Board

Feature Name: Board
Feature Name in Annotation: Board

Source of Information
Domain knowledge, Code comment, Source Code

Strategy Used:
Through 3D printer construction, we learned that there are motherboards for handling computations and controlling the printing. Then we started from the largest and most central logic file MarlinMain.cpp, and browsing through the code comment and source code. We found that "pins" are the needles that sits on the board, and they can be programmed to be used for connecting other hardwares. Therefore we tried to search for whether the comments, variables and method names contain keywords such as "pin".

Feature Description: This feature is mandatory for Marlin. Every 3D printer or embedded system has to have a motherboard in order to store the firmware and provide connections to handle the functionalities of different hardware components. For this feature, we only include the source codes that controls the functionality of the pins, and we exclude any source code that overrides those pins functionalities for other features.

Time spent: This feature is one of 18 features that were located by manually going through all code files of Marlin using our source code method. It took one person 25 hours to identify all 18 features.

Feature Characteristics:

Feature Name	LoFC	SD	TD	Completely Wrapped by ifdef
Board	214	72	0	No

Ratios of sources (%)

RL	PR	CM	Ifdef	DK	CC	SC	GD
0	0	0	0	40	10	50	0

RL: Release Log; **PR:** Pull Request; **CM**: Commit, **Ifdef**: Ifdef Expression; **DK**: Domain Knowledge; **CC**: Code Comment; **SC**: Source Code; **GD**: G-Code Documentation.