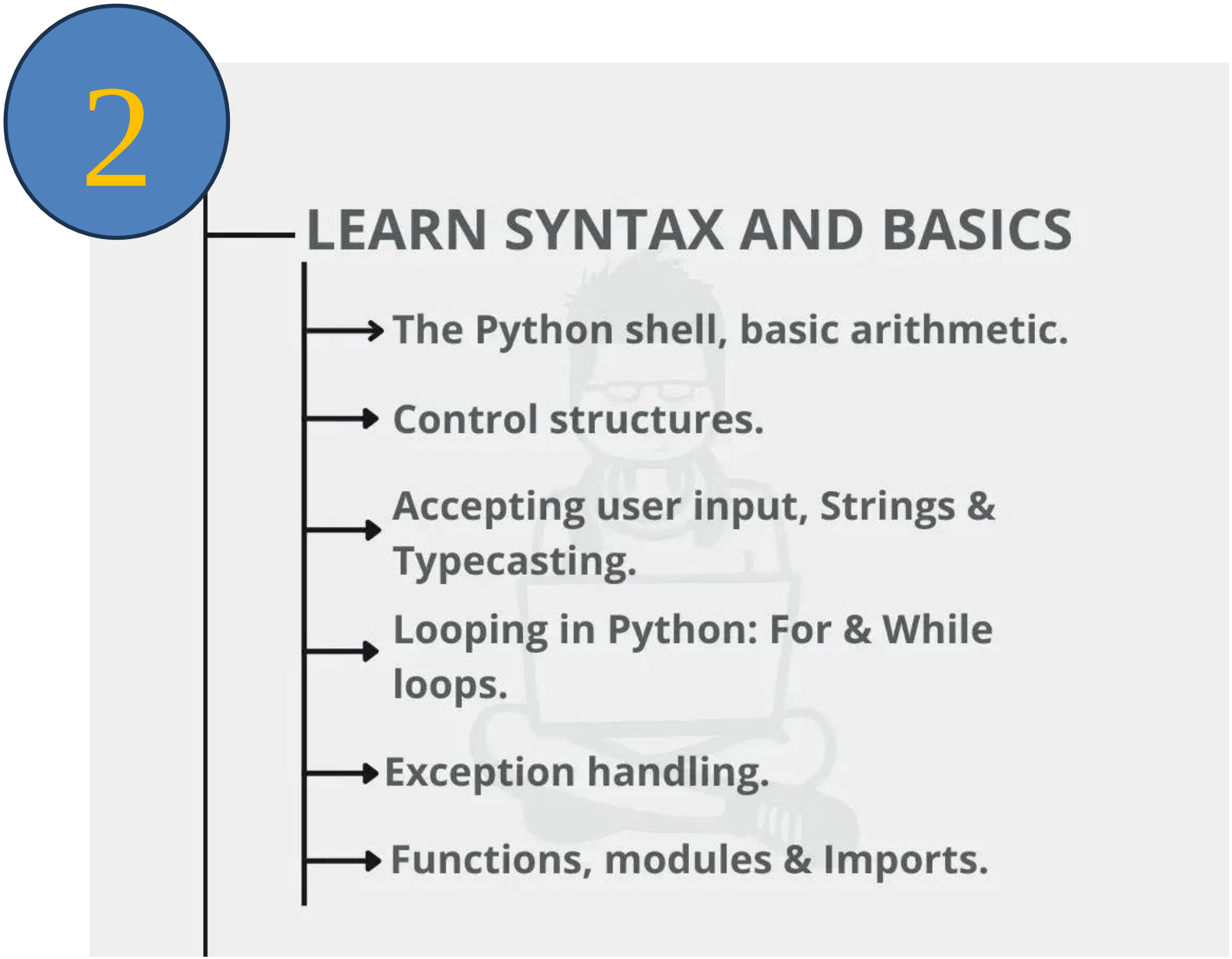
Python Roadmap

1

Why Python?
(Decide Your End Goal)

Python is a multi-purpose language, you can use Python to build **web apps**, **mobile apps**, and **desktop apps** as well as **software testing**, **data analysis** and **visualization**, **artificial intelligence**, and **Machine Learning** can also be done by using python.

Now let's get straight into the **Roadmap** (**The Game Plan**).


2
LEARN SYNTAX AND BASICS
The Python shell, basic arithmetic.
Control structures.
Accepting user input, Strings & Typecasting.
Looping in Python: For & While loops.
Exception handling.
Functions, modules & Imports.

