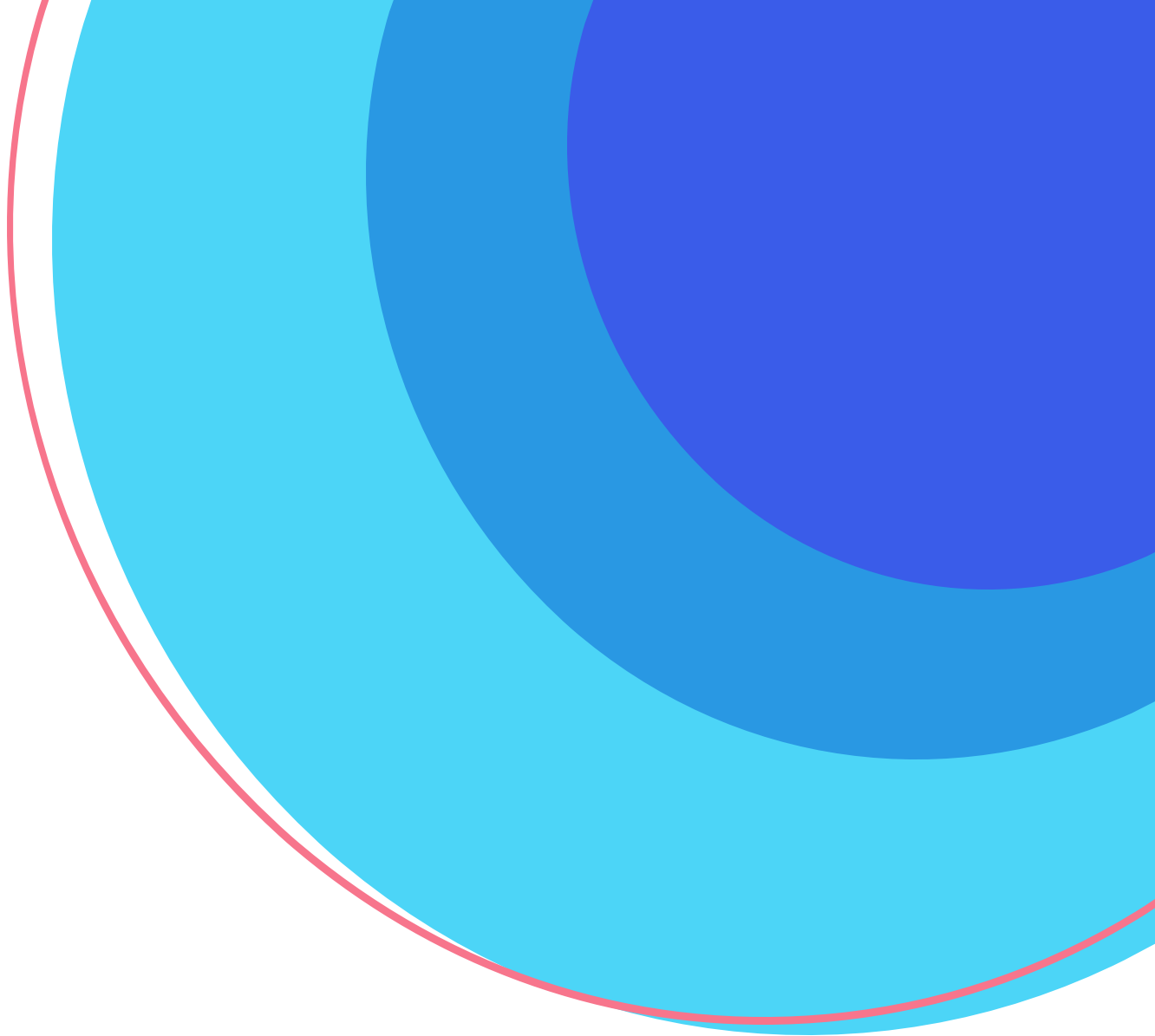




Learning by Doing: Empowering Professional Growth through Collaborative Python Automation

Conference: PHUSE US Connect 2025

Vanessa Chavez, Labcorp, Madison, WI, USA

Azadeh Gilanpour, Labcorp, Madison, WI, USA

Fiona Kine, Labcorp, Madison, WI, USA



Agenda

- Background
- Methods
 - Project Structure
 - Timeline of Events
- Leadership Development
- Professional Development
- Phase II - The Next Steps Are Coming!
- Conclusions
- Acknowledgments
- Q/A



