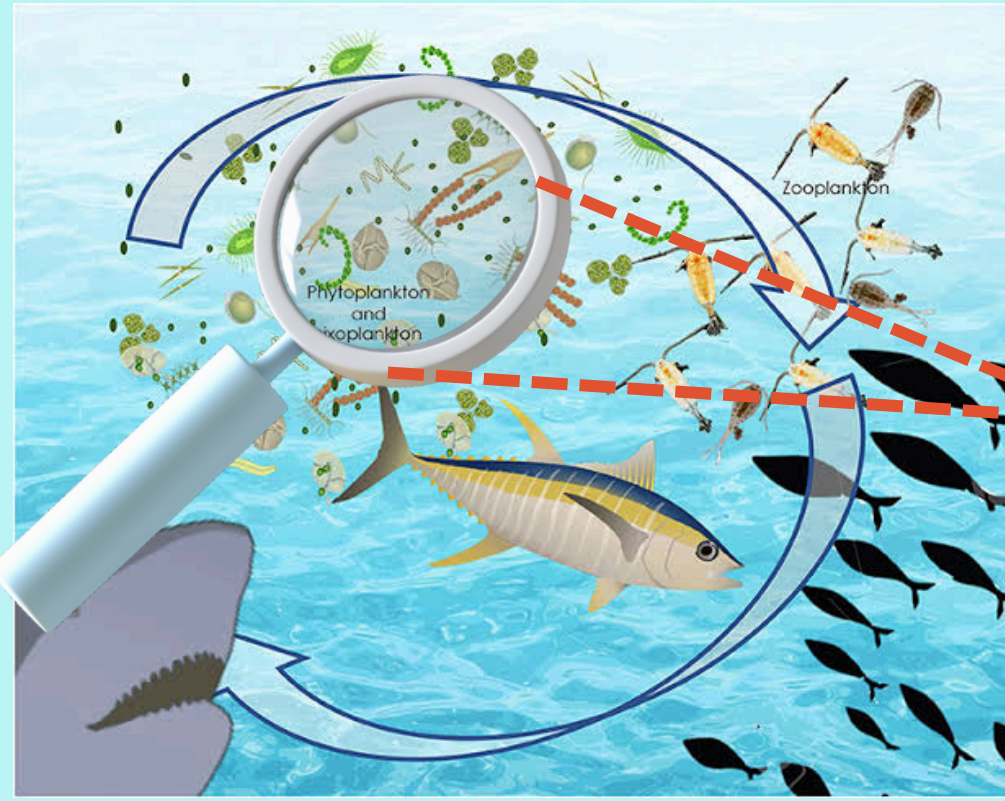


AUTOMATED PLANKTON CULTURE KIT

to increase the reproduction rate of freshwater phytoplankton *Spirulina platensis* in aquatic animal nursery