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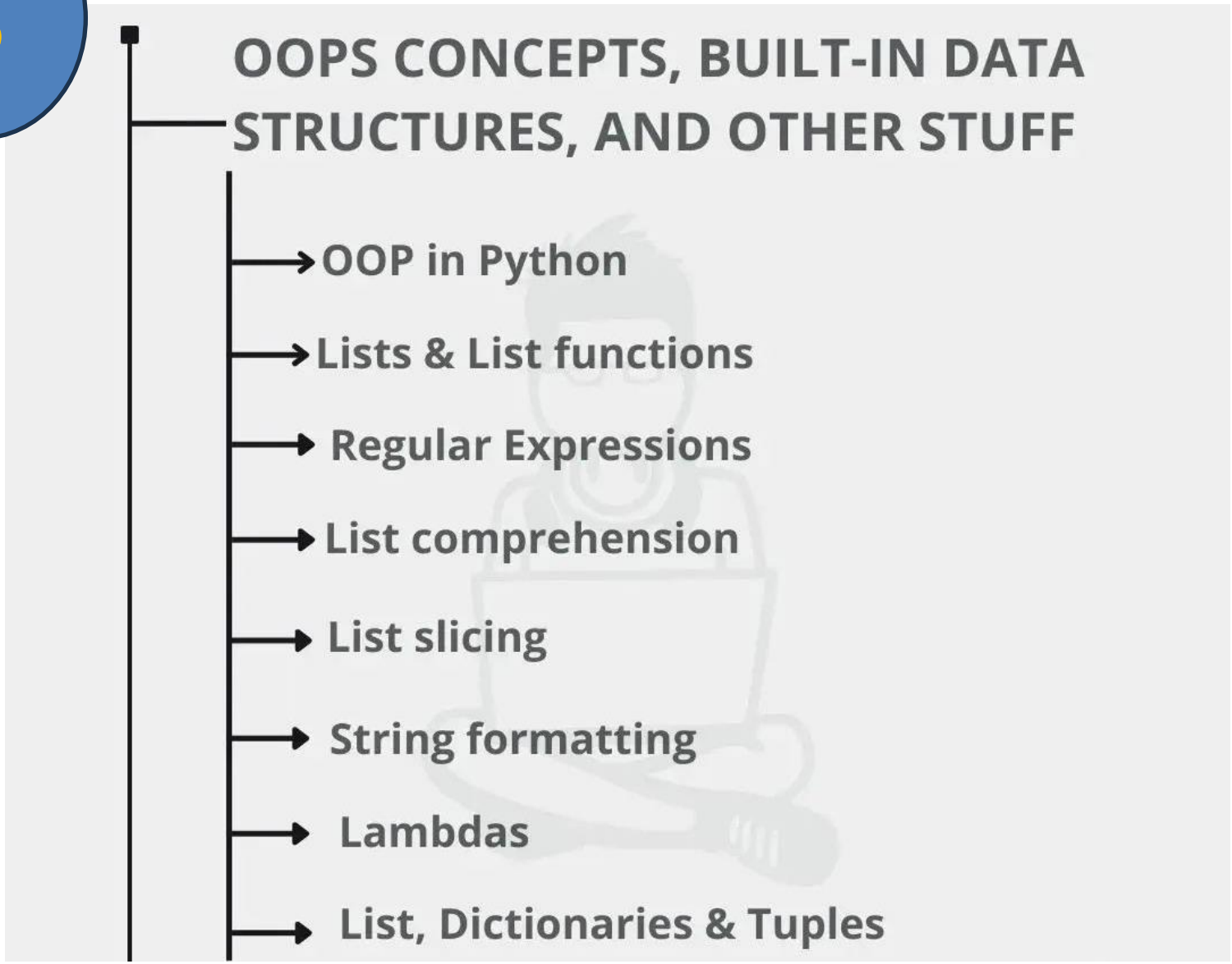
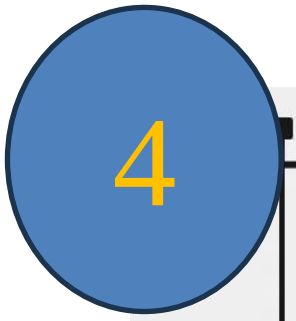

OOPS CONCEPTS, BUILT-IN DATA STRUCTURES, AND OTHER STUFF
OOP in Python
Lists & List functions
Regular Expressions
List comprehension
List slicing
String formatting
Lambdas
List, Dictionaries & Tuples