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Background

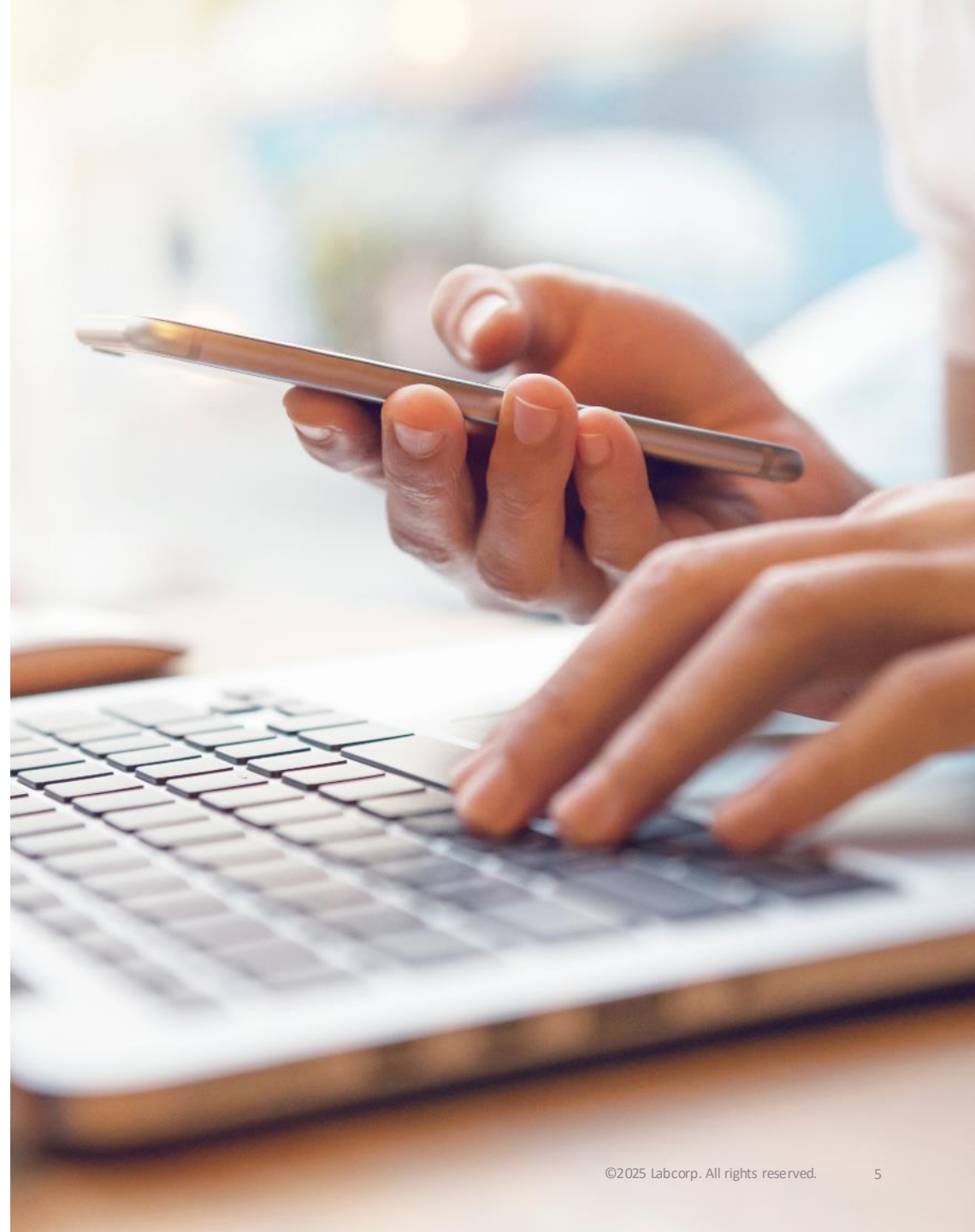
**Importance of
programming
skills for SEND
experts**