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Introduction



Spirulina platensis
Main phytoplankton that related to this problem

Objectives

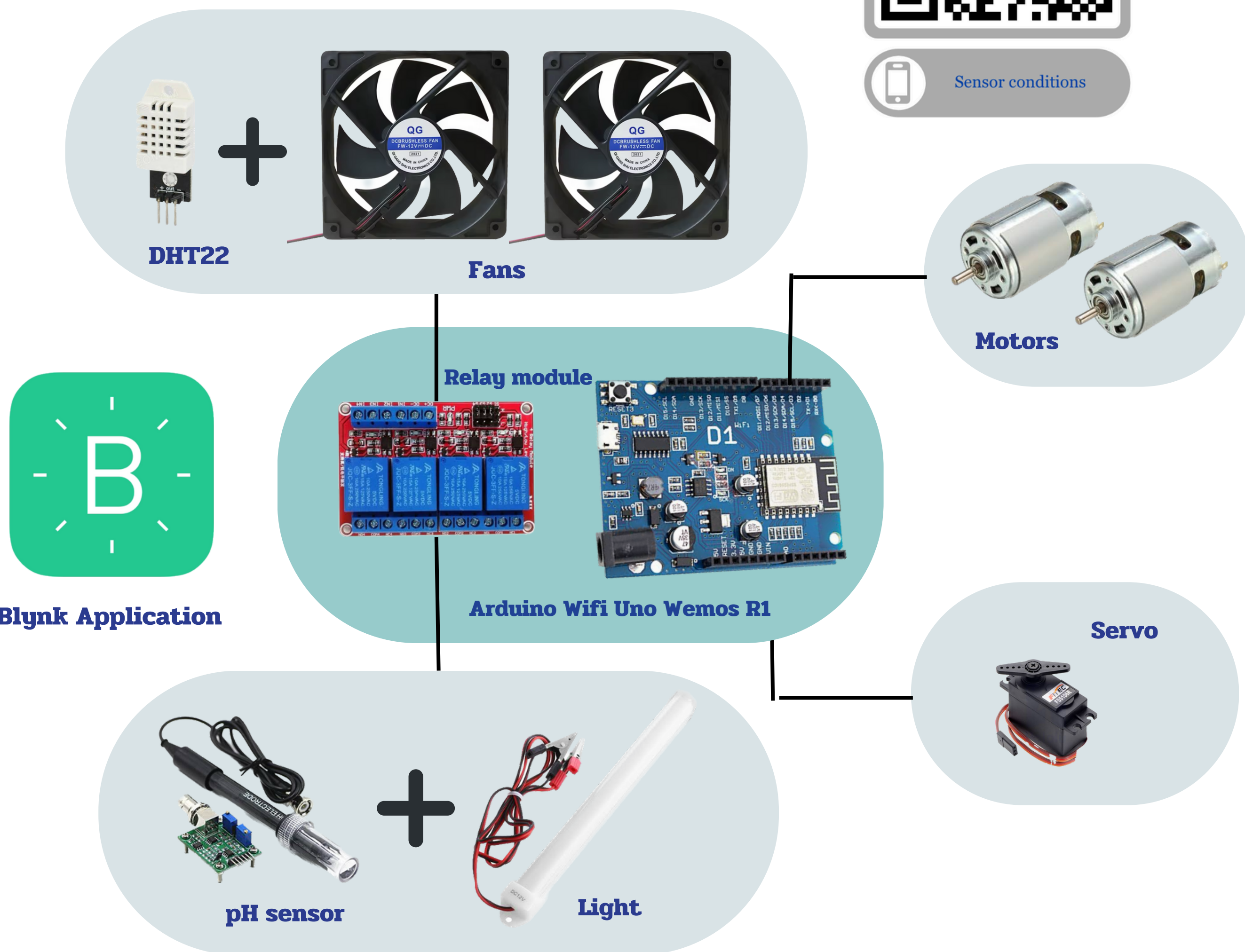
1. To design and develop an Automated *Spirulina platensis* Plankton Culture Kit that can control the factors affecting the number of plankton.
2. To increase the *Spirulina platensis* plankton reproduction rate from the Automated *S. platensis* Plankton Culture Kit.

