# Assessment Criteria for Group Work (out of 20)

| | Tasks completion | | | Taking initiatives and leads | | | coordination | | Communication | | | Respect |
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| Team Member | Finishing task in time or on time with an excellent quality (8-6) | Finishing task on time with a good quality (5-3) | Finishing tasks on time with minimum quality (0-2) | Stepped up to learn a new skill or take the most difficult task (5-3) | followed through with the tasks and showed some initiative (2-1) | Just completed the task that was assigned to him/her, avoided challenging tasks (0) | Was the coordinator reported the team member who did not complete a task or had any follow ups? (2) | Was the person project coordinator (1) | The person attended most meetings and responded in a clear and timely manner (3) | Missed some meetings but managed to make his presence clear and responded to written communication (2) | The student missed many meetings or was irresponsive (0-1) | The student respected others and listened to different opinions (2-0) |
| Khoi Ly | 7<br>I was tasked with developing the edge servers for both branch of the project: the inside and the outside, including features such as Discord API called, MQTT and Serial communication. I was also responsible for ensuring that the programs from different abstract layers work seamlessly together, while also recording the demonstration by myself. I was not taking a significant part, however, due to my times being mostly dedicated to development and demonstration. I finished my | | | 4<br>My initial task was around the same level of difficulty as the others, involving serial and MQTT communication, database handing, and API calling. This task required me to learn new concepts and techniques like ensuring that the data taken from serial is compatible with that of MQTT and vice versa; working with Discord API; or handling threading problems for non-blocking processes. In addition, in trying to integrate all different components together, I also learned to use OpenWeather API to get | | | 2<br>I was the one allocating tasks for other team members, based on Jeren's and mine proposed architecture. I was also the one to propose new features, as well as designing the MQTT topic structure for the team to follow. | | 2<br>I attended all team meetings and sometimes called for meeting myself. I also ensure that every change I made to the program is clearly communicated, with detailed explanation of what have been done and what should be done in future implementation. | | | 1<br>I was generally listened to other suggestion and welcome inputs at the start of the project. Towards the end of the project, however, I started to refuse some of the team's |

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| | tasks on time with excellent quality, adhering to the initial proposed architecture with some additional features proposed by others (inside acknowledgement and dataset analytics). | weather data, implement more robust actuators condition, as well as daily scheduling processes for Discord report generation. I wasn't taking the initiative to start the project, however, since I waited quite late until I implemented my program. | | | suggestion due to time constraints. |
| Ved Jay Makhijani | 3<br>Ved was tasked with implementing all functionalities of the cloud server, including the cloud user interface hosted on THingsBoard and a script to initiate Openweather API call and collect MQTT messages. His work, while function on its own, did not work with other parts due to the data structure the cloud server used to transmit data was completely different from the one that the edges expected, despite my effort to communicate the expected data structure many days earlier. He was also starting his work much later than the rest of the team, having barely a complete work on the day of demonstration | 3<br>Ved was implementing the cloud layer, which involves ThingsBoard dashboard design, RPC request handling, OpenWeather API handiling, and ream-time data visualisation; all of which were relatively new and required some research. But he implements his part very late into the project, which is on the day of demonstration. Before which he never takes initiative in any way. However, he was the one suggesting database analytics, despite his suggestion being vastly vague and ambiguous. | 1<br>Ved had some innovative suggestions, but mostly tried to follow the initial proposed plan. He also suggested the database analytics. | 1<br>Ved communicated quite frequently at the start and towards the very end of the project, however he didn't communicate much during the period in between. He also did not attended a lot of meetings that he said he was going to attend; while also did not fully comprehended the concepts and summaries that were communicated, leading to his implementation majorly flawed and incompatible. | 2<br>Ved was an agreeable member, who always calm in demeanour towards others, even when his ideas were rejected or when he received complains about his work. |

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| | while also containing many bugs and were completely incompatible with our implemented program. | | | | |
| Jeren Tang | 5<br>Jeren was tasked with developing the entirety of the physical layer, including interfacing with the light, temperature, and sound sensors; the LED, servo motor, and fan motor actuators.; as well as transmit the data received from sensors and actuators to the edge layer. His work was functional, albeit not fully compatible with the edge servers and required minor adjustment to be made. This is understandable, because he was the first member to finish his work, when no other parts have been completed yet, leading to him not having full reference on what he should implement. | 3<br>Jeren was responsible for programming the Arduinos to read, processed, and transmitted the sensors and actuators data; all of which required sophisticated understanding of the electronic components that were used in the system. He was also the first one to propose the initial architecture of the system, while also suggesting the bidirectional communication between the outside and inside branches, helping us adhere more to the assignment requirement. | 1<br>Jeren was the first one to proposed the system's general concept. He also proposed the bidirectional communication between inside and outside branches. He followed the proposed architectures afterward. | 2<br>Jeren was very adept in sharing information about his work and his intention, making working with him very pleasant. He also took the initiative to call for meetings multiple times, while also attended all meetings dully. However, he rarely contributed to the meetings when he was there, which may come from the fact that me and Ved were working intensely with the edge servers and cloud while his part of the system, the physical devices, were largely unnecessary for that instance. | 2<br>Jeren respected other opinion, and took on criticism very well; aiming to fix the issues in his code without raising complaints. |