Final Presentation

SCARA BREED

ISEP INSTITUTO SUPERIOR DE ENGENHARIA DO PORTO

TEAM 4

20/06/2024

Team Scarabreed

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Problem

Habitat loss

Pesticide

Climate change

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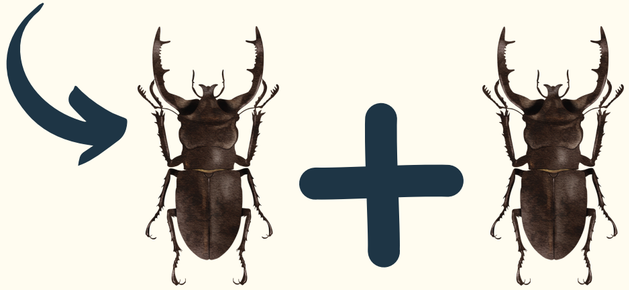
Decline in population

Objectives

Specialize for beetles



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Breeding device

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Restore ecosystems

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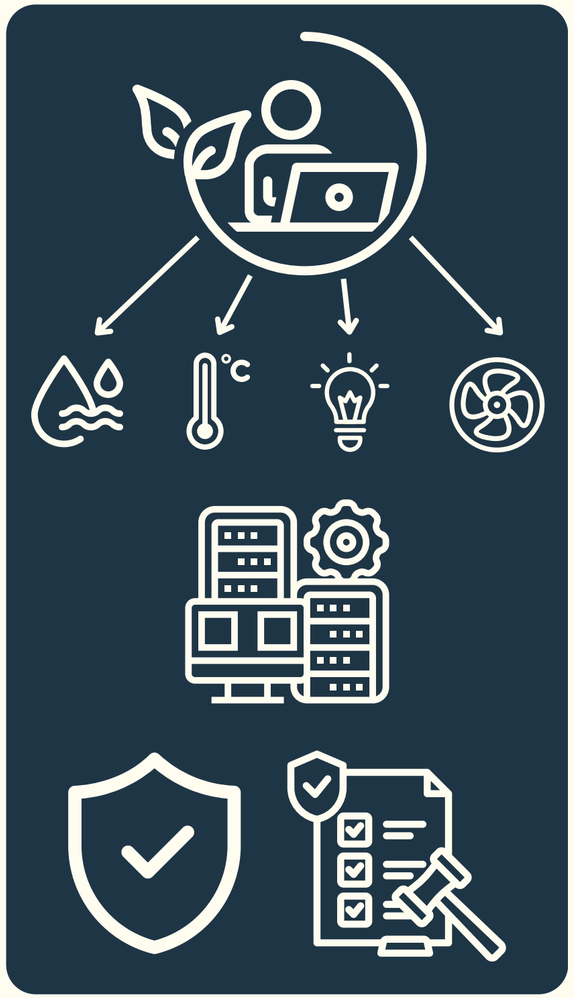
Requirements

