**PROJECT NAME: NEMO**

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| REQ. # | FUNCTIONAL REQUIREMENTS |
|  | **The system must regulate water parameters such as water temperature, water acidity, oxygen levels, and the ammonia concentration levels automatically.** |
|  | **The system must include sensors to adjust said water quality parameters as needed to maintain optimal conditions for fish health and growth.** |
|  | **The system must implement an automated feeding system that regulates feed rate based on factors such as the size of a the fish, it’s growth rate, it’s sex and enviromental conditions of the farm.** |
|  | **The system must dispense appropriate amounts of fish food at pre-scheduled time intervals to optimize fish growth while minimizing wastage.** |
|  | **The system must monitor fish stocks, including species, number and size distribution. It should allow for easy recording of new stock additions and removals due to harvest or death.** |
|  | **The system must conduct real-time monitoring of fish health indicators and enable early detection of diseases.** |
|  | **The system must implement preventive measures such as vaccination schedules, water treatment protocols, and biosecurity measures to minimize disease outbreaks.** |
|  | **The system must help plan and execute fish conservation activities based on factors such as fish size, market demand and handling capacity** |
|  | **The system must continuously monitor the health of the fish and warn of possible disease.** |
|  | **The system must activate water purification protocols when it detects that fish are infected with any epidemic disease.** |
| REQ. # | **NON-FUNCTIONAL REQUIREMENTS** |
|  | **The filtration system used for maintaining water cleanliness should specify the time it takes to clean a certain volume of water within a defined period.** |
|  | **Security measures should be implemented around the fish pond to prevent unauthorized access, such as fences or gates to prevent children and other animals from entering.** |
|  | **Accessibility for maintenance and cleaning of the fish pond is essential; filtration systems and other equipment should be easily accessible.** |
|  | **The reliability and durability of automatic systems regulating water levels in the pond should be ensured.** |
|  | **The fish farm must be aesthetically pleasing and blend well with the surroundings.** |
|  | **The time and effort required for maintenance and cleaning of the fish pond should be minimized.** |