**Enhancing
professional
development**

**Evolution of
the nonclinical
industry with
SEND for data
science**

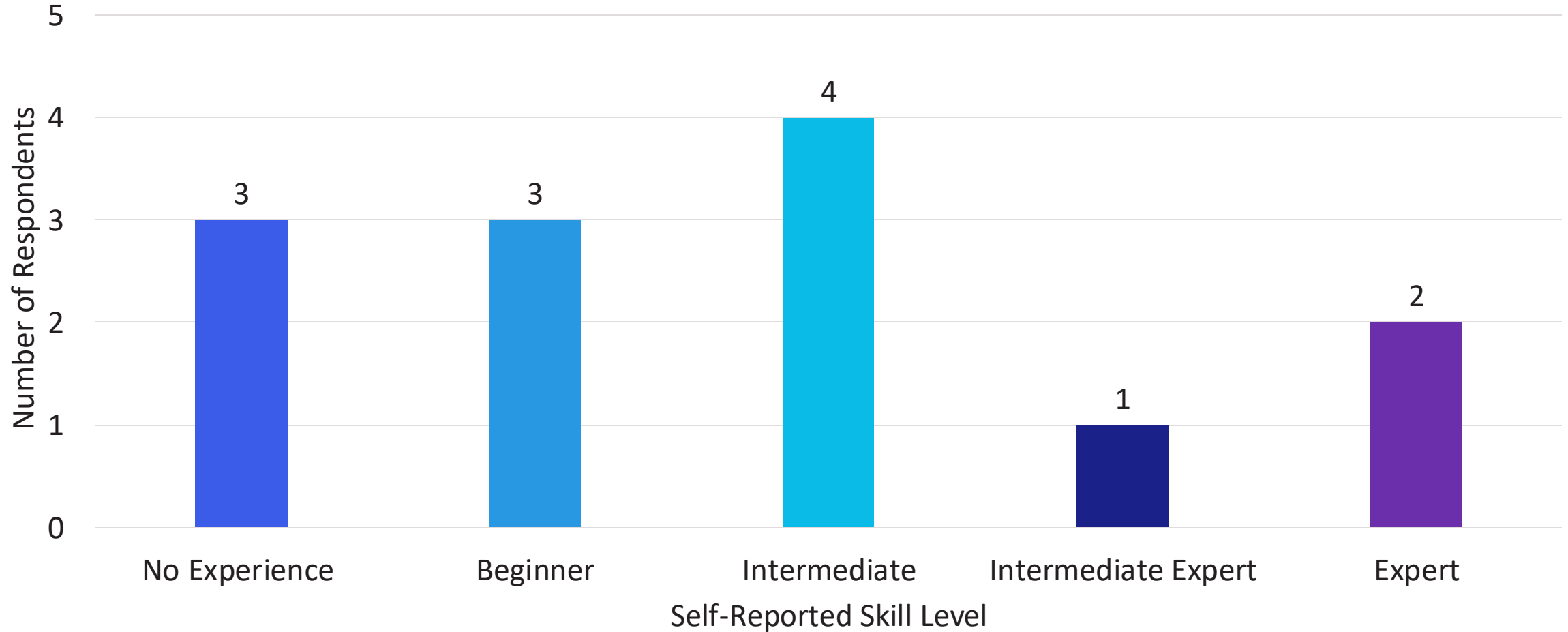
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Project structure – First skills assessment survey

What is your current level of programming experience (in any language)?, n=13



Project structure – Python lesson setup

1

Group Lesson

- LinkedIn Learning Video Lessons
- SharePad.io

2

Supplemental Activity

- Notes
- Work-Relevant Activities
- Breakout Sessions

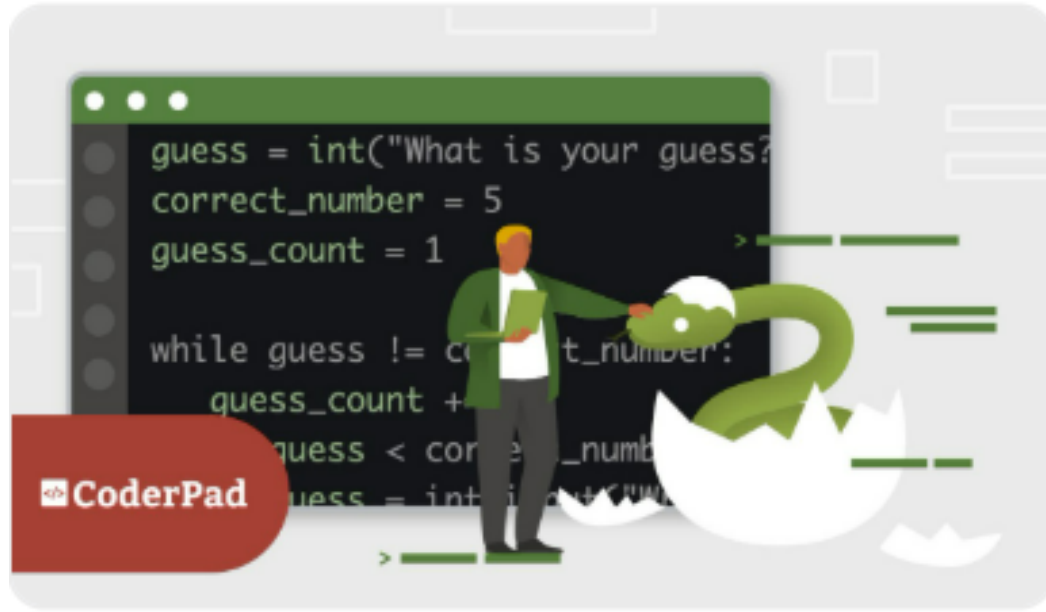
Project structure – Python lesson setup

Weekly Agenda

LinkedIn Course Video	Video Runtime	Date	Agenda	Supplemental Activity
N/A	N/A	Oct-10-2024	Week 1: Installing Python, Jupyter Notebook, LinkedIn Course, Review Weekly Agenda, Intro Survey	N/A
Variables	5:47	Oct-17-2024	Week 2: Variables, Numbers	Data Type, Casting, Reading .xpt files into table, how to get access to each column of datasets, specific cell, and row
Numbers	4:39			
Strings	5:03	Oct-24-2024	Week 3: Strings, Using Variables in Strings	Slicing Strings, String Concatenation, String Methods
Using Variables in Strings	5:23			
Booleans and If Statements	5:16	Nov-7- 2024	Week 4: Booleans and Conditionals	If Statements, Elif, Else
Comparison and Else	5:40			