PRODUCTS



BUDGET

EU DIRECTIVES

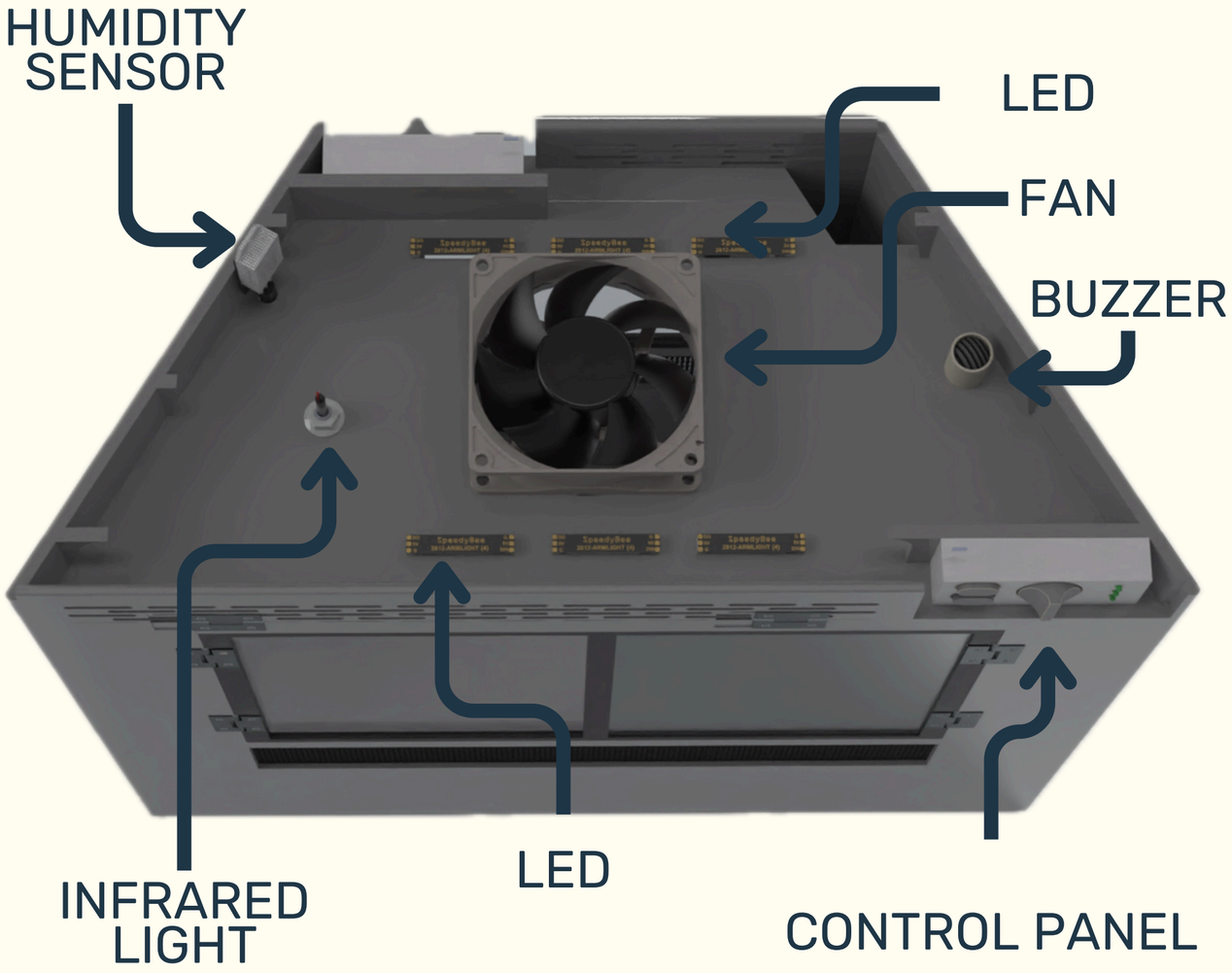
Directive
92/43/EEC

ENVIRONMENT & SUSTAINABLE

MARKETING

Structure & Design

Smart Control & App



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Material use

Window	Transparent Plate
Plate	Main Materials
Hinge	For the Doors
Screw	For the Hinges
Washer	For the Screws
Wood Screw	
Sealing	For the doors
Door Magnet	For the Doors
Wood Glue	To connect the Wood
Resistors	1k Ohm Resistors
Buzzer	Notification Indicator

Microcontroller ESP32	Mind of all electronics
LCD Display	I2C simple display
LEDs for inside light	Amber emitter diodes for light
Door contact	Check if the doors are closed
Humidity and Temperature Sensor	High accuracy and Resolution
Breadboard	Connection modules-microcontroller
Jumper Wires	With breadboard provides connection
Button	Part of user interface. Changing menus.
Power Supply	Provides power for system
Power Connector	Provides connection to power
Fan	5V DC Fan for ventilation
MOFSET	Using IRFZ44NPBF as level shifter for PWM regulation for fan

