Module 2:
Your first browser robot

Building a browser robot (with
Robocorp developer tools)

Robocorp

Agenda

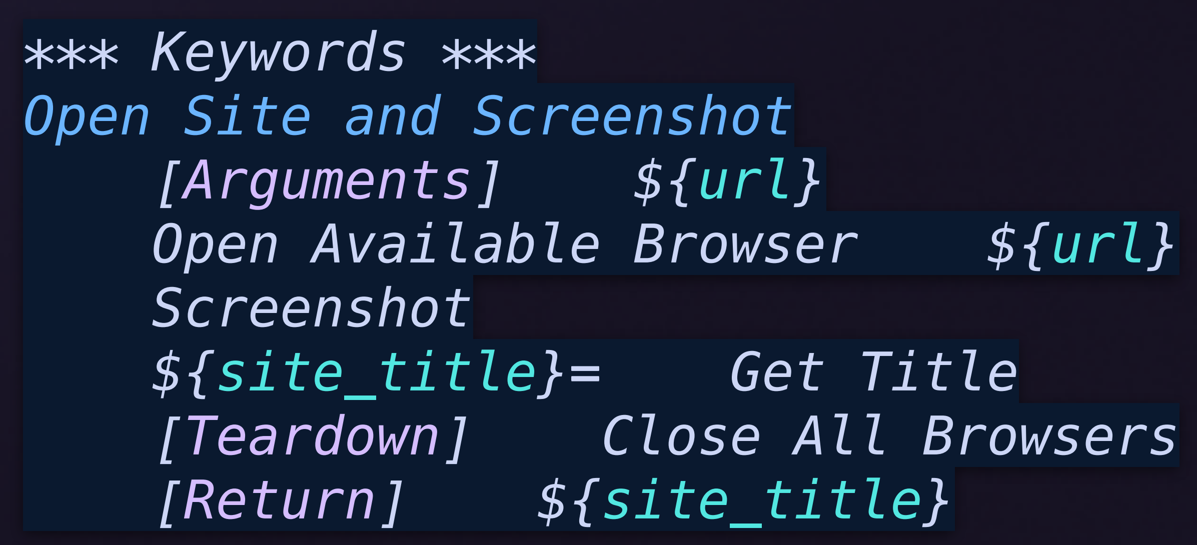
- What is Robot Framework? Python or RFW?
- Libraries and keywords:
  - https://robocorp.com/docs/libraries
  - https://rpaframework.org
  - https://github.com/robocorp/rpaframework
- Basics of Robot Framework syntax
- Building the browser robot (1h)
  - Selenium or Playwright
- Homework: Finalizing the first browser robot
- Last 30 minutes: Q&A, support

What is Robot Framework? Python or RFW?

Choice needs to be made when creating Robot. Do I want to use RFW or Python syntax for this Robot?

