# Voting Machine Requirements

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| **Target release** | Type // to add a target release date |
| **Epic** | [BD-1](https://thermelgy-firmware.atlassian.net/browse/BD-1) - To develop a fully functional Voting Machine Firmware |
| **Document status** | DRAFT |
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## (blue star) Objective

To develop a generic Voting Machine system Firmware that registers votes through GPIO pins and displays the results.

## (blue star) Success metrics

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| **Goal** | **Metric** |
| Accurate vote registration | Ensure each vote corresponds to a unique candidate |
| Display accurate results | Display the correct number of votes for each candidate |
| Smooth user interface for voting process | Display instructions clearly and wait for user input |

## (blue star) Assumptions

## (blue star) Milestones

**Voting Machine Firmware V1.0.0**:

1. Implement basic vote counting and result display.
2. Show candidate-wise vote counts and total votes.
3. Implement a way to end voting and display the results.

## (blue star) Requirements

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| **Requirement** | **User Story** | **Importance** | **Jira Issue** | **Notes** |
| 1. **Vote Registration**:   DI1, DI2, DI3, DI4 should register votes for candidates 1, 2, 3, and 4 respectively. | The user presses a button (connected to GPIO) to cast their vote for a candidate. | HIGH |  |  |
| **2. Total Vote Count**: A register that holds the total number of votes cast. | The user presses a button (connected to GPIO) to cast their vote for a candidate. | HIGH |  |  |
| **3. End Voting**: DI8 should allow the user to end voting and display results. | After voting ends, display the total number of votes cast and the breakdown for each candidate. | HIGH |  |  |

## (question) Learning Matrix

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| **Topic** | **Specific** | **Remarks** |
| **GPIO Pins** | Configuring input pins |  |
| Software debouncing techniques | Software debouncing techniques |  |

## (warning) Out of Scope