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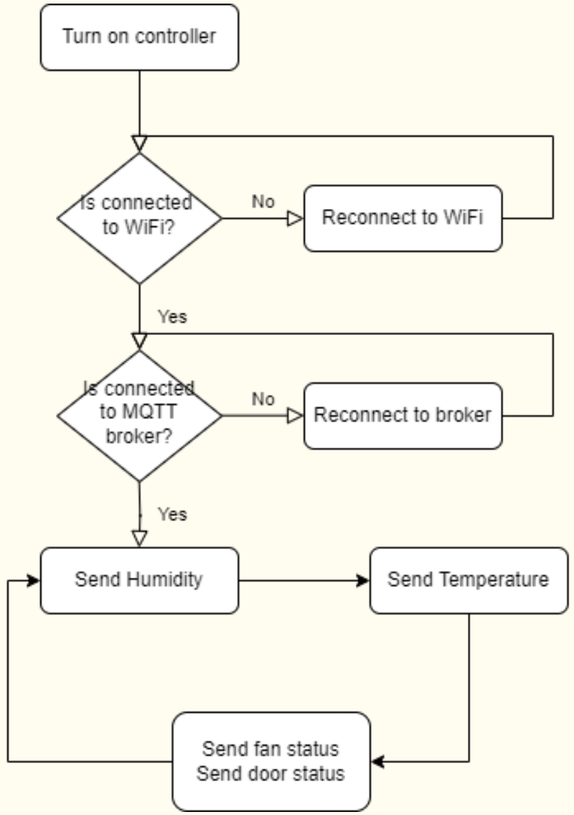
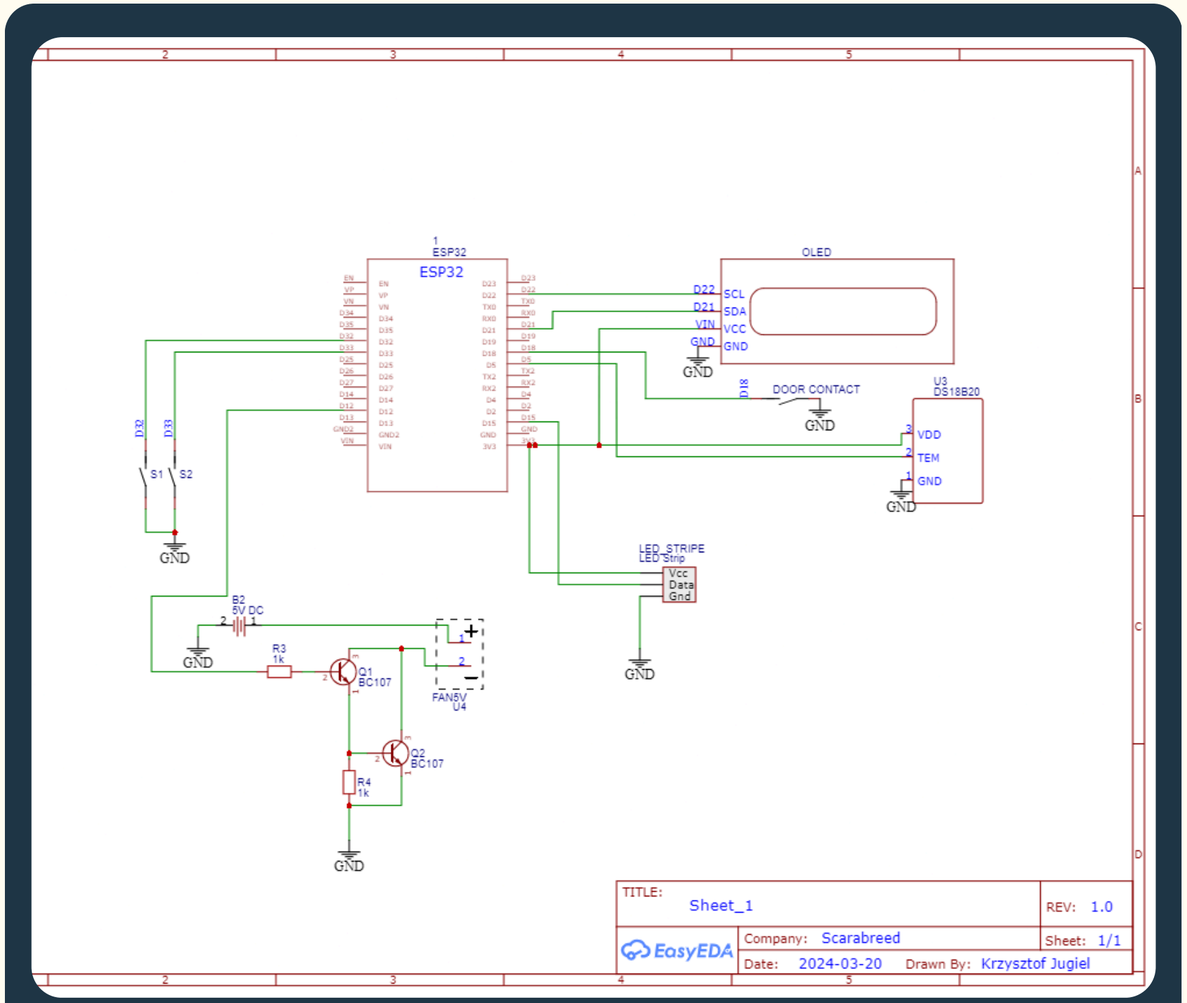
The Prototype





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Conclusion

Achievements

Limitations

Future Work

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Preserve Biodoversity with Scarabreed. Your Beetle Breeding, Your way !