Robot Framework

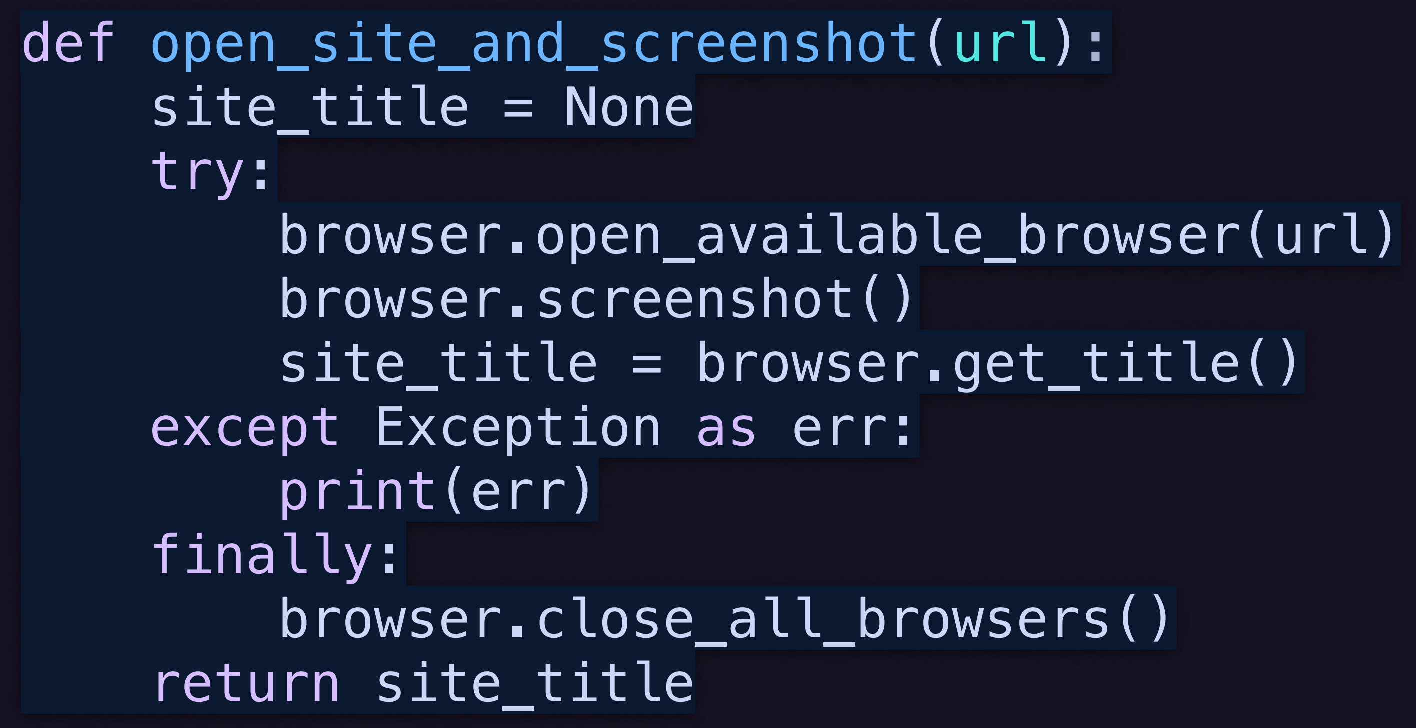
- Benefits of framework (logging, exception handling...)
- Extendable keyword-driven syntax
- Learning curve to learn the RFW syntax
- Easy integration of Python code



```
*** Keywords ***
Open Site and Screenshot
    [Arguments]    ${url}
    Open Available Browser    ${url}
    Screenshot
    ${site_title}=    Get Title
    [Teardown]    Close All Browsers
    [Return]    ${site_title}
```

Python

- For advanced developers
