
50:
51: if __name__ == '__main__':
52:     main()

```

## SQLite/orderprep.py (Page 1 of 1)

```

1: #!/usr/bin/env python
2:
3: #-----
4: # orderprep.py
5: # Author: Bob Dondero
6: #-----
7:
8: import sys
9: import contextlib
10: import sqlite3
11:
12: #-----
13:
14: DATABASE_URL = 'file:bookstore.sqlite?mode=rw'
15:
16: def main():
17:
18:     if len(sys.argv) != 3:
19:         print('Usage: python ' + sys.argv[0] + ' isbn custid',
20:               file=sys.stderr)
21:         sys.exit(1)
22:
23:     isbn = sys.argv[1]
24:     custid = sys.argv[2]
25:
26:     try:
27:         with sqlite3.connect(DATABASE_URL, isolation_level=None,
28:                               uri=True) as connection:
29:             with contextlib.closing(connection.cursor()) as cursor:
30:                 stmt_str = "UPDATE orders SET quantity = quantity+1 "
31:                 stmt_str += "WHERE isbn = ? AND custid = ?"
32:                 cursor.execute(stmt_str, [isbn, custid])
33:
34:     except Exception as ex:
35:         print(ex, file=sys.stderr)
36:         sys.exit(1)
37:
38: #-----
39:
40: if __name__ == '__main__':
41:     main()

```