Methodology

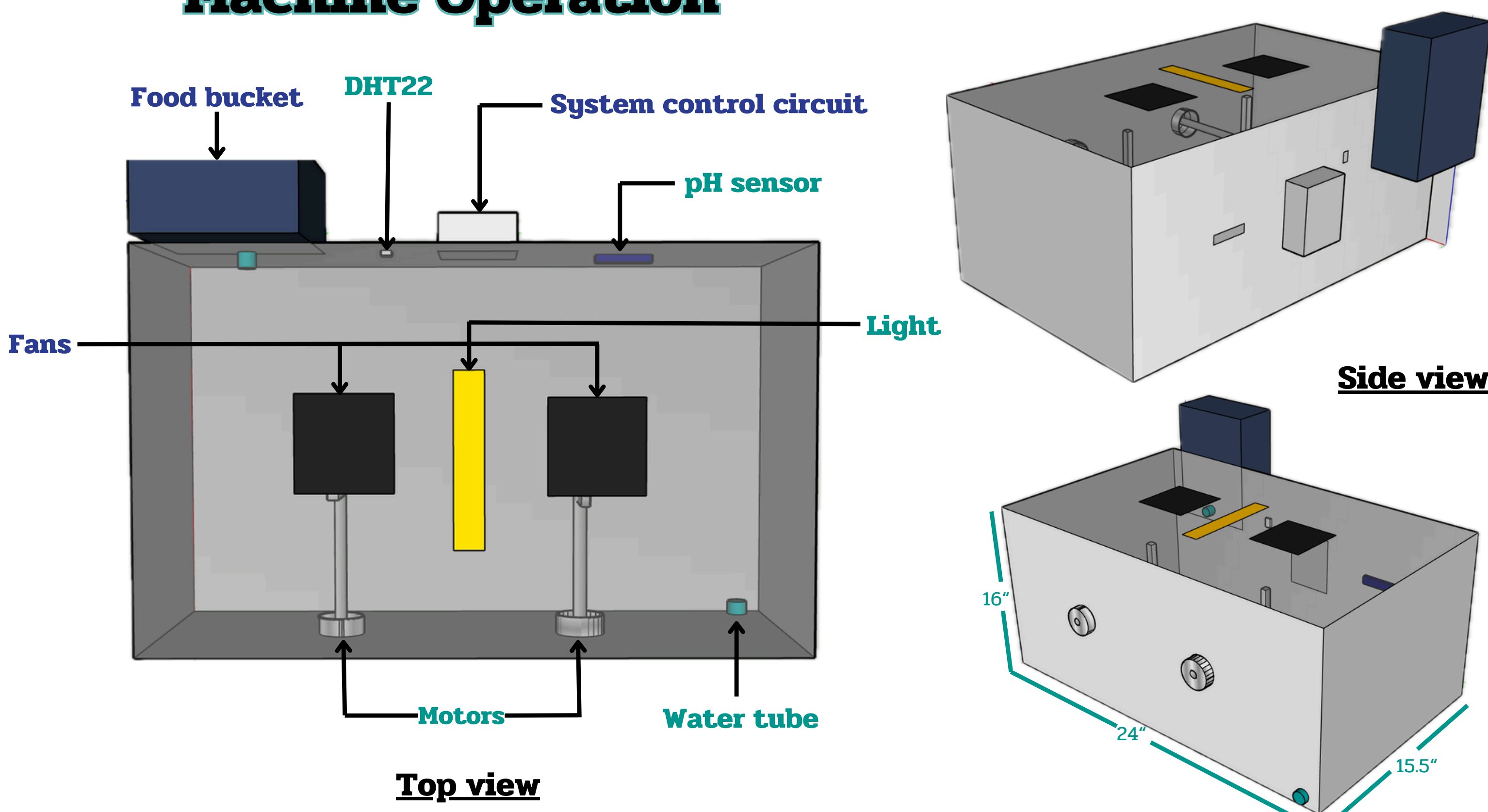
Device Operation



Sensor conditions



Machine Operation

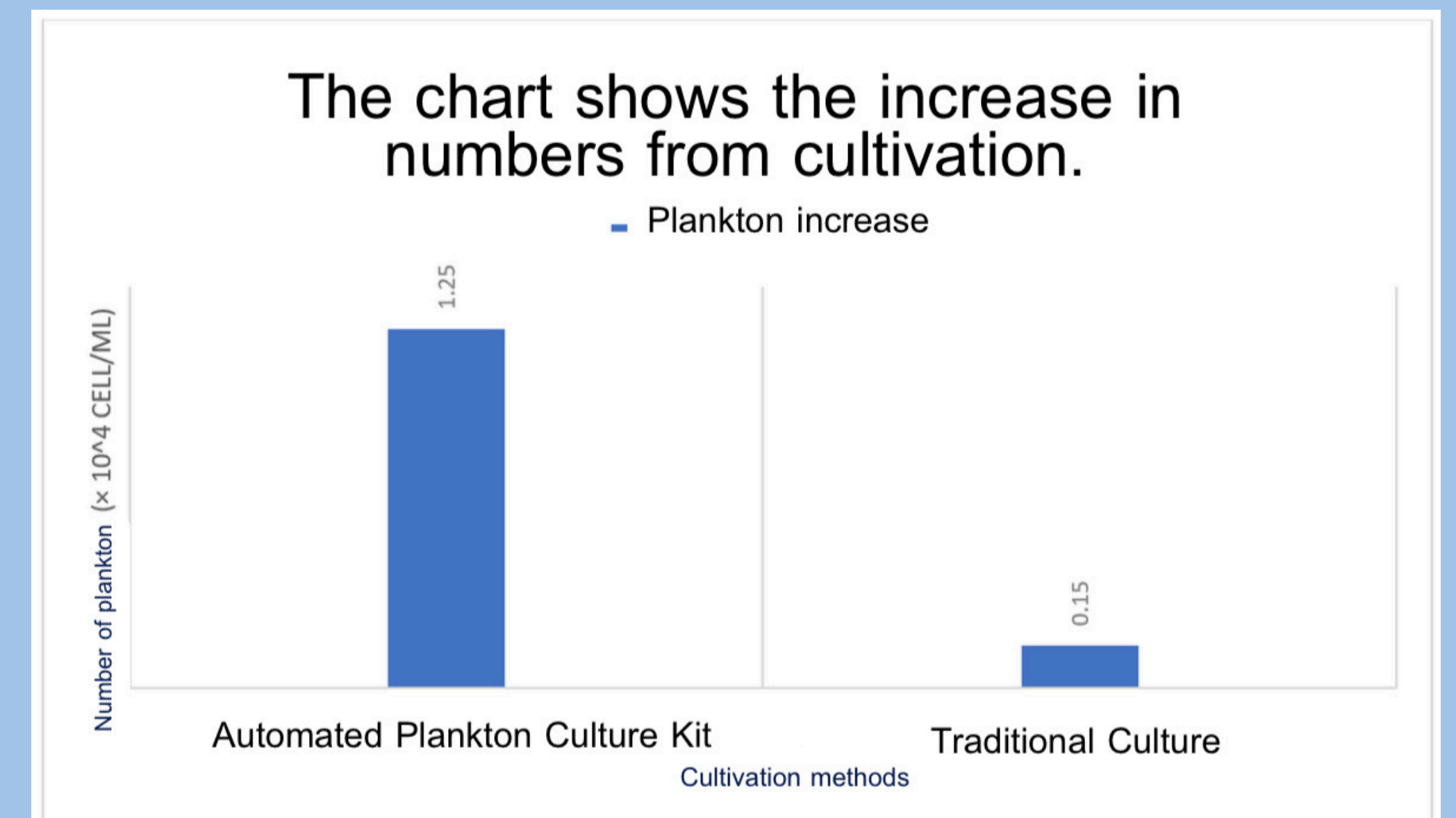


Results and Discussion

Design and Functionality of the Automated plankton culture kit

Devices	Working	Conditions
DHT22 sensor	✓	If temp < 35 °C operate fan B temp > 40 °C operate fan A
pH sensor	✓	If pH of water < 9 turn on the light
Motors	✓	Running all the time
Servo	✓	Controlling food bucket
Blynk application	✓	Sending working results to mobile phone

Comparison of *S. platensis* reproduction rates



Conclusion



References

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- [2] Ladda Wongrat. 2001. Phytoplankton. Faculty of Fisheries, Department of Fishery Biology, Kasetsart University.
- [3] Venkataraman, L. V. 1983. Bluegreen Alga : *Spirulina*. Central Food Technological Research Institute, Mysore, India.