Part 1: Introduction

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Introduction

Here we are going to cover the background to why we use databases, and set the stage for later, when we will start to develop a Python database application.

You will probably wish to consult the files in your course repository for lesson 3, in activity. These are the files we refer to in the videos.

Lesson 3 Introduction

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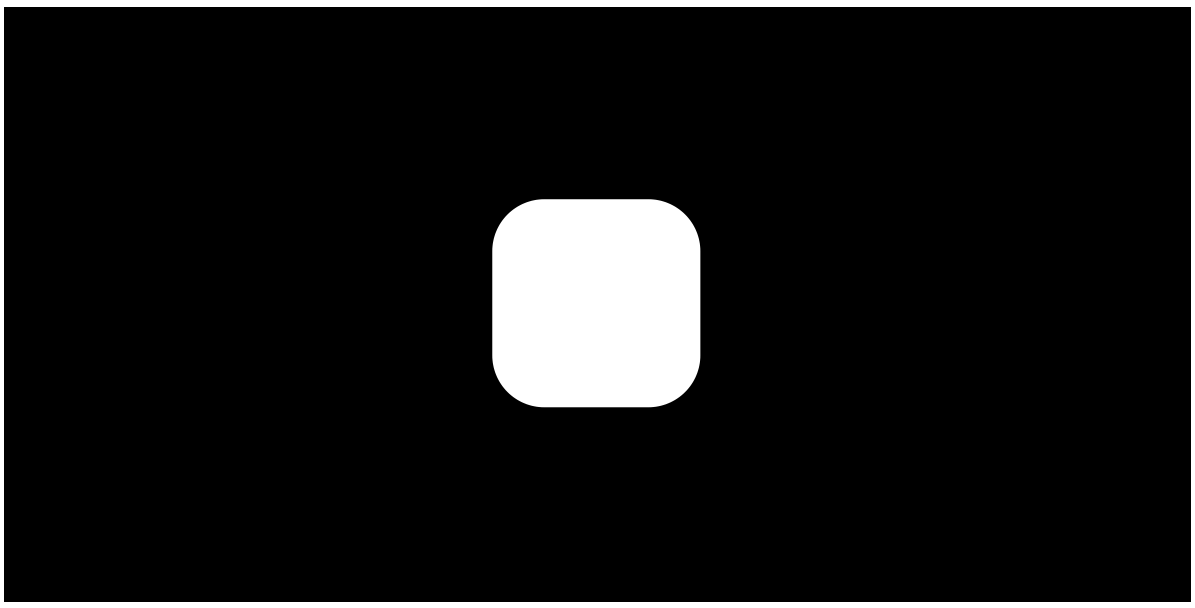

In this lesson, we're going to learn about Python relational databases.

We're going to be using a database that sits on the desktop SQLite.

It's a very popular database, particularly in Python circles,

and it's used by lots of large organizations.

To help us use SQLite more easily from Python

Installations

Windows only

On Windows, unlike Linux and Mac, sqlite is not installed with Python. To install on Windows:

1. Go to https://www.sqlite.org/download.html
2. Download https://www.sqlite.org/2020/sqlite-tools-win32-x86-3320100.zip
3. Unzip the files in to a directory called c:\sqlite3
4. You may wish to set your path to include c:\sqlite3

All Operating Systems (including Windows)

Now, the process is the same for Linux, Mac and Windows. In your project's virtual environment enter the following command (note that for recent versions of Python this should already be installed):

```
pip install pysqlite3
```

Now, type the following command (note for Windows: if you didn't set your path to include c:\sqlite3 you will have to enter c:\sqlite3\sqlite3):

```
sqlite3
```

And you should see the sqlite prompt. Type the quit command to return to the command prompt:

```
.quit
```

Storing Data

Relational Databases with Python

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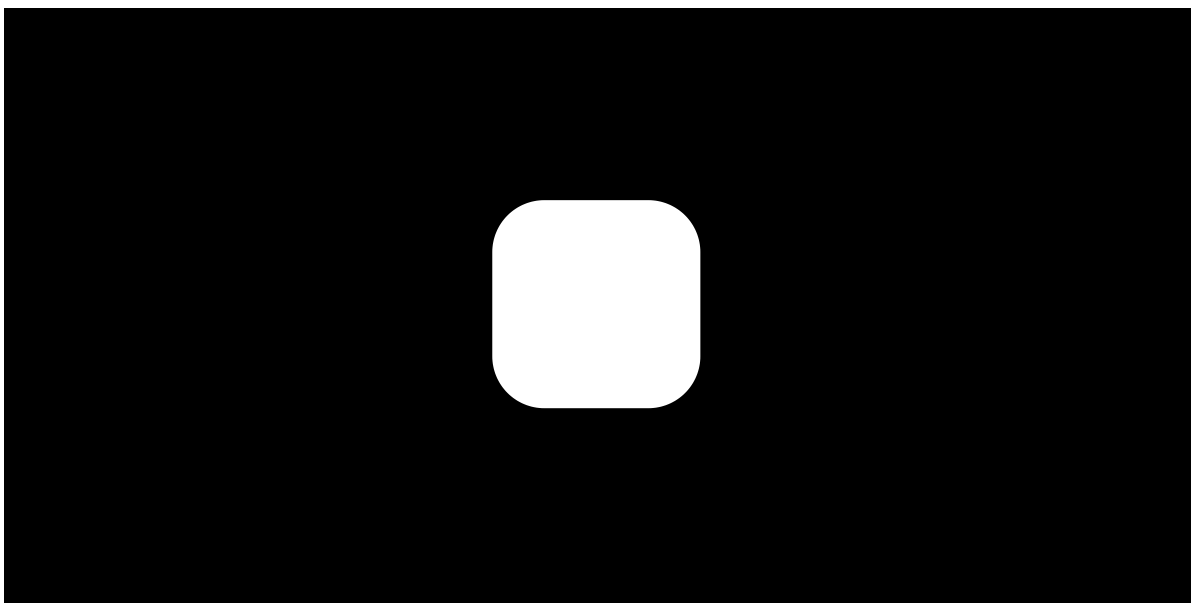

[MUSIC PLAYING]

In this lesson and the next, we're going to look at how we define,

store, and retrieve data.

We'll start by examining the most common form of database,

and move on in the next lesson to learn about other forms of data storage--

some very simple, and some quite sophisticated

Video

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Transcripts

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People file:

```
"""
write a csv file
data is "anonymous" (no schema)

Creates a file that looks like this:

John,502-77-3056,2/27/1985,117.45

"""

import csv

peopledata = ['John', '502-77-3056', '2/27/1985', 117.45]

with open('simple_data_write.csv', 'w') as people:
    peoplewriter = csv.writer(people)
    peoplewriter.writerow(peopledata)
```

Schema file:

```
'Person Name','SSN','BirthDate','Account Balance'
'John','502-77-3056','2/27/1985','117.45'
```

We have covered the basis of data definition, and why it is important. We now know what a schema is and why it is important. Now we can start to write a Python program that uses a database.