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Washington Association of Raspberry Pi Jam Sessions

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Hey Coder Kids!

Are you ready for an awesome adventure into the amazing world of coding? Get ready to become a tech wizard and create your own cool games, apps, and animations with Code.org's Hour of Code!

Imagine having the power to bring your wildest ideas to life with just a few clicks and some magic code. That's right, you can make characters jump, dance, and even talk just by writing some computer instructions. It's like having a secret spell book that lets you control the digital realm!

During this Hour of Code, you'll embark on a journey filled with exciting challenges and puzzles that will test your problem-solving skills. You'll learn how to code in a fun and interactive way, using easy-to-understand python code.

But that's not all! You'll also get to create your own unique projects, like designing your own video game levels, animating your favorite characters, or building a cool app for your friends and family to enjoy.

And the best part? You don't need any special powers or previous experience to join in the fun. Code.org's Hour of Code is designed for everyone, regardless of your coding knowledge. All you need is a curious mind and a willingness to learn something new and exciting.

So, what are you waiting for? Join millions of other kids around the world and become a coding superhero today! Sign up for Code.org's Hour of Code and get ready to unleash your creativity, problem-solving skills, and have an absolute blast while learning to code.

Let the coding adventure begin!

During your visit to our booth today you can experiment on our Raspberry Pi Experience Lab and follow along with Summer, our A.I. Tutor as she explains how you can sort magic cards using different python code spells.

To Begin your hour of code simply get logged in to one of the Raspberry Pi stations and then scan the qr code above with your mobil phone to access the tutorial then read through this list of resources you will need to complete the tutorial.

Operating System

Raspberry Pi OS: This is the official operating system for Raspberry Pi, based on Debian. It's optimized for the Raspberry Pi hardware and comes with a variety of educational software, making it ideal for learning and development projects.

Programming Language

Python: Since the code examples provided are in Python, you'll need to ensure Python is installed. Raspberry Pi OS comes with Python pre-installed, making it ready for coding projects right out of the box.

Libraries for Python Installation commands:

Open up the CLI comand line terminal of your Raspberry Pi then type the installation commands to install the python libraries you will need to complete the tutorial.

Matplotlib: This library is used for creating static, interactive, and animated visualizations in Python. It's necessary for plotting the performance comparison graph of the sorting algorithms.

Installation command:

```
pip3 install matplotlib
```

NumPy: A fundamental package for scientific computing with Python, used here for generating random lists and managing array operations efficiently.

Installation command:

```
pip3 install numpy
```

FPDF: A library that allows for PDF generation with Python, used to create the PDF tutorial.

Installation command:

```
pip3 install fpdf
```

Development Tools

Thonny Python IDE: An Integrated Development Environment (IDE) that comes pre-installed with Raspberry Pi OS. It's beginner-friendly and suitable for writing and running Python scripts.

Terminal or Command Line Interface (CLI): For installing libraries and running Python scripts directly. Accessible through the Raspberry Pi OS.

Additional Software

Git: Version control system to manage code changes and collaborate on projects. Although not directly mentioned, it's a good practice to use Git for managing your project's codebase.

Installation command:

```
sudo apt install git
```

Educational Resources

Raspberry Pi Projects: An official site offering a wide range of projects and tutorials, which can be an excellent supplementary resource for learning more about programming and electronics with Raspberry Pi. <https://www.raspberrypi.com/tutorials/>

Hardware Requirements

While not a software resource, it's important to note that these examples are designed to be run on a Raspberry Pi. The specific model (e.g., Raspberry Pi 4 Model B or Raspberry Pi 5) will depend on performance requirements, but most code examples should run on any recent Raspberry Pi model.

This setup will equip you with the necessary tools and libraries to explore Python programming, from basic scripts to more complex applications involving data visualization and PDF generation, all on a Raspberry Pi platform.

Be sure to log your hour of code at https://warpjams.com/hour_of_code_log

WarpJams.com will send you more project resources to continue your exploration of learning to code.



Scan here to enter to win a Raspberry Pi 5 with 8gb of Ram, power supply, fan, heat sink, and case. Value \$150.00

or you can visit

<https://warpjams.com/win-a-raspberry-pi-5-8-gb-computer/>