

Final Exam Study Guide topics

Computer Hardware

- Identify components and what their functions are.
 - o For example: What is RAM, purpose
 - o Storage options for computers
 - o PC Building - requirements - What is needed to build a basic PC?

Networking

- OSI Model - 7 Layers
- IP addressing (valid address, classes)
- Networking terminology and function
 - o For example; What is a Router, Switch, or a MAC address

Number Systems

- Binary, Hexadecimal, Decimal
- Conversion between each system (methods)

Electronics

- OHMs law
- Read Schematics and symbols
- TinkerCAD circuits (components, connections etc)

Arduino

- Difference between a Microcontroller and Microprocessor
- Basic code structure
 - o Void setup() - What happens here?
 - o Void loop() - What happens here?
- Basic coding
 - o Looping and conditionals (FOR, WHILE, IF)
 - o Basic functions: digitalWrite/Read, analogRead
 - o What are variables and data types?
 - For example: integer vs float