

# Keep thinking: Section 12

## *The Complete Python/PostgreSQL Developer Course*

Although quizzes are great to test your knowledge and do some quick revision, in some cases more extended questions and thought is necessary.

The questions in this document are solely for you to think about and try to answer. Use the internet and the course to try to answer them.

Once you've answered them, create a discussion in the Course Q&A so we can have a chat about what you've thought about them.

### **Question: why would you use Exceptions instead of returning Strings or integers?**

This is a question I've got before myself—what is the point of raising Exceptions and then catching them, when we can instead return Strings or error codes like -1, -2, etc.

For example, an error code -1 could mean there was an unknown error, error code -2 that there was a value error, and so on.

In Python it is very common for methods to raise Exceptions (sometimes multiple Exceptions per method!), in the following fashion:

```
1  @staticmethod
2  def login(email, password):
3      user = User._check_login(email, password)
4      if user:
5          if user_is_confirmed(user):
6              return user
7          raise UserNotConfirmedException("The e-mail for this
users has not been confirmed.")
8      raise IncorrectPasswordException("Your password or e-mail
were incorrect.")
```

Assume that both `UserNotConfirmedException` and `IncorrectPasswordException` are both subclasses of `UserError`.

Then, when using that method from elsewhere in your program, you could do something like this:

```
1  try:
2      user = User.login(email=user_email,
3                          password=user_password)
4      session['user_id'] = user.id
5      print("User logged in and e-mail in session.")
6  except UserError as e:
7      print("User error with message '{}'.format(e.message))
8      return redirect(url_for('.login', message=e.message))
9  print("User logged in.")
10 return redirect(url_for('.profile'))
```

How would you rewrite both blocks of code without using exceptions (instead, returning Strings or integers as error codes)?

Does that make the code easier to read and understand?

### **Question: regarding the last block of code, why do you think lines 9 and 10 are not in the try-except block?**

Give this question a bit of thought, because it encompasses some programming principles that are important to follow.

Think about the different scenarios that the code could go through. What lines could there be errors on? Remember we wrote the `User.login` function, but not the `redirect` or `url_for` functions, for example. Should they be inside the try-except block that checks for an Exception we also wrote?

The answers to these questions are important, but more so is the thought that you are putting into them! Start a topic in the course Q&A to keep the discussion going!

Your instructor

— Jose