- Logging needs to be integrated
- Python syntax has much possibilities compared to RFW which lacks for example. *while* loop

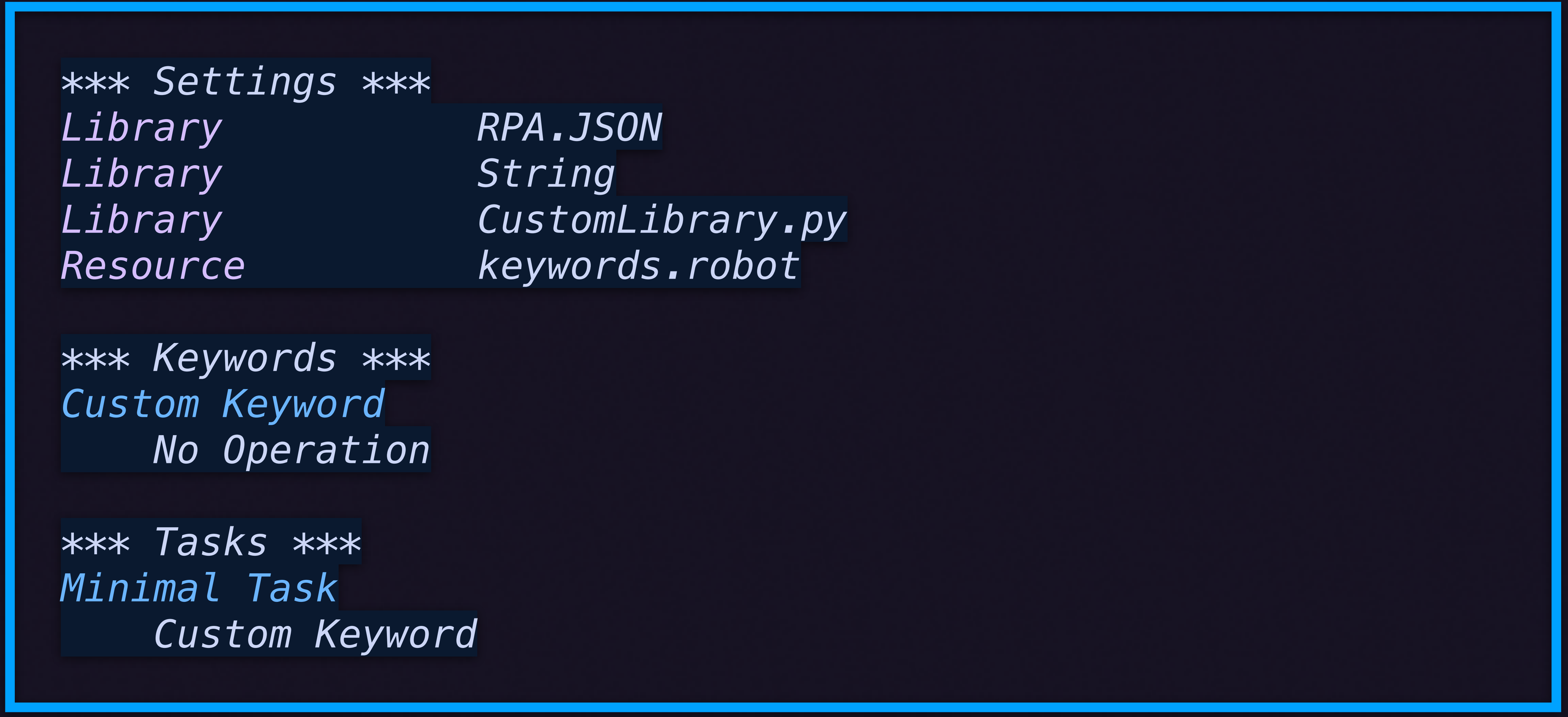


```
def open_site_and_screenshot(url):
    site_title = None
    try:
        browser.open_available_browser(url)
        browser.screenshot()
        site_title = browser.get_title()
    except Exception as err:
        print(err)
    finally:
        browser.close_all_browsers()
    return site_title
```