Project structure – Python lesson setup

LinkedIn Learning Video Lessons



Course Popular

Python for Non-Programmers

2h 11m • Beginner • Updated May 2024

2h 11m 42s

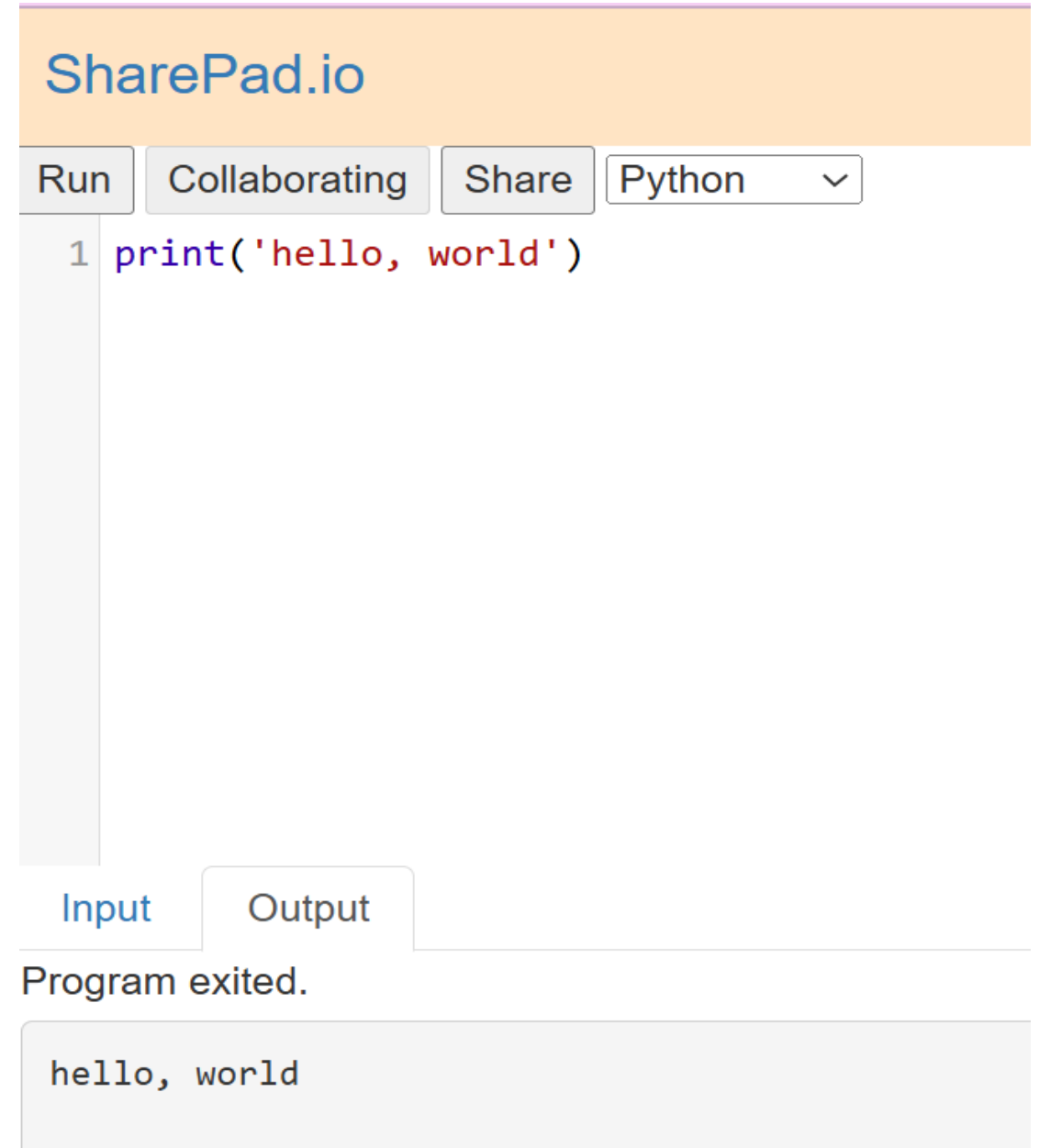


LinkedIn • By: Nick Walter

4.8 ★★★★★ (13,675) • 302,335 learners •

Project structure – Python lesson setup

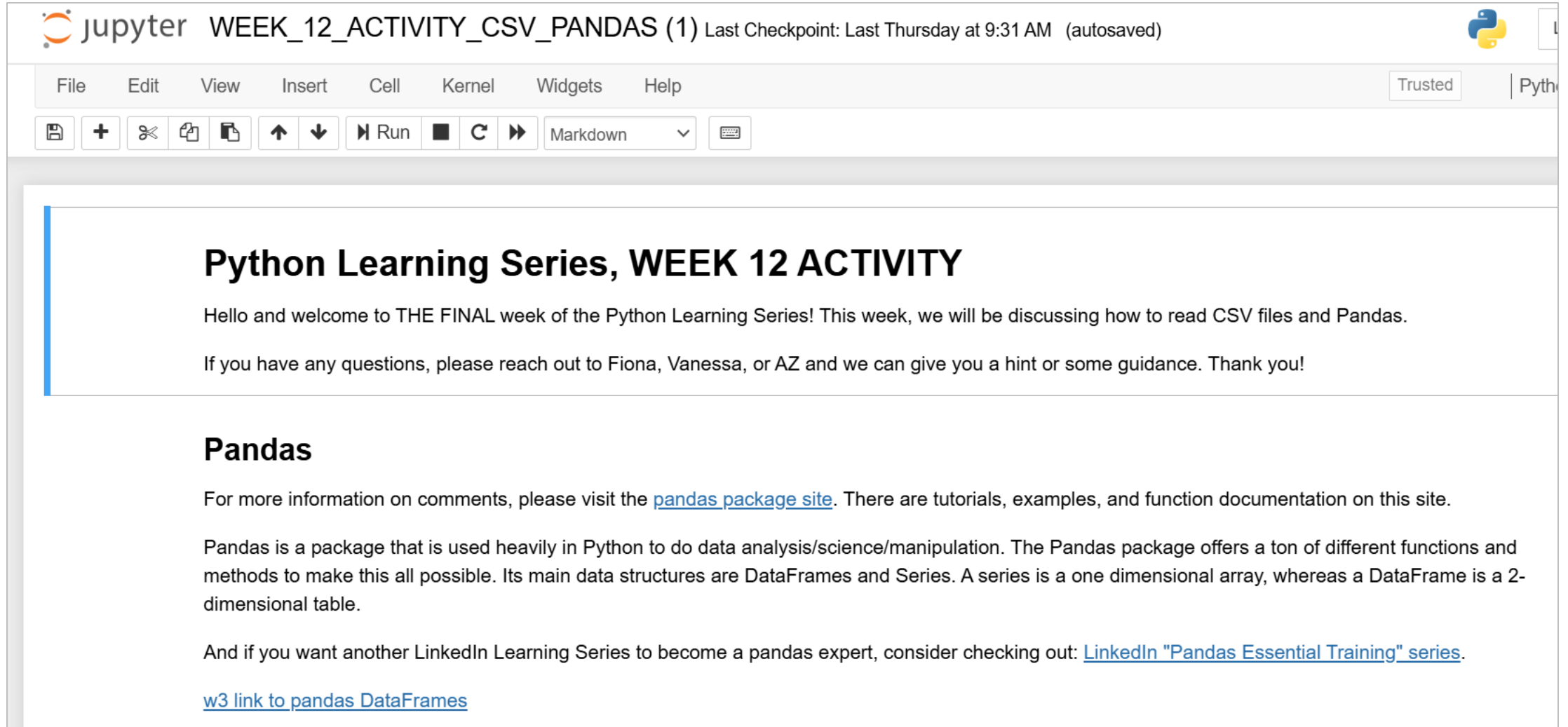
SharePad.io



The screenshot shows the SharePad.io web interface for a Python project. At the top, there's an orange header with the 'SharePad.io' logo. Below it, a navigation bar contains buttons for 'Run', 'Collaborating', and 'Share', followed by a language dropdown menu set to 'Python'. The main area is a code editor with a single line of Python code: `1 print('hello, world')`. At the bottom, there are two tabs: 'Input' and 'Output'. The 'Output' tab is active, displaying the text 'Program exited.' and a light gray box containing the output 'hello, world'.

Project structure – Python lesson setup

Notes



The screenshot shows a Jupyter Notebook interface. At the top, the title bar reads "jupyter WEEK_12_ACTIVITY_CSV_PANDAS (1) Last Checkpoint: Last Thursday at 9:31 AM (autosaved)". Below the title bar is a menu bar with options: File, Edit, View, Insert, Cell, Kernel, Widgets, Help. To the right of the menu bar is a "Trusted" status indicator and a "Python" label. Below the menu bar is a toolbar with icons for saving, adding, deleting, copying, pasting, undo, redo, and running cells. A dropdown menu is set to "Markdown". The main content area has a blue vertical bar on the left. The title "Python Learning Series, WEEK 12 ACTIVITY" is centered. Below the title, there is a welcome message and a paragraph about Pandas. The section "Pandas" is followed by a paragraph about where to find more information, a paragraph about what Pandas is used for, and a paragraph about a LinkedIn Learning series. At the bottom, there is a link to a w3 link to pandas DataFrames.

jupyter WEEK_12_ACTIVITY_CSV_PANDAS (1) Last Checkpoint: Last Thursday at 9:31 AM (autosaved)

File Edit View Insert Cell Kernel Widgets Help Trusted Python

Python Learning Series, WEEK 12 ACTIVITY

Hello and welcome to THE FINAL week of the Python Learning Series! This week, we will be discussing how to read CSV files and Pandas.

If you have any questions, please reach out to Fiona, Vanessa, or AZ and we can give you a hint or some guidance. Thank you!

