MySQL from Python

- Install the MySQL driver for Python*

  python -m pip install
  mysql-connector-python

- Then test it with one line of code:

```
tmp on ᚠ main [x+?] via 💎 v3.3.5
→ python -q
 >>> import mysql.connector
 >>>

tmp on ᚠ main [x+?] via 💎 v3.3.5 took 7s
→ export PS1="$ "
```

*** Thayer Computing won't let you do this yourself. I've asked them to do it for us,**

- Then you connect with this:

```
import mysql.connector

. . .

mydb = mysql.connector.connect(

  host="localhost",

  user="yourusername",

  password="yourpassword"

)
```

Connecting to MySQL

1. When you connect to the database, you receive a “handle” *(like a file handle in C).*
2. Use that handle to initiate the connection and get back a cursor.
3. Use that cursor to execute MySQL commands.

```
import mysql.connector

mydb = mysql.connector.connect(
  host="localhost",
  user="d29265d",
  password="[redacted]"
)

mycursor = mydb.cursor()

mycursor.execute("SHOW DATABASES")

for x in mycursor:
  print(x)
```

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Password protection

- Use our `dbconfig.py` and `dbconfig.ini` to provide your credentials and (optional) initial database (USE) without putting them in the python code.
- Be sure to

```
chmod 600 dbconfig.ini
```

```
→ cat dbconfig.ini
[mysql]
host = cosc061-ad12-db.c.dartmouth.edu
database = test
user = ccpalmer
password = [redacted]
```

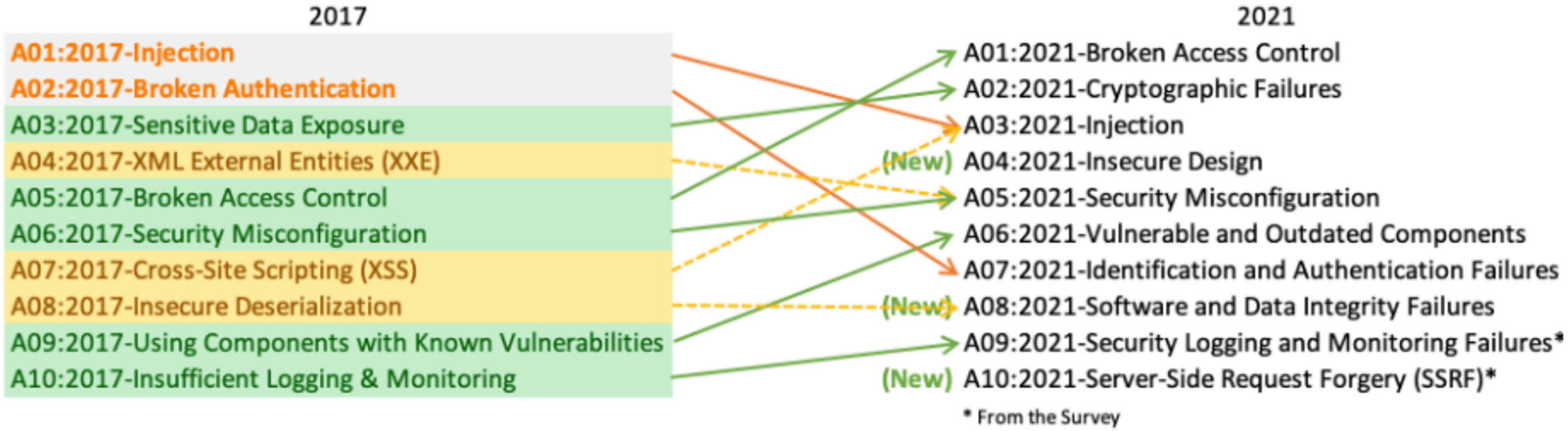
Password protection

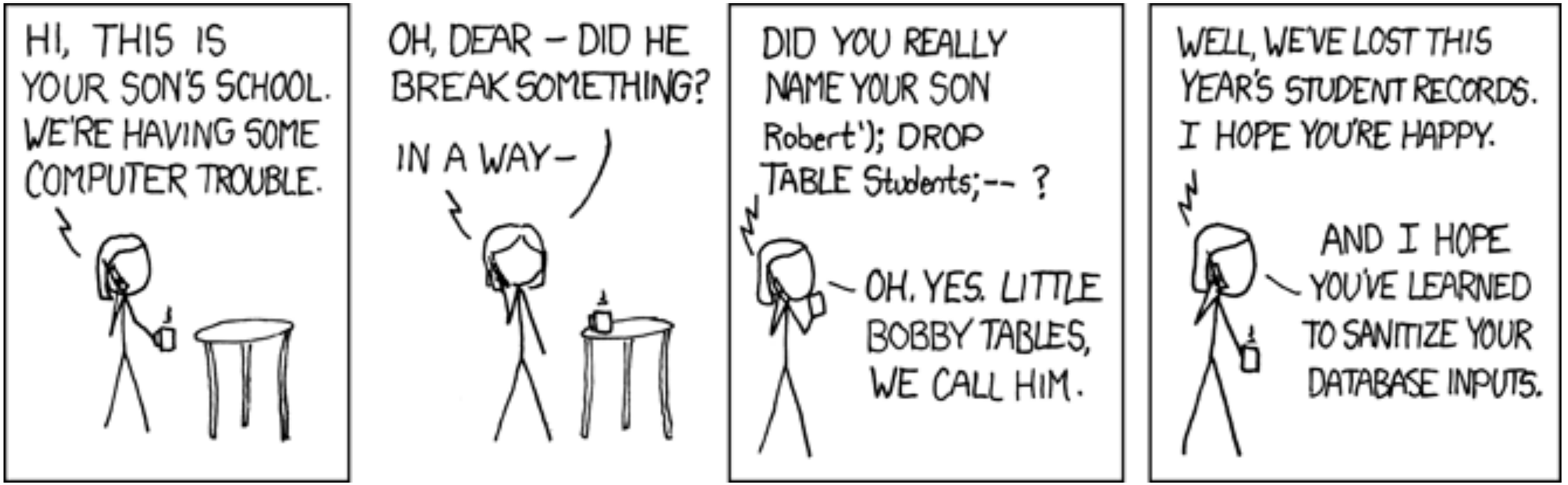
```
→ cat dbconfig.py
from configparser import ConfigParser

def read_db_config(filename='dbconfig.ini', section='mysql'):
    """ Read database configuration file and return a dictionary object
    Based on examples from [MySQL with Python tutorial ](http://www.mysqltutorial.org/python-mysql)
    :param filename: name of the configuration file
    :param section: section of database configuration
    :return: a dictionary of database parameters
    """

    # create parser and read ini configuration file, default 'dbconfig.ini'
    parser = ConfigParser()
    parser.read(filename)

    # get section, default to mysql
    dbconfig = {}
    if parser.has_section(section):
        items = parser.items(section)
        for item in items:
            dbconfig[item[0]] = item[1]
    else:
        raise Exception('{0} not found in the {1} file'.format(section, filename))

    return dbconfig
```

mysql-demo.py

Top 10 Web Application Security Risks

There are three new categories, four categories with naming and scoping changes, and some consolidation in the Top 10 for 2021.





https://imgs.xkcd.com/comics/exploits_of_a_mom.png

Good luck speed cameras.