Libraries and keywords

- Libraries included in default Robot template
  - Robot Framework standard libraries
  - **rpaframework** collection of libraries
- Packages can be added through ***conda.yaml***
  - A package can contain multiple libraries
  - From *conda-forge*, for example. *opencv*
  - From *PyPI*, for example. *BeautifulSoup4*
- Custom libraries can be created into Robot structure (as defined in ***robot.yaml***)

- Keywords are provided by libraries
- In RFW syntax keywords can be defined in the *tasks.robot* or separate *.robot* files included as resource files



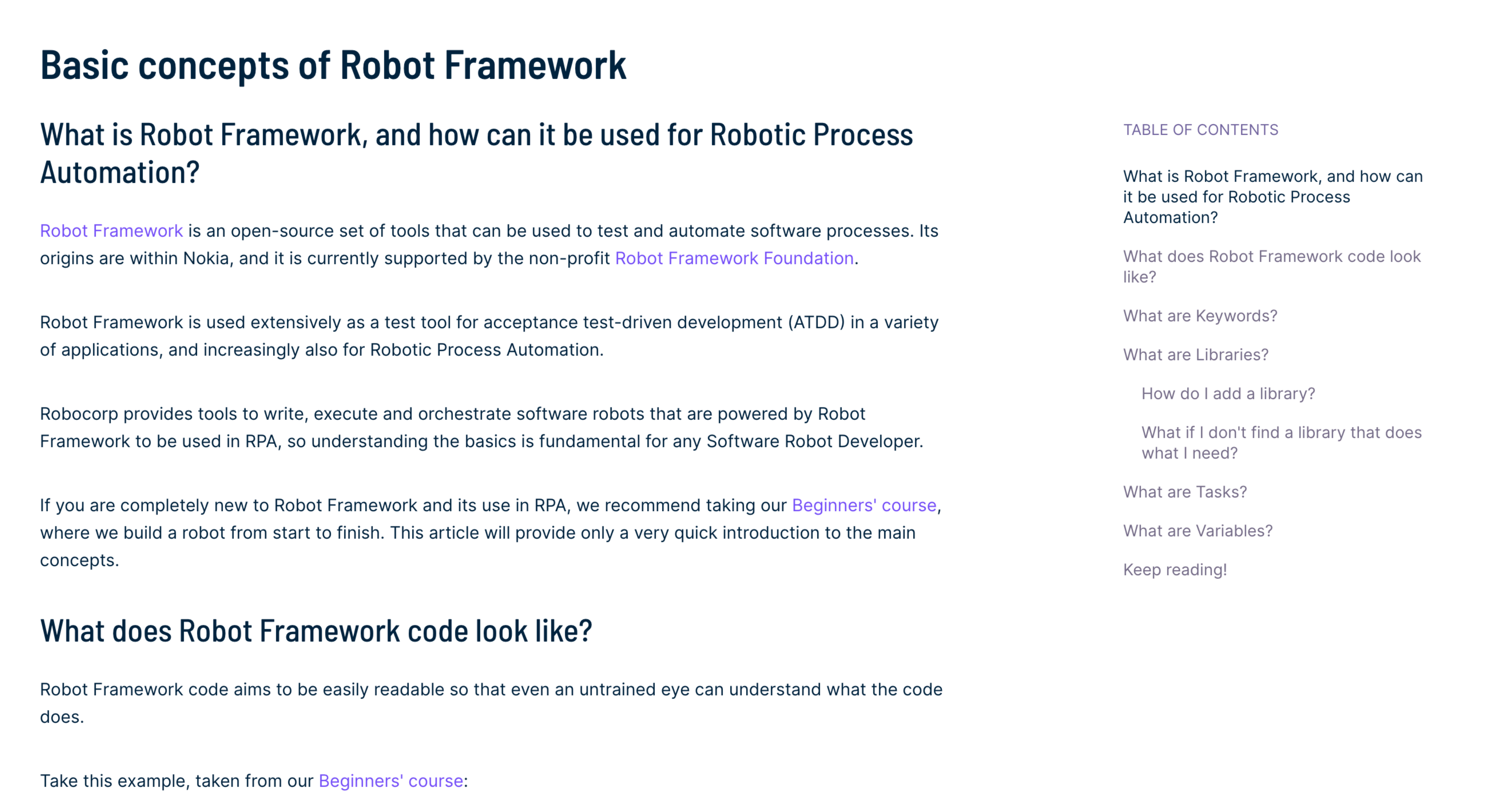
```
*** Settings ***
Library           RPA.JSON
Library           String
Library           CustomLibrary.py
Resource          keywords.robot

*** Keywords ***
Custom Keyword
    No Operation

*** Tasks ***
Minimal Task
    Custom Keyword
```

Basics of Robot Framework syntax

https://robocorp.com/docs/languages-and-frameworks/robot-framework/overview



Basic concepts of Robot Framework

What is Robot Framework, and how can it be used for Robotic Process Automation?

Robot Framework is an open-source set of tools that can be used to test and automate software processes. Its origins are within Nokia, and it is currently supported by the non-profit Robot Framework Foundation.

Robot Framework is used extensively as a test tool for acceptance test-driven development (ATDD) in a variety of applications, and increasingly also for Robotic Process Automation.

Robocorp provides tools to write, execute and orchestrate software robots that are powered by Robot Framework to be used in RPA, so understanding the basics is fundamental for any Software Robot Developer.

If you are completely new to Robot Framework and its use in RPA, we recommend taking our Beginners' course, where we build a robot from start to finish. This article will provide only a very quick introduction to the main concepts.

What does Robot Framework code look like?

Robot Framework code aims to be easily readable so that even an untrained eye can understand what the code does.