Pandas

For more information on comments, please visit the [pandas package site](#). There are tutorials, examples, and function documentation on this site.

Pandas is a package that is used heavily in Python to do data analysis/science/manipulation. The Pandas package offers a ton of different functions and methods to make this all possible. Its main data structures are DataFrames and Series. A series is a one dimensional array, whereas a DataFrame is a 2-dimensional table.

And if you want another LinkedIn Learning Series to become a pandas expert, consider checking out: [LinkedIn "Pandas Essential Training" series](#).

[w3 link to pandas DataFrames](#)

Project structure – Python lesson setup

Work-Relevant Activities

Activity Instructions

In this activity, we're going to answer a question about the Study Report Status of our study.

1. From your TS, find the index of STRPSTAT and hardcode the index of STRPSTAT into a variable called `strpstat_index`.
Use the index to find the TSVAL of STRPSTAT.
2. Create an if statement with the following conditions:
If STRPSTAT is DRAFT, print "The study report is draft"
If STRPSTAT is FINAL, print "The study report is final"

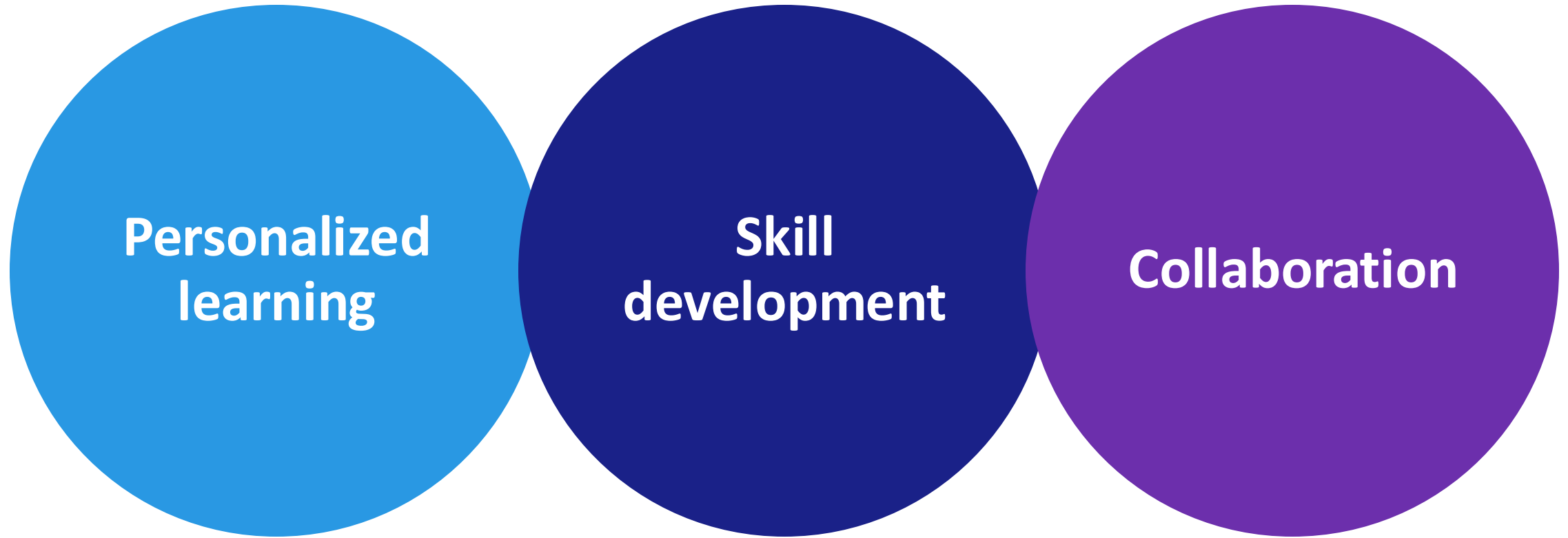
Challenge Activity:

Determine and print the GLTYP status of your study using a formatted string.

