

Maker Project Documentation

Student Build Journal & Reflection

|  |  |
| --- | --- |
| **Project Title** |  |
| **Name** |  |
| **Email Address** |  |
| **Phone Number** |  |
| **Date Started** |  |
| **Date Completed/Ongoing** |  |
| **Facilitator** |  |

## 

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## 

# 📝 1. Introduction

*What is your project about? What does it do? Why did you choose this idea?*

# 🎯 2. Project Objectives

* What problem does your project solve?
* Who is the project designed for (target user)?
* What are your goals?

# 🧩 3. Hardware Components Used

***List and briefly describe each hardware component you used.***

|  |  |  |
| --- | --- | --- |
| **Component Name** | **Purpose in Project** | **Quantity** |
| e.g. ESP32 | Main microcontroller | 1 |
| e.g. DHT11 Sensor | Measures temperature & humidity | 1 |
| e.g. 9 V Battery | Powers the system | 1 |

# 

# ⚙️ 4. Circuit/CAD Design & Assembly

***Describe (and if possible, show diagrams/photos/screenshots of) how you connected the components.***

* How did you design your circuit?
* Did you use a breadboard or PCB?
* What tools did you use (e.g. soldering, CAD, Fritzing)?
* What material did you use(e.g Cardboard, MDF Laser cutted, 3D printing, a combination)?

# 💻 5. Software Development

***Explain the programming part of your project.***

* What microcontroller or board did you use?
* Which programming language (e.g. Arduino C++, Python)?
* What did your code do?
* Did you use or create any libraries?

🧠 *You can include code snippets or explain how different parts of the program work.*

# 💻 Provide a link to your Github repository or linkable projects from Wokwi/TinkerCad/Hackerster etc.

# 

# 🧪 6. Testing & Troubleshooting

***How did you test your system? What didn’t work the first time?***

* How did you find and fix errors?
* What tools did you use to debug? (e.g. Serial Monitor, LED blink tests)
* What tests passed or failed?

# 🔄 7. Iterations / Improvements

***How did your project evolve?***

* What did you change(or going to change) from version 1 to version 2?
* What improvements did you make?

# 🧠 8. Personal Reflections

***This section is about your experience and your thoughts.***

* What was the hardest part for you?
* What was the most exciting or fun part?
* What skills did you learn?
* What would you do differently next time?
* How do you feel about what you built?

# 🧭 9. Challenges & How You Overcame Them

* List the main challenges you faced
* How did you solve or work around each one?

# 📷 10. Photo Gallery / Visual Documentation

***Insert photos or video demo links of your project at different stages.***

* Circuit setup
* Coding/testing
* Final assembly
* Finished product
* You working on it!

# ✅ 11. Final Outcome Summary

* Did your project work?
* What does it do now?
* Who can use it?
* Next steps (future plans)?

# 📚 12. Resources Used

***Mention all the references, tutorials, or support you used.***

|  |  |
| --- | --- |
| **Resource Type** | **Name / Link / Description** |
| **Online Tutorial** | **e.g. RandomNerdTutorials ESP32 Guide** |
| **Mentor Support** | **e.g. Mr. Thabo helped with soldering** |
| **Datasheet** | **DHT11 Datasheet** |