Introduction to Programming

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Mitchell Spradlin — Amazon

The Class

- Mix of lectures and hands-on labs
- Break halfway through class
- Raise hand to ask questions nay time
- Be respectful and inclusive
- Explore!

Background

Going around the room:

- What is your name?
- What school do you go to?
- What grade are you going in to?
- Have you done any programming? What languages?
- Have you used a Raspberry Pi?

Hardware

To get your computer up and running:

- Open each of the boxes

  ▸ Keep the boxes for repacking later

- Connect monitor and mouse to Pi

- Connect power to the monitor

- Connect power to the Pi last

- Be gentle - altogether this equipment is about $250
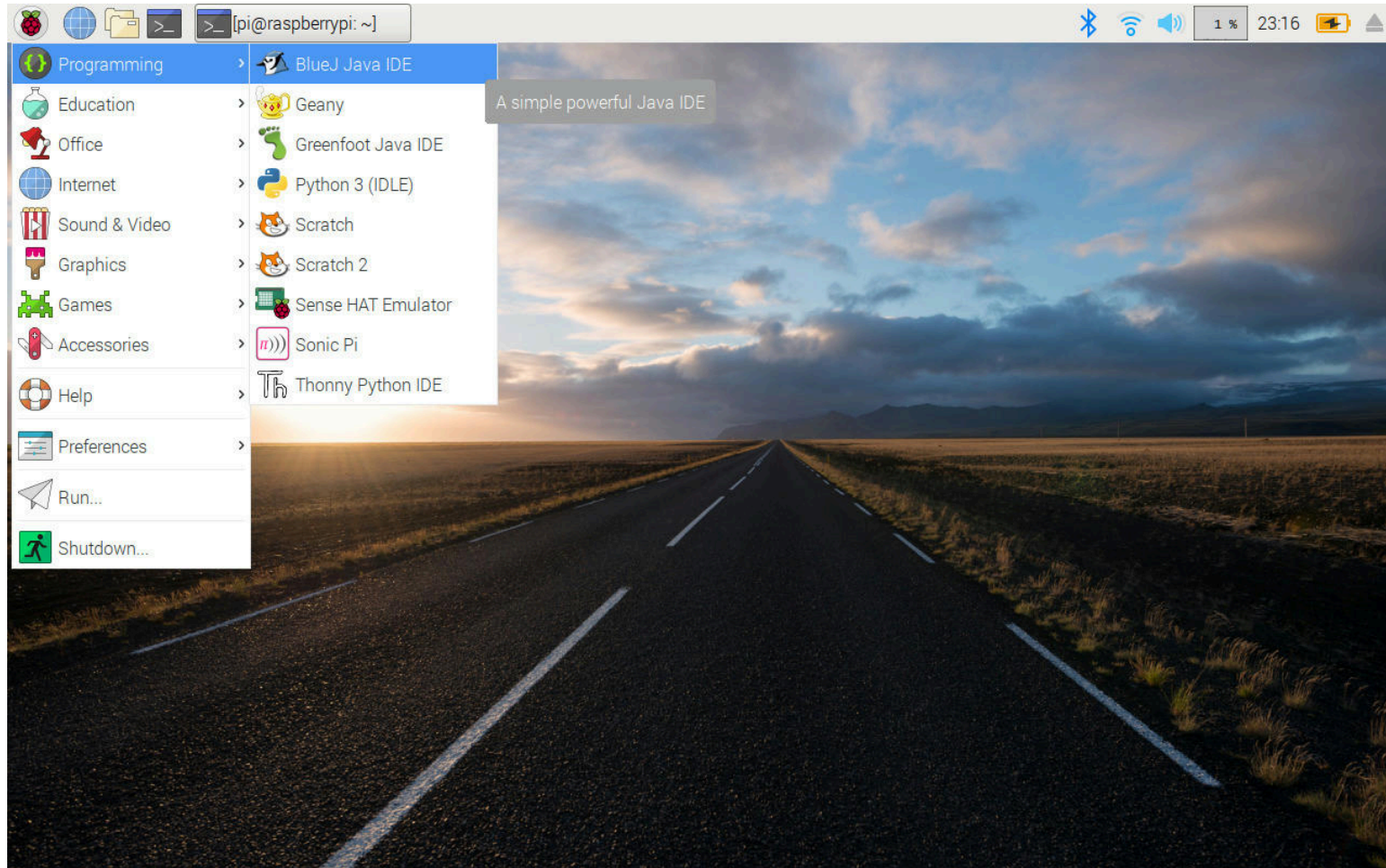
Figure 1: HDMI