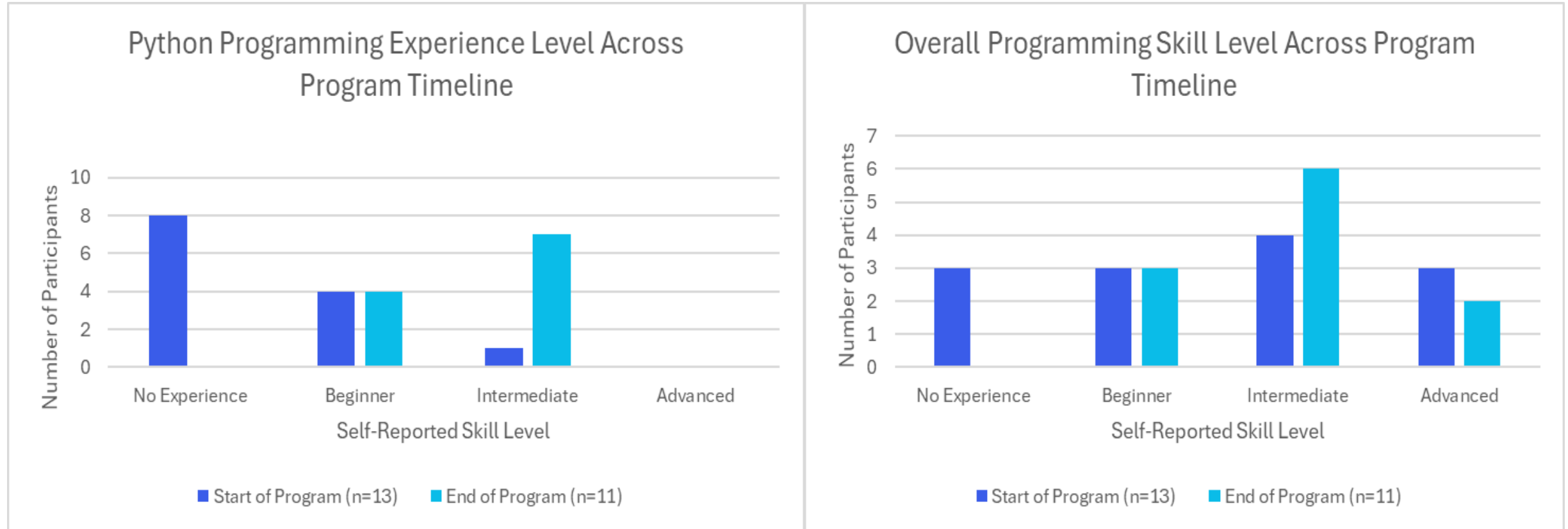
1. If your study is GLP, print that the study conforms to GLP standards and which GLP standards it follows.
2. If your study is non-GLP, print that the study is non-GLP.
3. If GLPFL is missing, print a warning that your dataset is missing GLPFL!

Project structure – Python lesson setup

Breakout Sessions



Project structure – Last skills assessment survey



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Project timeline – Important dates

2023:

Old Python
Development
Meeting Starts

10 Oct:

First Python Programming
Learning Series Meeting

11 Feb:

QC Automation Python
Project Begins



19 Feb:

New Python Meeting
Restructure and Idea Pitch

23 Jan:

Completion of the
Python Programming
Learning Series

2025:

Continue QC Automation
Project to Completion

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Leadership development

- ✓ Innovation within Leadership
- ✓ Driving Change
- ✓ Improvisation
- ✓ Continuous Improvement
- ✓ Cross-Functional Development



Vanessa Chavez



Fiona Kine



Azadeh Gilanpour

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Professional development

“Opens the doors to seeing how some of our **automation** tools work and possibly be a **part of future projects**”

“**Understand** how the **Python** and other automation works”

“It has enhanced my **problem-solving skills**. It has sharpened my **logical and analytical thinking**”

“More **confidence** to help in any Python projects”

“I believe it will not only allow me to **contribute effectively** but also provide an **excellent opportunity for growth in my career**”



How has this training
benefitted your
professional
development?

“Improved **collaboration**: Better **communication** and collaboration with team members”

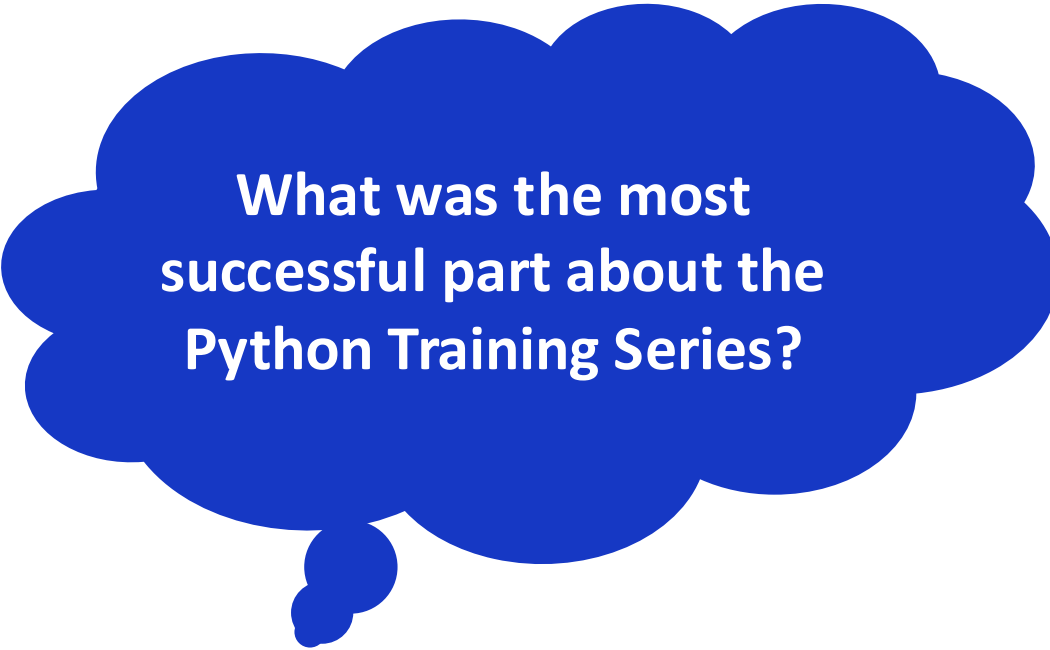
“Gain **confidence** in contributing to any automation tasks using Python”

