

# Practicum Product Design Specification (PDS) Outline

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Team 8:

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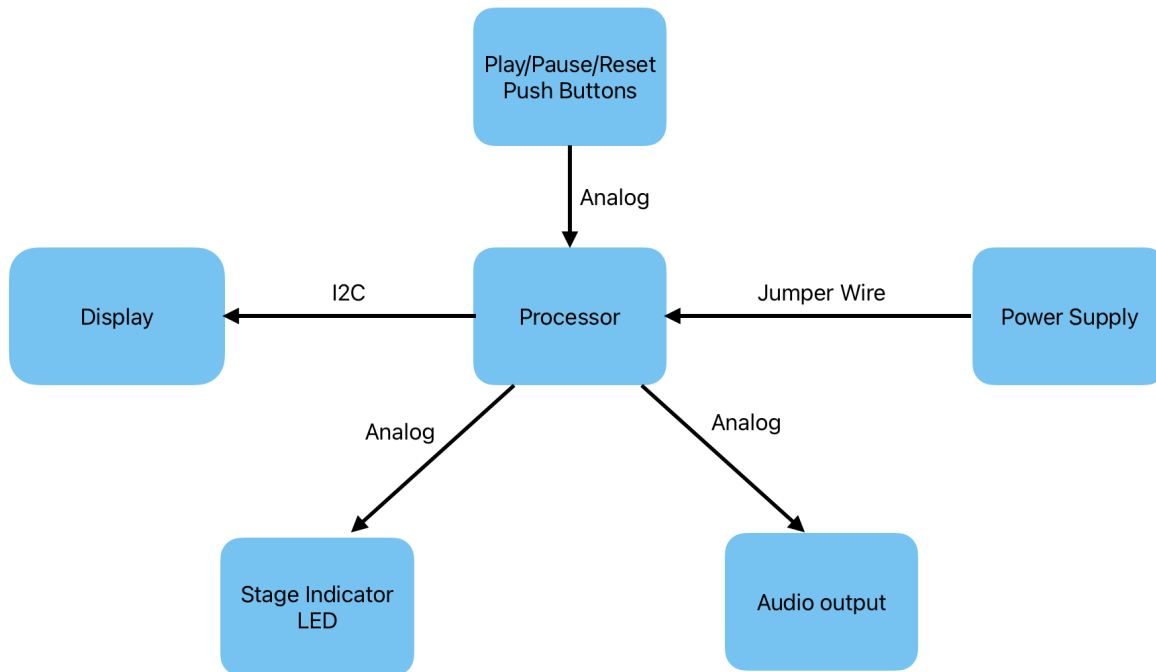
Josh Varughese

- **Executive Summary with Concept of Operations**
  - Product is a timer that allows the user to follow the Pomodoro study technique. This study method consists of 25 minutes of focused study time, followed by a 5 minute break. This cycle is repeated 4 times after which the user gets a 30 minute break. Our Pomodoro Technique clock will give users the ability to start, reset, and pause work sessions using separate buttons. The display shows a timer and LEDs indicate whether the current timer is in a work session, short break, or long break.
  - The timer will be especially useful for students who struggle focusing for long periods. It gives users a long enough break to recharge while not being long enough to allow for major distractions.
- **Brief “Market” Analysis**
  - The product is intended for customers who need help staying focused when studying.
  - Currently there are timers available, but hardly any that use the Pomodoro technique specifically. There are apps that do this as well, but many students struggle with having devices in their study spaces because of how big of a distraction they can be. Our product will also be designed with a minimal aesthetic in mind to fit as many room and desk setups as possible.
  - The product could likely sell for under \$30 based on other timer devices being sold on Amazon.com and related websites.
- **Requirements**
  - Must display countdown sequence
  - Must begin countdown sequence with user input
  - Must cycle through the Pomodoro stages (E.g. focused time, short break, long break)
  - Must indicate the current stage of the Pomodoro cycle
  - Must be able to turn on and off
  - Should be protected by enclosure
  - Should be easily portable
  - Should use sound to indicate user input or stage transitions
  - May allow the user to adjust the time increments
  - May be accompanied by spaghetti and pomodoro sauce

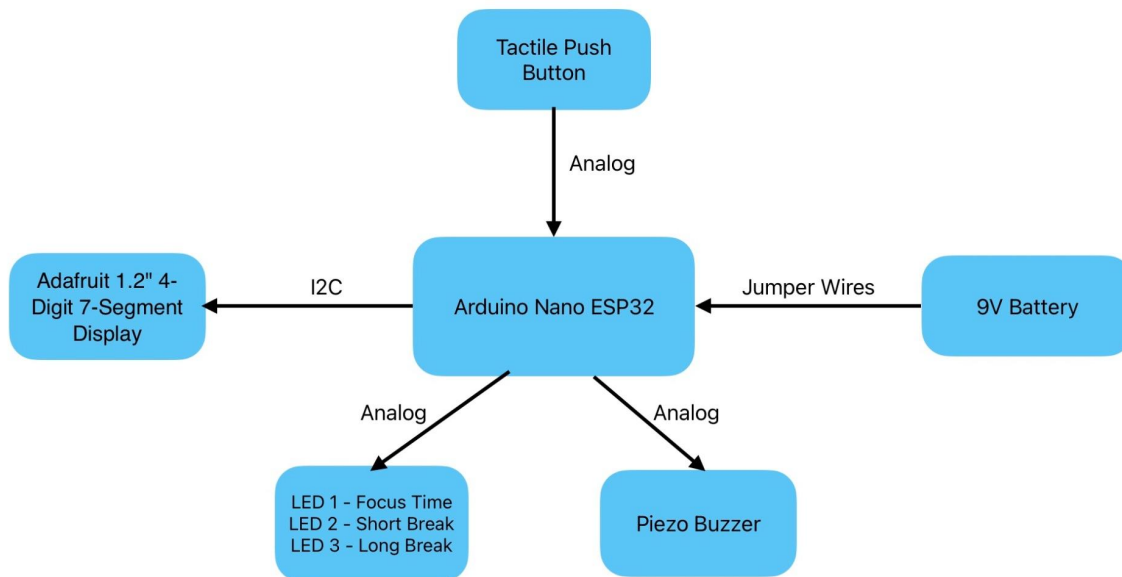
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- **System Architecture**

- Level 0



- Level 1



- **Design Specification**

- Sensors will be a play/pause button and a reset button
  - Actuators will be the display of the timer and indicator LEDs for the current

stage of the Pomodoro cycle

- Ideally it will be battery powered to increase portability
  - Uses a switch to power device on/off
- We will use an Arduino as a processor
  - Arduino IDE will be used as our development environment