

trees.db

species

code	species
m	maple
p	pine

trees

tree	x	y	species	diameter	priority
A	10	4	m	8	71
B	20	4	m	10	100
C	30	4	p	6	30
D	40	4	p	8	40
E	50	4	m	12	99

```
import sqlite3
c = sqlite3.connect("trees.db")

def query(sql):
    return list(c.execute(sql))
```

What is printed? (if there are no prints, what is returned by the call?)

- 1 `query("select * from species")`
- 2 `query("SELECT x, y FROM trees WHERE tree = 'C'")`
- 3 `query("SELECT tree FROM trees")`
- 4 `query("SELECT species FROM trees ORDER BY priority DESC")`
- 5 `query("SELECT tree, priority FROM trees " +
"ORDER BY priority DESC LIMIT 1")[0]`
- 6 `vals = []`
`for row in query("SELECT x, y from trees"):`
 `vals.append(row[0])`
`print(sum(vals) / len(vals))`
- 7 `x = query("SELECT code FROM species WHERE species='maple' ")[0][0]`
`print(query("SELECT tree FROM trees WHERE species='{x}' ".format(x)))`
- 8 `for r in query("SELECT tree FROM trees ORDER BY diameter, priority"):`
 `print(r[0])`

fire.db

hydrants

```
import sqlite3
import pandas as pd

c = sqlite3.connect("fire.db")

def query(sql):
    return pd.read_sql(sql, c)
```

idx	year	color	style	owner	alt	active
1	1999	red	K-81	private	1179	0
2	2000	red	M-3	public	1065	0
3	2001	green	Pacer	private	1058	1
4	2010	blue	Pacer	public	1081	1
5	2014	blue	Pacer	public	1052	1
6	2018	blue	Pacer	public	1109	1

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- 9 query("SELECT color, year FROM hydrants WHERE color = 'blue' ")
 - 10 df = query("SELECT color, year FROM hydrants")
df[df.color == "blue"]
 - 11 query("SELECT idx FROM hydrants WHERE owner='private' AND active")
 - 12 df = query("SELECT year, style, active FROM hydrants")
df[df.active == 1]["style"]
 - 13 df = query("SELECT * FROM hydrants")
df[(df.alt > 1100) & (df.year > 2000)].idx.item()
 - 14 query("SELECT year FROM hydrants").year.mean()
 - 15 query("SELECT year FROM hydrants WHERE color = 'blue' ").year.mean()
 - 16 df = query("SELECT * FROM hydrants ORDER BY year DESC LIMIT 2")
df.year.mean()