Professional development

“Learning how to use **pandas to view and manipulate** the CSV and XPT SEND domains”

“The sharepad.io collaboration was both fun and very informative and useful”

“The **activity Jupyter books** were well put together and easy to understand so I can go back and solidify concepts”



What was the most successful part about the Python Training Series?

“I think the most successful part was the engagement from others on the team who are interested in coding, and the collaboration together”

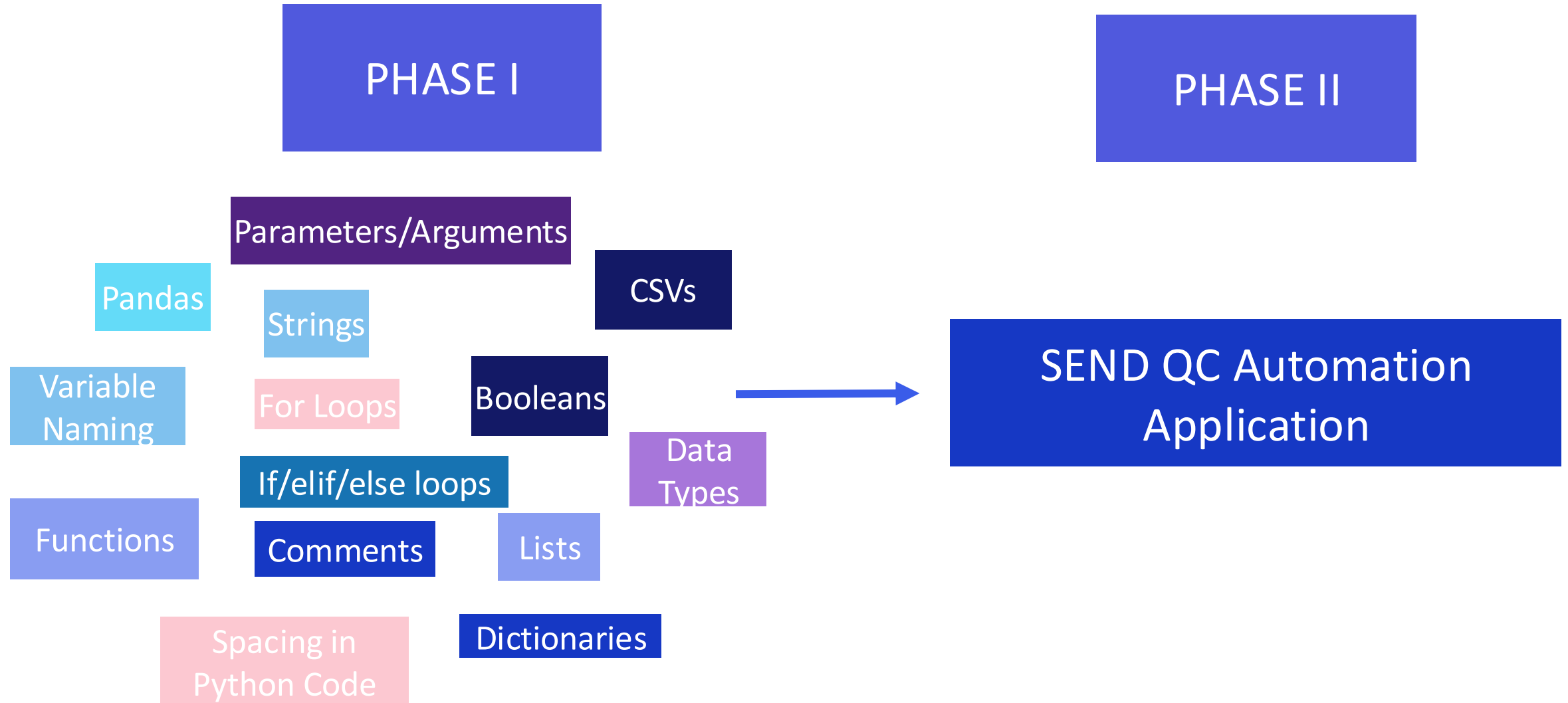
“**Hands-on learning** experience using practical sessions helped me to apply concepts immediately”

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Phase II – Next steps coming soon!



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Conclusions

Challenges

Group consideration

Tailor support to
participant goals

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Acknowledgments

A special thank you to...

Our US, UK and India colleagues who participated in the project

Our supervisors Michael DeNieu and Erika Geis

Our manager Jason Pitzer

We could not have done this project without your support!



Q&A

Thank you for listening!

Any Questions?



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