FRAMEWORKS FOR WEB DEV

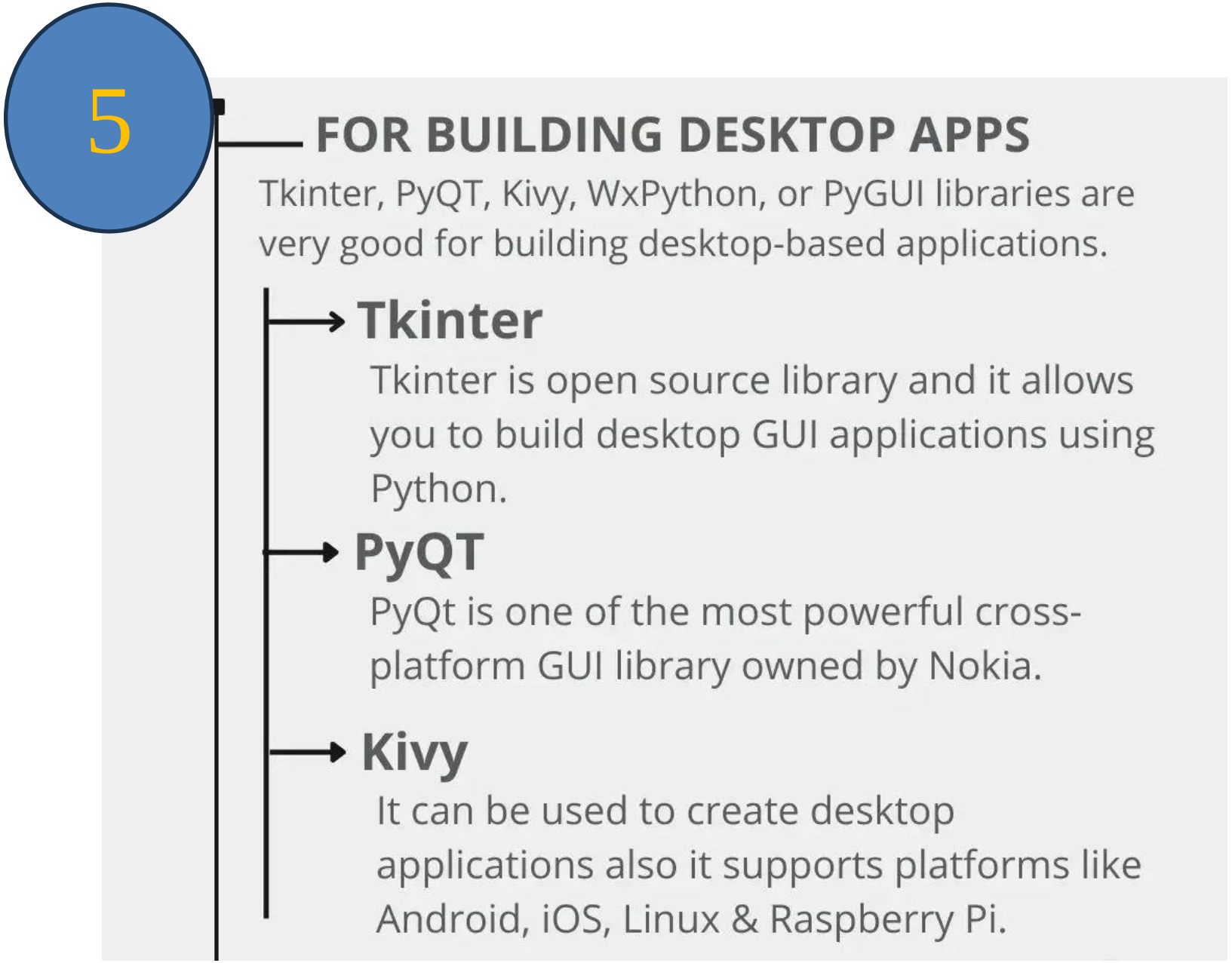
We have so many frameworks for web dev in Python like Django, Flask, Bottle, Tornado, & Pyramid.

