

MCU Alarm Clock Project Checklist

1. Planning and Part Selection

- ☐ Define feature set
- ☐ Design overall structure
- ☐ Choose parts
 - ☐ MCU
 - ☐ Display type
 - ☐ LED indicators
 - ☐ Input buttons
 - ☐ Audio
 - ☐ Power supply method
- ☐ Create Project Proposal

2. Software Development

- ☐ Connect hardware to Dev board
- ☐ Create software project
 - ☐ Implement RTC
 - ☐ Implement time display
 - ☐ Implement LED indicators
 - ☐ Implement buttons
 - ☐ Implement audio
 - ☐ Implement set clock logic
 - ☐ Implement set alarm logic
 - ☐ Implement low-power mode
- ☐ Test software
 - ☐ Test clock functionality

- ☐ Test alarm functionality
- ☐ Test power-on reset behavior

3. PCB and Case Design

- ☐ Design custom PCB
 - ☐ Create schematic
 - ☐ Design PCB board
 - ☐ Order PCB board and components
- ☐ Design Case
 - ☐ Model case
 - ☐ Test fit components
 - ☐ Print prototype
- ☐ Verify all parts align/fit

4. Final Assembly and Testing

- ☐ Assemble circuit
 - ☐ Solder components
 - ☐ Flash firmware
 - ☐ Test functionality
- ☐ Assemble case
 - ☐ Insert and secure all components
 - ☐ Test operation and durability
- ☐ Monitor time-drift and battery levels