

Python II

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Python + Arduino

- Python
 - Work started in 1990
 - Created by Guido van Rossum
- Arduino
 - First Arduino in 2007
 - Created by Massimo Banzi and David Cuartielles



Processing

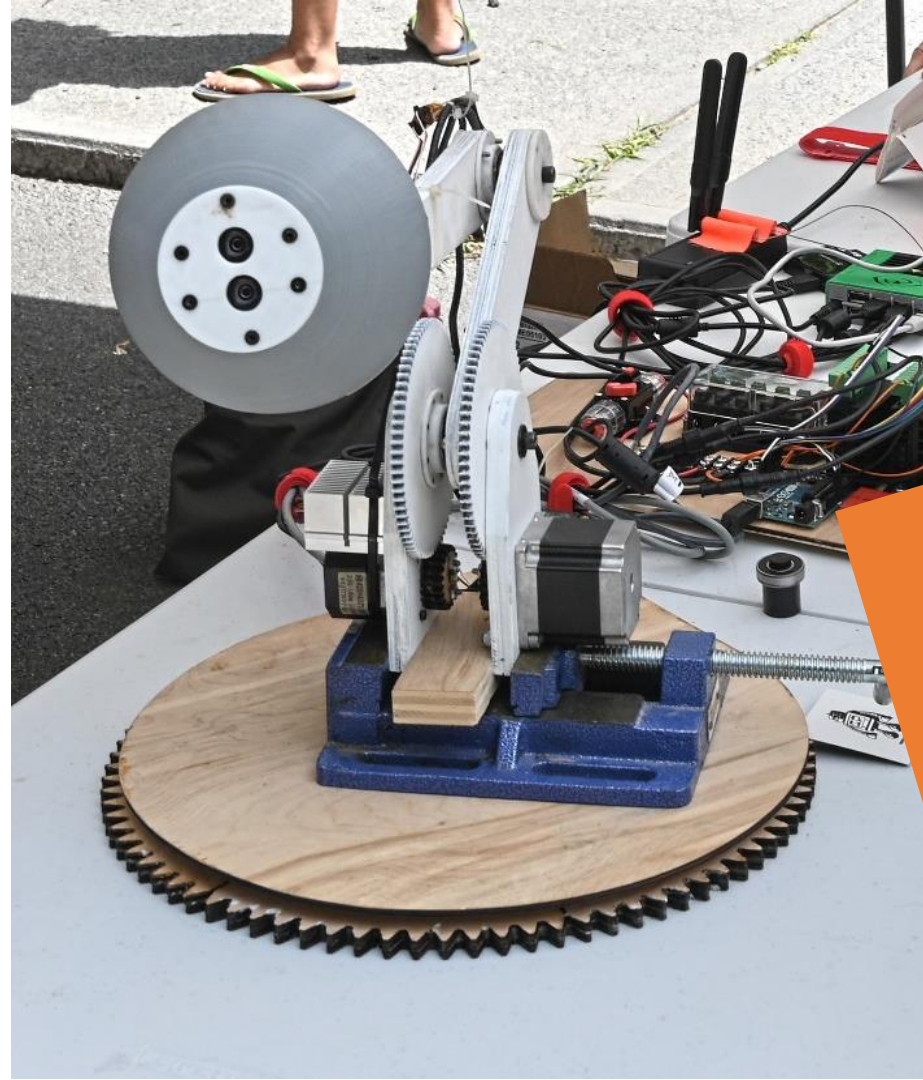
- Graphical IDE in pseudo-Java
- Easy to use for certain things
- Hard to interface with other components



