Project	Component / Subsystem	Description / Notes																													
Aquaponics	Greenhouse Subsystem	Aquaponics Greenhouse Subsystem Overview The Aquaponics Greenhouse Subsystem integrates a fish tank with hydroponic grow beds in a controlled greenhouse environment. Fish waste provides nutrients for plants, while plants filter water for the fish. This subsystem includes the greenhouse structure, water circulation system, lighting, and environmental controls.																													
Requirement ID	Requirement Description	Requirement Type	Priority	Verification Method	Verification Status	Test Case ID	Test Case Description	Test Result	Test Date	Tested By	Defect ID	Defect Description	Defect Status	Defect Severity	Defect Priority	Notes																	
REQ-001	The greenhouse shall maintain a temperature between 18°C and 30°C.	Functional	High	Test	Not Started																										
REQ-002	The greenhouse shall maintain a relative humidity between 50% and 80%.	Functional	High	Test	Not Started																										
REQ-003	The greenhouse shall provide at least 14 hours of light per day.	Functional	High	Test	Not Started																										
REQ-004	The greenhouse shall have a water circulation system that ensures oxygenation of the fish tank.	Functional	High	Test	Not Started																										
REQ-005	The greenhouse shall have a backup power system for critical components.	Functional	High	Test	Not Started																										
REQ-006	The greenhouse shall have a water level sensor in the fish tank.	Functional	High	Test	Not Started																										
REQ-007	The greenhouse shall have a temperature sensor in the fish tank.	Functional	High	Test	Not Started																										
REQ-008	The greenhouse shall have a humidity sensor in the fish tank.	Functional	High	Test	Not Started																										
REQ-009	The greenhouse shall have a pH sensor in the fish tank.	Functional	High	Test	Not Started																										
REQ-010	The greenhouse shall have a dissolved oxygen sensor in the fish tank.	Functional	High	Test	Not Started																										
REQ-011	The greenhouse shall have a water flow sensor in the water circulation system.	Functional	High	Test	Not Started																										
REQ-012	The greenhouse shall have a water pump for the water circulation system.	Functional	High	Test	Not Started																										
REQ-013	The greenhouse shall have a water filter for the water circulation system.	Functional	High	Test	Not Started																										
REQ-014	The greenhouse shall have a water heater for the water circulation system.	Functional	High	Test	Not Started																										
REQ-015	The greenhouse shall have a water cooler for the water circulation system.	Functional	High	Test	Not Started																										
REQ-016	The greenhouse shall have a water level controller for the water circulation system.	Functional	High	Test	Not Started																										
REQ-017	The greenhouse shall have a temperature controller for the water circulation system.	Functional	High	Test	Not Started																										
REQ-018	The greenhouse shall have a humidity controller for the water circulation system.	Functional	High	Test	Not Started																										
REQ-019	The greenhouse shall have a pH controller for the water circulation system.	Functional	High	Test	Not Started																										
REQ-020	The greenhouse shall have a dissolved oxygen controller for the water circulation system.	Functional	High	Test	Not Started																										