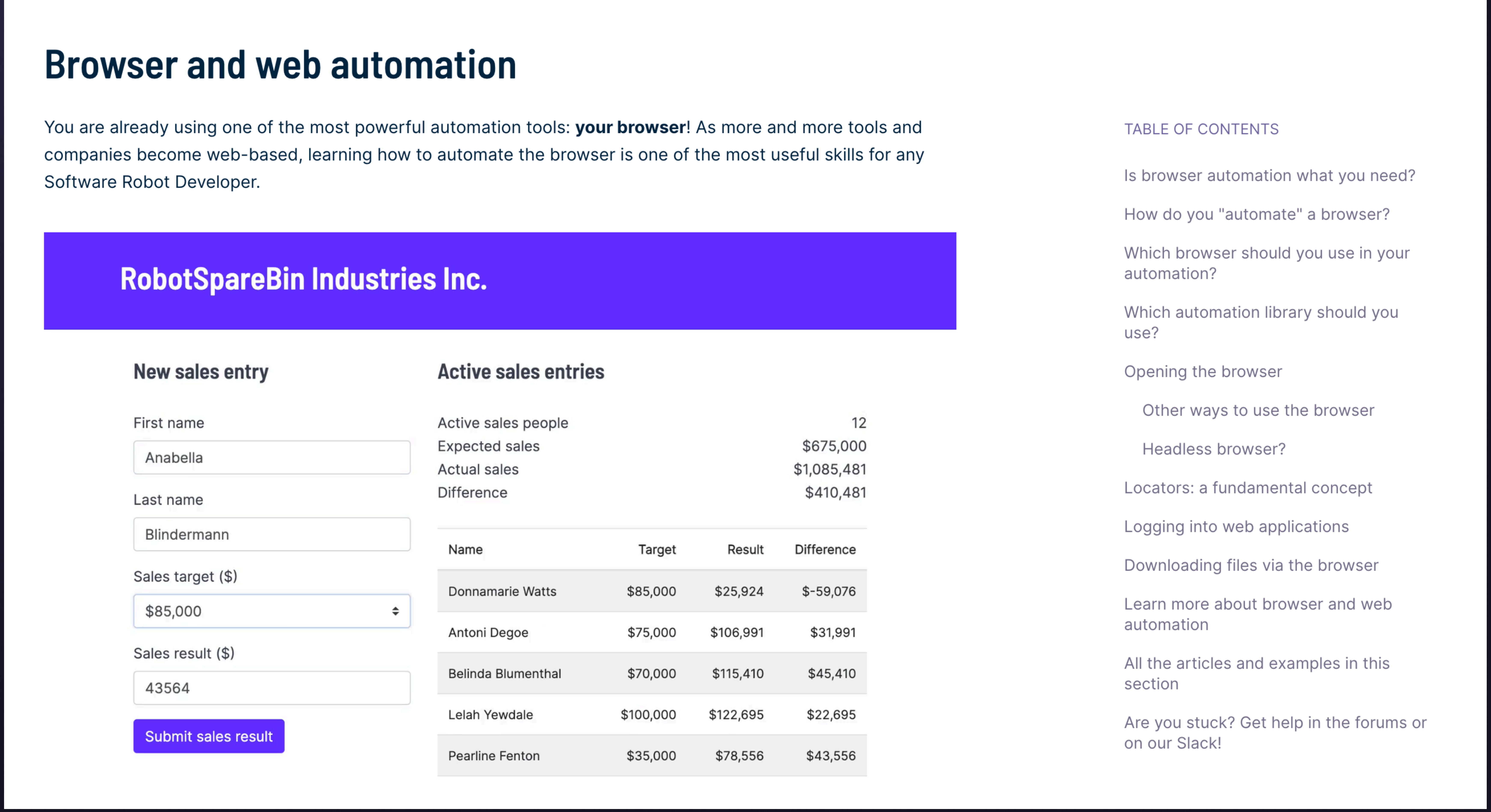
Take this example, taken from our Beginners' course:

TABLE OF CONTENTS

Robocorp

Building the browser robot (1h)

https://robocorp.com/docs/development-guide/browser



Browser and web automation

You are already using one of the most powerful automation tools: **your browser**! As more and more tools and companies become web-based, learning how to automate the browser is one of the most useful skills for any Software Robot Developer.

RobotSpareBin Industries Inc.

New sales entry

First name	Anabella
Last name	Blindermann
Sales target ($)	$85,000
Sales result ($)	43564