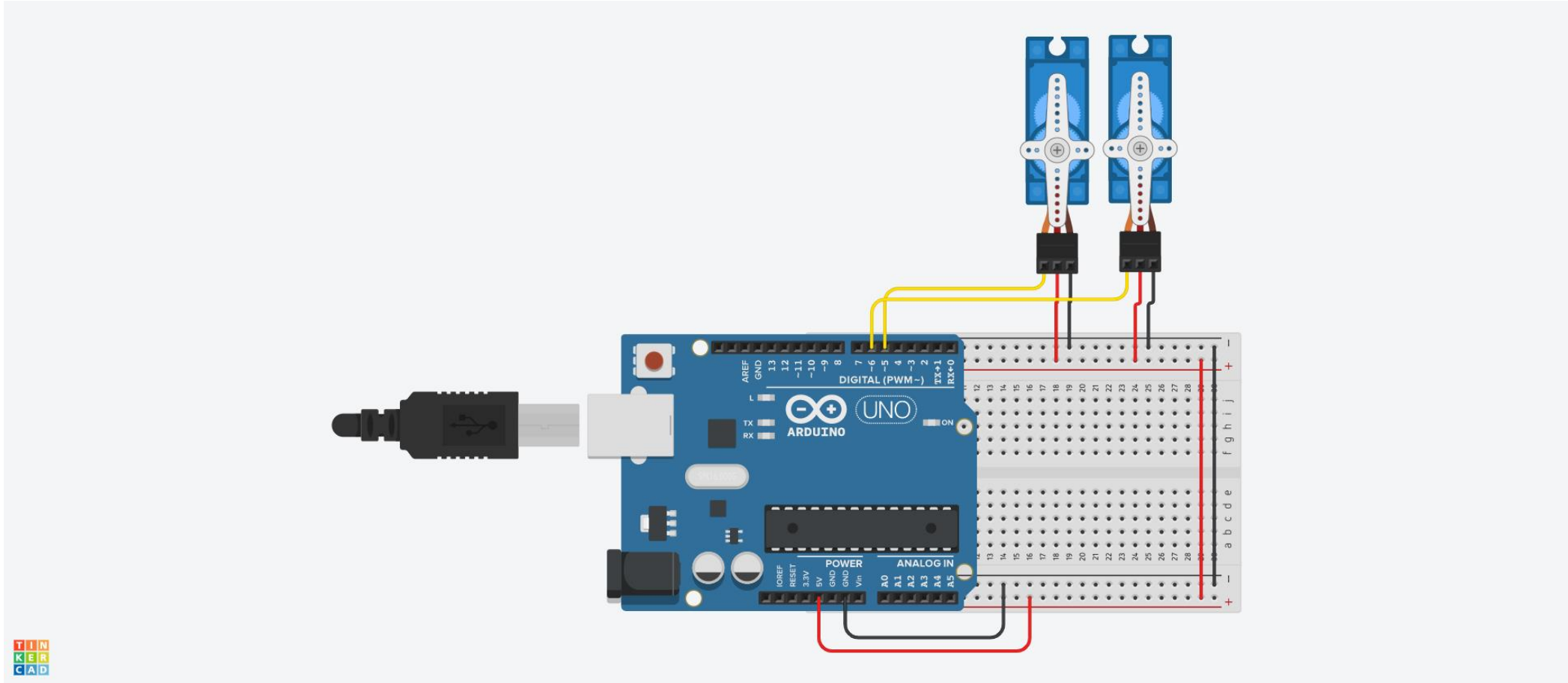
Objectives

- Communicate from the host to the Arduino
- Communicate from the Arduino to the host

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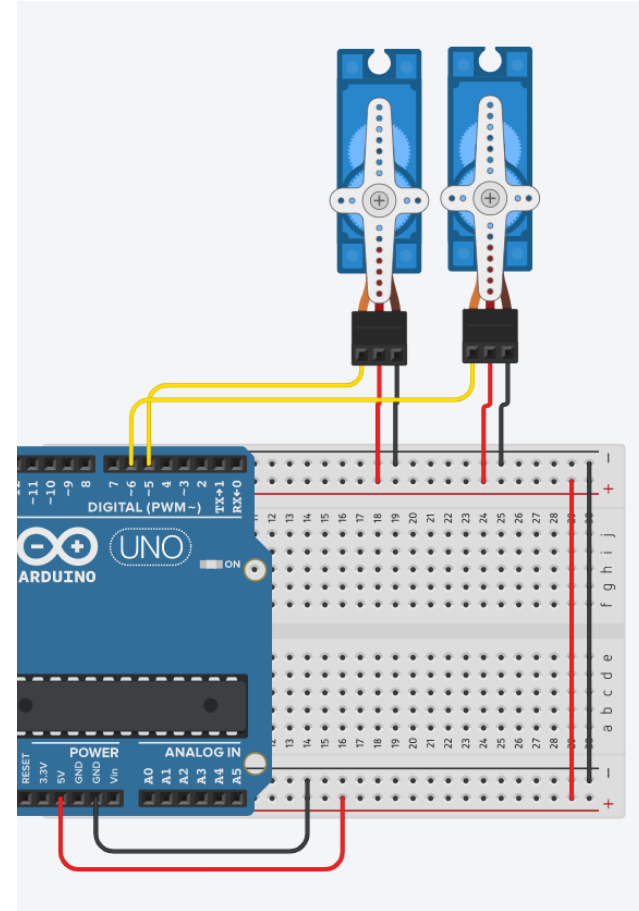


Example Application



Example Application

- Two servos
- Slew rate limited
- Accept commands
- Report position



Code

- <https://gist.github.com/MaxBareiss/13bdded08ca45ecbd8709116987a94f4>

Takeaways

- Use fast serial (115200 baud)
- Use small packets (64 bytes)
- Python newlines are host-specific
- Use single byte commands
- Flush Arduino buffer

More Advanced Options

- JSON
 - Handwritten
 - Library
- Protocol Buffers (protobuf)
- CAN, ModBus, RS-485, Ethernet, etc.

Questions?