Figure 3: USB C

Figure 2: USB A
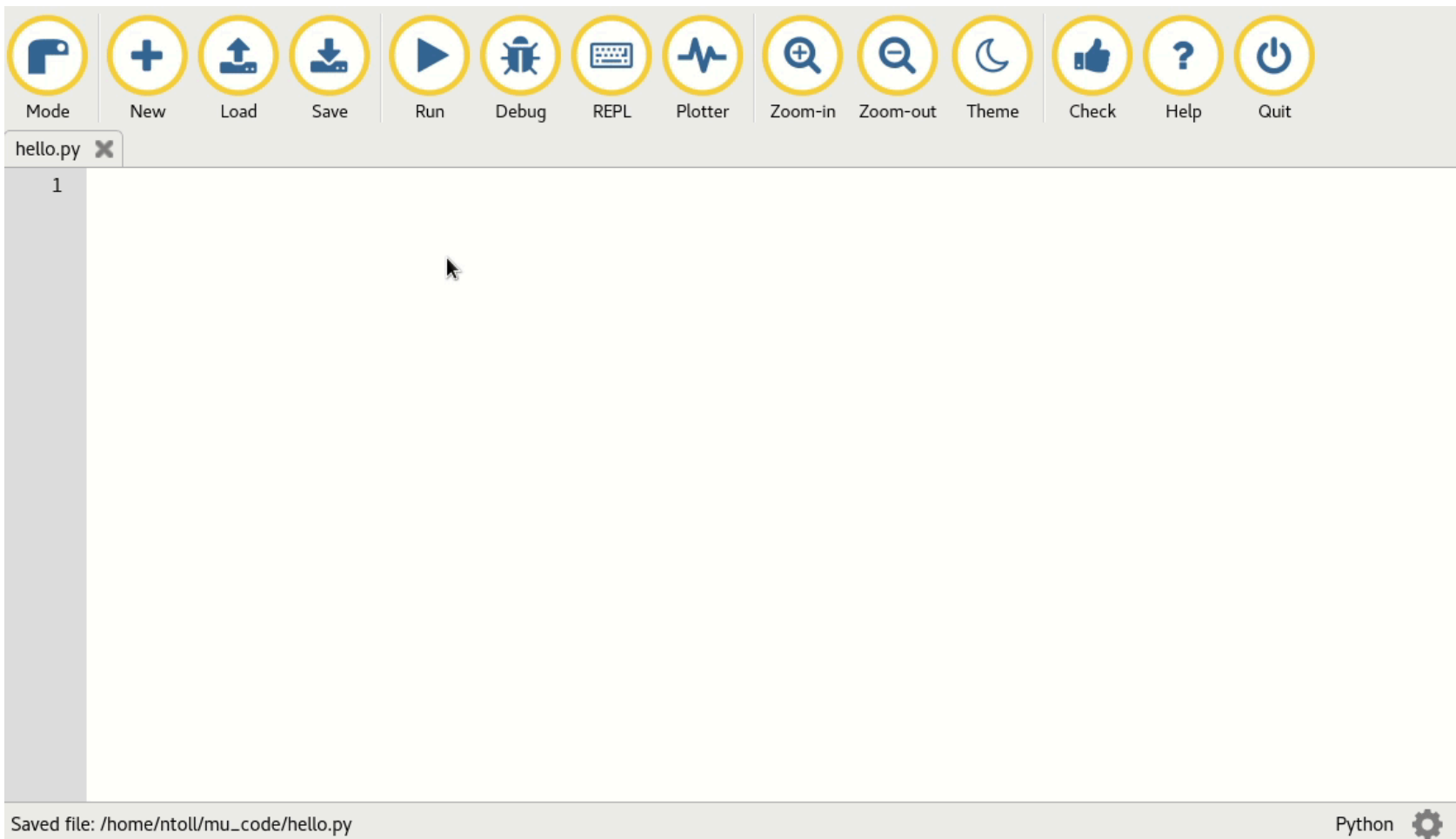
Figure 4: Graphical Desktop

Mu — Python Editor

TODO - Highlight Mu Icon

hello.py ✖

1

Your First Program

- Click the "New" button, then "Save" using `hello.py`
- Type this Python code into the text area:

```python
print("Hello World!")
```

- Press Run
- Observe the output at the bottom of the screen
- Click "Stop" to return to editing your code

How Python Executes your Code

TODO

Variables

`while` Loop

Break

Lab 1: Getting Started with the Sense HAT

- Connect the Sense HAT
- Go to here and try to complete the steps through "Displaying images"

https://projects.raspberrypi.org/en/projects/getting-started-with-the-sense-hat

- If you finish early, feel free to continue past those exercises or write your own programs.