Submit sales result

Active sales entries

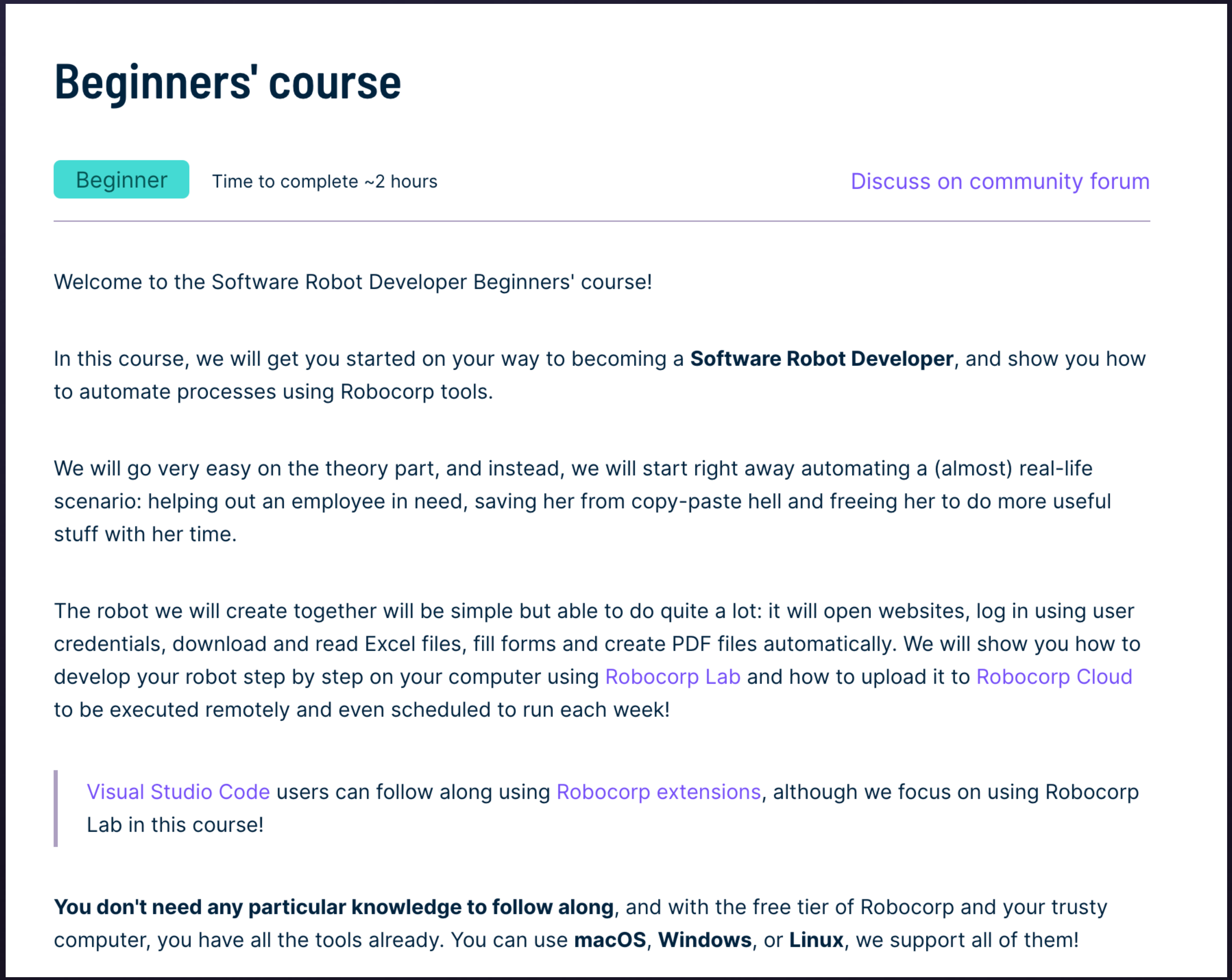
Active sales people	12
Expected sales	$675,000
Actual sales	$1,085,481
Difference	$410,481

Name	Target	Result	Difference
Donnamarie Watts	$85,000	$25,924	$-59,076
Antoni Degoe	$75,000	$106,991	$31,991
Belinda Blumenthal	$70,000	$115,410	$45,410
Lelah Yewdale	$100,000	$122,695	$22,695
Pearline Fenton	$35,000	$78,556	$43,556

TABLE OF CONTENTS

Homework: Finalizing the first browser robot

https://robocorp.com/docs/courses/beginners-course



Beginners' course

Beginner Time to complete ~2 hours Discuss on community forum

Welcome to the Software Robot Developer Beginners' course!

In this course, we will get you started on your way to becoming a **Software Robot Developer**, and show you how to automate processes using Robocorp tools.

We will go very easy on the theory part, and instead, we will start right away automating a (almost) real-life scenario: helping out an employee in need, saving her from copy-paste hell and freeing her to do more useful stuff with her time.

The robot we will create together will be simple but able to do quite a lot: it will open websites, log in using user credentials, download and read Excel files, fill forms and create PDF files automatically. We will show you how to develop your robot step by step on your computer using Robocorp Lab and how to upload it to Robocorp Cloud to be executed remotely and even scheduled to run each week!

> Visual Studio Code users can follow along using Robocorp extensions, although we focus on using Robocorp Lab in this course!

You don't need any particular knowledge to follow along, and with the free tier of Robocorp and your trusty computer, you have all the tools already. You can use **macOS**, **Windows**, or **Linux**, we support all of them!

Robocorp

Q&A, support

Docs: https://robocorp.com/docs/
Portal: https://robocorp.com/portal/

Forum: https://forum.robocorp.com
Developers Slack

Robocorp