

ID	Task Name	Duration	Start	Finish
1	Brainstormed viable projects, finalised project choice	11 days	Wed 1/08/18	Sun 12/08/18
2	Project broken down into milestones, assigned initial work to members	2 days	Sun 12/08/18	Tue 14/08/18
3	1. Sensors Research	11 days	Tue 14/08/18	Sat 25/08/18
4	1.1. Sensor proof of concept implementation (serial to USB)	1 day	Tue 14/08/18	Wed 15/08/18
5	1.2. Testing of POC	1 day	Wed 15/08/18	Thu 16/08/18
6	1.3. Sensor and Wifi Implementation	2 days	Thu 16/08/18	Sat 18/08/18
7	1.4. Testing of Sensor and Wifi implementation	1 day	Sat 18/08/18	Sun 19/08/18
8	1.5. Sensor to API Communication	6 days	Sun 19/08/18	Sat 25/08/18
9	1.5.1. Implementation and testing of Temperature logging	4 days	Sun 19/08/18	Thu 23/08/18
10	1.5.2. Implementation and testing of Humidity logging	4 days	Sun 19/08/18	Thu 23/08/18
11	1.5.3. Implementation and testing of Motion logging	4 days	Sun 19/08/18	Thu 23/08/18
12	1.5.4. Testing of Sensor to API communication	1 day	Thu 23/08/18	Fri 24/08/18
13	2. Database pilot	48 days	Tue 14/08/18	Mon 1/10/18
14	2.1. Create Basic Database and table	14 days	Tue 14/08/18	Tue 28/08/18
15	2.2. Testing of database	3 days	Tue 28/08/18	Fri 31/08/18
16	2.3. Optimisation of data types used in each table	10 days	Fri 31/08/18	Mon 10/09/18
17	2.4. Implementation of Indexing and other optimisations to avoid Big O issues.	6 days	Mon 10/09/18	Sun 16/09/18
18	2.5. Final Database implementation	14 days	Sun 16/09/18	Sun 30/09/18
19	3. BackEnd	56 days	Sun 19/08/18	Sun 14/10/18
20	3.1. Decision on framework to be used	7 days	Sun 19/08/18	Sun 26/08/18
21	3.2. Initial POC on framework	4 days	Sun 26/08/18	Thu 30/08/18
22	3.3. Feature implementations	38 days	Thu 30/08/18	Sun 7/10/18
23	3.3.1. Implementation of PING GET endpoint to avoid sending of data unnecessarily	5 days	Thu 30/08/18	Tue 4/09/18
24	3.3.2. Implementation and testing of POST endpoints:	28 days	Tue 4/09/18	Tue 2/10/18
25	3.3.2.1. Tempature	28 days	Tue 4/09/18	Tue 2/10/18
26	3.3.2.2. Humidity	28 days	Tue 4/09/18	Tue 2/10/18
27	3.3.2.3. Motion	28 days	Tue 4/09/18	Tue 2/10/18
28	3.3.3. Implementation and testing of application helpers to aid front-end data sourcing	5 days	Tue 2/10/18	Sun 7/10/18
29	3.4. Refactor existing code	6 days	Sun 7/10/18	Sat 13/10/18
30	3.4.1. Peer review safety of code, implement required changes	6 days	Sun 7/10/18	Sat 13/10/18
31	4. FrontEnd	56 days	Sun 19/08/18	Sun 14/10/18
32	4.1. Initial implementation of POC dashboard	15 days	Sun 19/08/18	Mon 3/09/18
33	4.2. Initial POC of authentication using a login page	10 days	Mon 3/09/18	Thu 13/09/18
34	4.3. Review of code by peers	5 days	Thu 13/09/18	Tue 18/09/18
35	4.4. Migrate dashboard behind successful login page	5 days	Tue 18/09/18	Sun 23/09/18

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36	4.5. Improvements and refactoring of dashboarding code	5 days	Sun 23/09/18	Fri 28/09/18
37	4.6. Review and refactor to suit all devices commonly used to browse websites.	5 days	Fri 28/09/18	Wed 3/10/18
38	4.7. Implement required bootstrap/css framework to handle display of data.	6 days	Wed 3/10/18	Tue 9/10/18
39	4.8. Final peer review and refactor	5 days	Tue 9/10/18	Sun 14/10/18
40	5. Pilot/monitoring and testing	27 days	Sun 14/10/18	Sat 10/11/18
41	5.1. Implement and test system-wide exception logging to DB	27 days	Sun 14/10/18	Sat 10/11/18
42	5.2. Implement and test system-wide logging of authentication	27 days	Sun 14/10/18	Sat 10/11/18
43	5.3. Fuzzing/toolset assisted testing of website	27 days	Sun 14/10/18	Sat 10/11/18
44	6. Sensors	26 days	Sat 25/08/18	Thu 20/09/18
45	6.1. Pilot testing of potential boards (UNO3 / ESP / RPI / OPI)	6 days	Wed 22/08/18	Tue 28/08/18
46	6.1.1. Code feasibility report on each board, considerations on support from community and team ability	3 days	Wed 22/08/18	Sat 25/08/18
47	6.1.2. Review of boards and decision on main boards to use	3 days	Sat 25/08/18	Tue 28/08/18
48	6.2. Implement monitoring for chosen metrics:	10 days	Tue 28/08/18	Fri 7/09/18
49	6.2.1. Temperature	10 days	Tue 28/08/18	Fri 7/09/18
50	6.2.2. Humidity	10 days	Tue 28/08/18	Fri 7/09/18
51	6.2.3. Motion	10 days	Tue 28/08/18	Fri 7/09/18
52	6.3. Implement networking on boards	2 days	Fri 7/09/18	Sun 9/09/18
53	6.3.1. Determine viability of WPA-2E connectivity	2 days	Fri 7/09/18	Sun 9/09/18
54	6.4. Implement json generation on boards	2 days	Sun 9/09/18	Tue 11/09/18
55	6.5. Implement PING request functionality to check web server is up or not	2 days	Sat 11/08/18	Mon 13/08/18
56	6.6. Test API communication	4 days	Thu 13/09/18	Mon 17/09/18
57	6.7. Design and print 3D case for boards	2 days	Mon 17/09/18	Wed 19/09/18
58	6.8. Deploy boards to various locations	1 day	Wed 19/09/18	Thu 20/09/18
59	7. Documentation	71 days	Tue 14/08/18	Wed 24/10/18
60	7.1. Generate POC documentation from project	2 days	Tue 14/08/18	Thu 16/08/18
61	7.2. Generate scope document	8 days	Thu 16/08/18	Fri 24/08/18
62	7.3. Comment code extensively for readability	14 days	Fri 24/08/18	Fri 7/09/18
63	7.4. Document APIs	50 days	Fri 24/08/18	Sat 13/10/18
64	7.5. Document database design, with considerations of optimisation and required modifications	50 days	Fri 24/08/18	Sat 13/10/18
65	7.6. Generate user guide for final product	20 days	Wed 26/09/18	Tue 16/10/18
66	7.7. Generate final report	8 days	Tue 16/10/18	Wed 24/10/18