Django

A high-level web framework mostly used in startups and enterprises for web development, If you are a complete beginner then it will take some time to learn **Django.**

Flask

Flask is one of the easiest microframeworks to learn in Python. If you wish to develop a simple and lightweight web application then Flask is suitable for that.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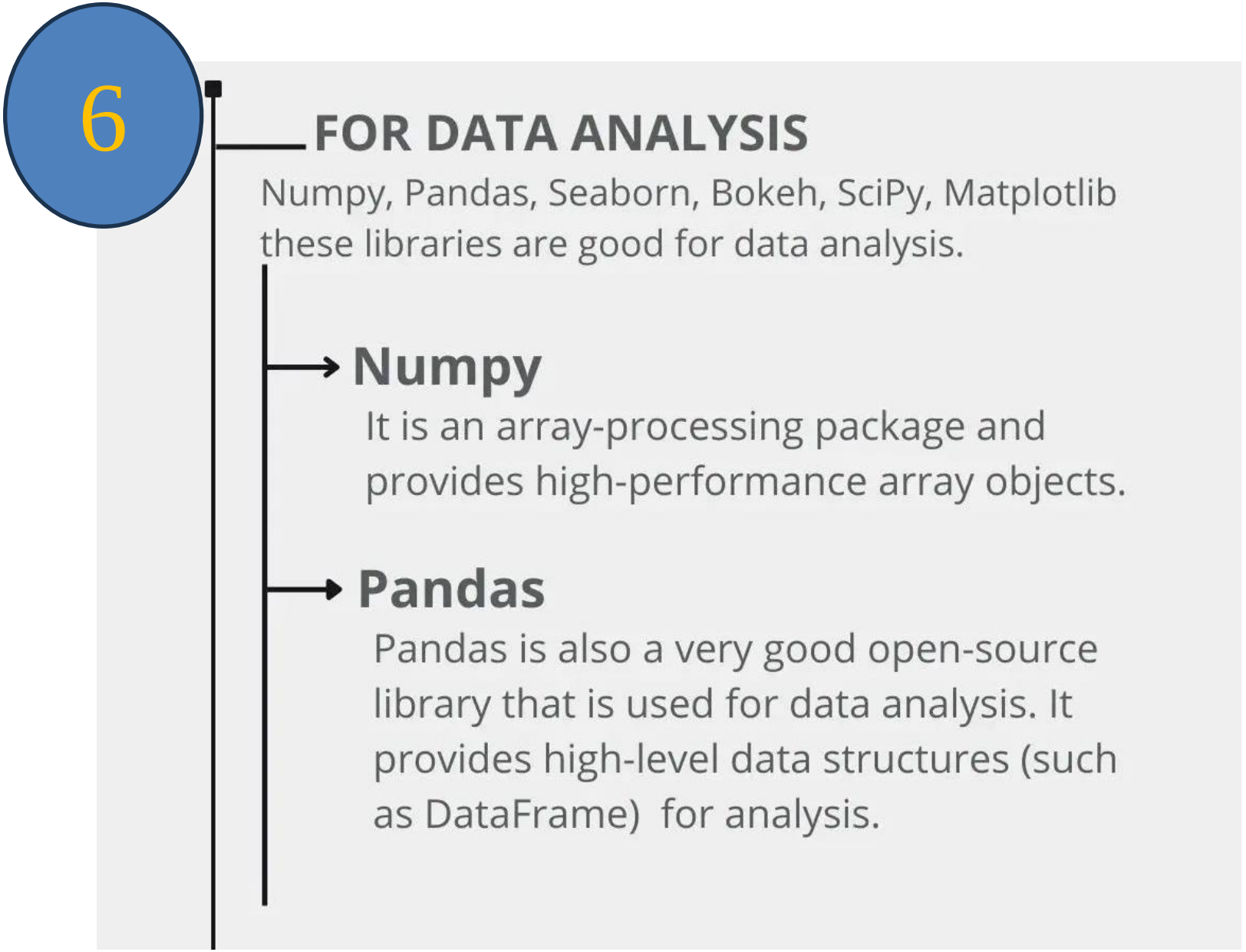
FOR BUILDING DESKTOP APPS
Tkinter, PyQT, Kivy, WxPython, or PyGUI libraries are very good for building desktop-based applications.
Tkinter
Tkinter is open source library and it allows you to build desktop GUI applications using Python.
PyQT
PyQt is one of the most powerful cross-platform GUI library owned by Nokia.
Kivy
It can be used to create desktop applications also it supports platforms like Android, iOS, Linux & Raspberry Pi.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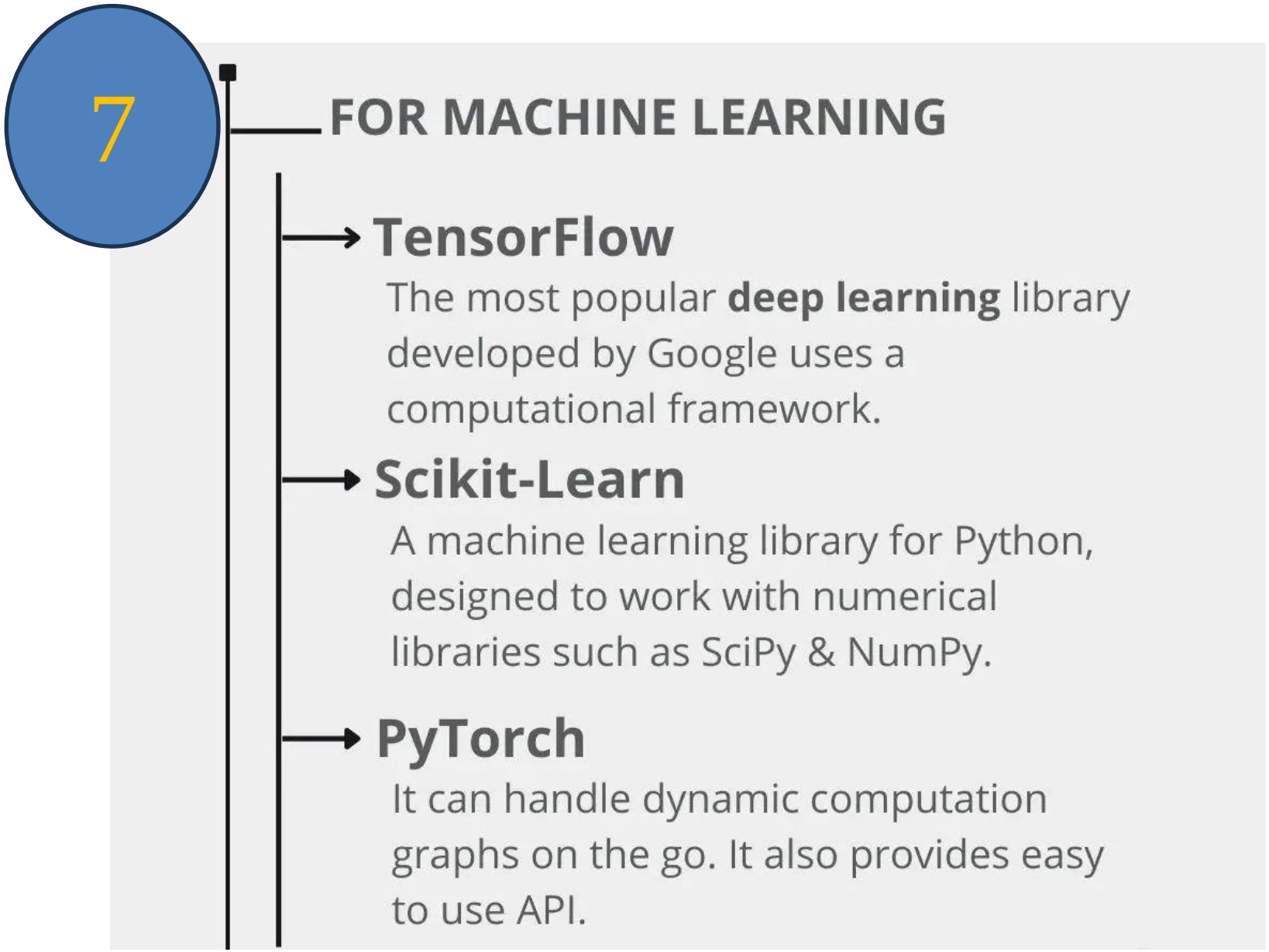
FOR DATA ANALYSIS
Numpy, Pandas, Seaborn, Bokeh, SciPy, Matplotlib these libraries are good for data analysis.
Numpy
It is an array-processing package and provides high-performance array objects.
Pandas
Pandas is also a very good open-source library that is used for data analysis. It provides high-level data structures (such as DataFrame) for analysis.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FOR MACHINE LEARNING
TensorFlow
The most popular deep learning library developed by Google uses a computational framework.
Scikit-Learn
A machine learning library for Python, designed to work with numerical libraries such as SciPy & NumPy.
PyTorch
It can handle dynamic computation graphs on the go. It also provides easy to use API.

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BONUS TIPS

- Have patience.
- Stick with your goal and language.
- Frustration and pain is a part of the learning process, embrace it instead of avoiding it.
- Be consistent
- Build Projects