Synthesizer Project

Dec 11, 2024

Personal Project

Project manager

Project dates Oct 3, 2024 - Dec 14, 2024

Completion97%Tasks68Resources0

Tasks

Name		Begin date	End date	Compl etion	Durati on	Pred ecess ors	Priorit y
Pre-Project	•	10/3/24	10/7/24	100	5		Normal
Group Formation	•	10/3/24	10/7/24	100	5		Normal
Collaboration Site Set-up	0	10/3/24	10/7/24	100	5		Normal
Begin Brainstorming Projects	•	10/3/24	10/7/24	100	5		Normal
Project Concept Generation	•	10/8/24	10/15/24	100	8		Normal
Generate 3 Project Ideas	•	10/8/24	10/9/24	100	2	53, 54, 55	Normal
Pick a Project	0	10/10/24	10/10/24	100	1	56	Normal
Define Synthesizer Features	•	10/11/24	10/15/24	100	5	57	Normal
Research Components and Features	0	10/11/24	10/15/24	100	5	57	Normal
Establish Project Must, Shoulds and Mays	•	10/11/24	10/15/24	100	5	57	Normal
Initial Design and Planning	•	10/16/24	10/25/24	100	10		Normal
Design Block Diagrams and Determine Input/Outputs	•	10/16/24	10/16/24	100	1	2, 3, 4	Normal
Identify Necessary Components	•	10/16/24	10/18/24	100	3	2, 3, 4	Normal
Being Planning out a Prototype	•	10/16/24	10/20/24	100	5	2, 3, 4	Normal
Begin designing project Schematic	•	10/16/24	10/20/24	100	5	2, 3, 4	Normal
Clean up Project Schematic	•	10/21/24	10/25/24	100	5	58	Normal
Create and Finalize a Product Design Specification	•	10/19/24	10/23/24	100	5	6, 7	Normal
Hardware Prototyping	•	10/14/24	10/30/24	100	17		Normal
Create Schematic for Class D Amplifier	0	10/16/24	10/20/24	100	5	4	Normal
Create Layout for Class D Amplifier	0	10/21/24	10/25/24	100	5	60	Normal
Order Class D Amp PCB	•	10/26/24	10/30/24	100	5	61	Normal
Begin ESP32 PWM and Library Derisking	•	10/21/24	10/25/24	100	5		Normal
Begin Component Derisking	0	10/14/24	10/18/24	100	5		Normal
Finalize Component Combinations and Values	•	10/19/24	10/21/24	100	3	11	Normal
Order Components	•	10/22/24	10/26/24	100	5	12	Normal
Wait For Components	•	10/27/24	10/29/24	100	3	74	Normal
Firmware Development for Core Synth Functions	•	10/26/24	11/7/24	100	13		Normal
Begin to develop code for PWM generation	•	10/26/24	10/30/24	100	5	10	Normal

Tasks

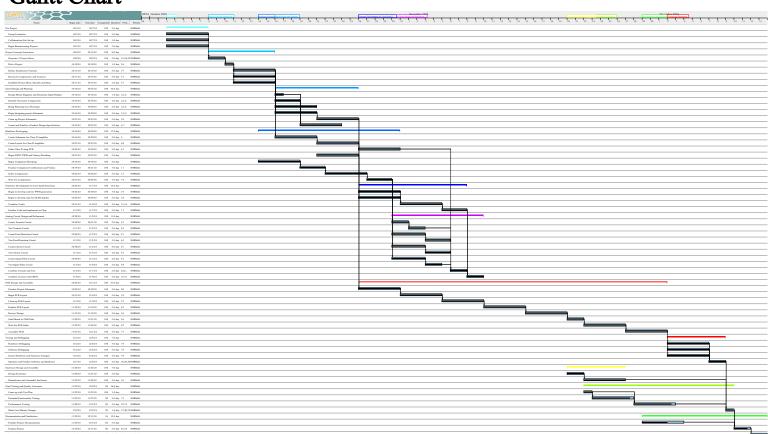
Name		Begin date	End date	Compl etion	Durati on	Pred ecess ors	Priorit y
Begin to develop code for OLED display	0	10/26/24	10/30/24	100	5	10	Normal
Combine Codes	•	10/31/24	11/4/24	100	5	15, 16	Normal
Finalize Code and implement on Chip	•	11/5/24	11/7/24	100	3	17	Normal
Analog Circuit Design and Refinement	•	10/30/24	11/9/24	100	11		Normal
Create Tremolo Circuit	0	10/30/24	10/31/24	100	2	81	Normal
Test Tremolo Circuit		11/1/24	11/2/24	100	2	63	Normal
Create Fuzz/Distortion Circuit		10/30/24	11/2/24	100	4	81	Normal
Test Fuzz/Distortion Circuit		11/3/24	11/5/24	100	3	65	Normal
Create Chorus Circuit		10/30/24	11/2/24	100	4	81	Normal
Test Chorus Circuit		11/3/24	11/5/24	100	3	67	Normal
Create Signal Filter Circuit		10/30/24	11/2/24	100	4	81	Normal
Test Signal Filter Circuit		11/3/24	11/4/24	100	2	69	Normal
Combine Circuits and Test	•	11/6/24	11/7/24	100	2	62, 64, 66, 68, 70	Normal
Combine Circuits with ESP32	•	11/8/24	11/9/24	100	2	18, 71	Normal
PCB Design and Assembly	•	10/26/24	12/1/24	100	37		Normal
Finalize Project Schematic		10/26/24	10/30/24	100	5	80	Normal
Begin PCB Layout	0	10/31/24	11/4/24	100	5	24	Normal
Clean up PCB Layout	0	11/5/24	11/9/24	100	5	25	Normal
Finalize PCB Layout	0	11/10/24	11/14/24	100	5	83	Normal
Review Design	0	11/15/24	11/19/24	100	5	26	Normal
Send Board to OSH Park	0	11/20/24	11/21/24	100	2	84	Normal
Wait For PCB Order	0	11/22/24	11/26/24	100	5	82	Normal
Assemble PCB	0	11/27/24	12/1/24	100	5	77	Normal
Testing and Debugging	•	12/2/24	12/8/24	100	7		Normal
Hardware Debugging		12/2/24	12/6/24	100	5	78	Normal
Software Debugging		12/2/24	12/6/24	100	5	78	Normal
Iterate Hardware and Firmware Changes	0	12/2/24	12/6/24	100	5	78	Normal
Optimize and Finalize Software and Hardware	•	12/7/24	12/8/24	100	2	28, 29, 30	Normal
Enclosure Design and Assembly		11/20/24	11/26/24	100	7		Normal

Tasks

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Design Enclosure	0	11/20/24	11/21/24	100	2		Normal
Manufacture and Assemble Enclosure	•	11/22/24	11/26/24	100	5	36	Normal
Final Testing and Quality Assurance	•	11/22/24	12/9/24	90	18		Normal
Come up with Test Plan	•	11/22/24	11/22/24	100	1		Normal
Extended Functionality Testing	•	11/23/24	11/27/24	90	5	73	Normal
Performance Testing	•	11/28/24	12/2/24	90	5	39, 73	Normal
Make Last Minute Changes	•	12/9/24	12/9/24	90	1	37, 40, 75	Normal
Documentation and Finalization	•	11/29/24	12/13/24	56	15		Normal
Finalize Project Documentation	•	11/29/24	12/3/24	60	5		Normal
Finalize Project	•	12/10/24	12/11/24	80	2	43, 76	Normal
Presentations	0	12/12/24	12/13/24	25	2	44	Normal

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Gantt Chart



Resources Chart