

ABSTRACT

Team ID : RB- 69890241

Competition : RowBoatics

Construction of Hull :

- a. Dimensions : Length - 31cm
Breadth - 11.5cm (back)
Height - 9.4 cm (excluding rudder and propeller)
- b. Material : Constructed from "No Parking" cardboards
Edges stitched together with a synthetic thread
Epoxy resin to secure the joints (Araldite)
A coating of Epoxy applied all over the surface of the boat to make it water resistant
Outer layer sprayed with oil paint for better finish
- c. Weight : Can hold upto 1kg
- d. Top : Covered with Kaizen foam for a better finish

Controlling the boat :

- a. Board : Arduino Uno
- b. Modules : NRF24L01 transceiver with antenna for a long range transmission
- c. Motor : Servo Motor connected to the rudder to control the Left - Right movement of the boat
: Brushless DC motor 2100KV with ESC connected to a propeller through U-Joint to a propeller shaft to move the boat front
Controlled using a joystick at the transmitter end
- d. Battery : 3 Cell LiPo for the motor
9V E type battery for the receiver and transmitter
- e. Accessories : Rudder - 4cm
Propeller : 2 blade propeller - 3cm diameter
Propeller shaft
U - joint

Estimated cost :

NRF24L01 transmitter and receiver with antenna- 320

Joystick controllers - 180

Dual PCB-240

Voltage regulator, switch- 50

Foam-280 (for a roll)

Spray paint-190

Araldite-110

Total - Rs . 1370

Control-

1.NRF24L01

2.NRF24L01 with antenna

3.Switches , voltage regulators

4.Joysticks

5.Dual PCB

Construction-

1.Epoxy resin and Hardener

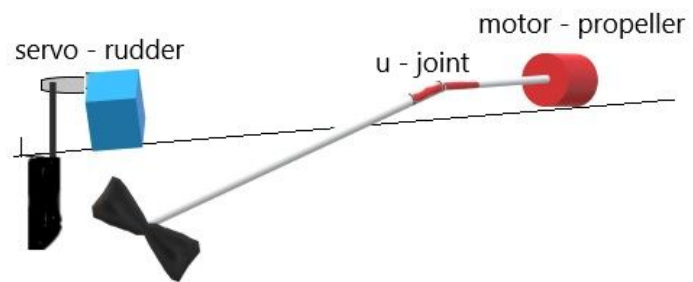
2.Paint

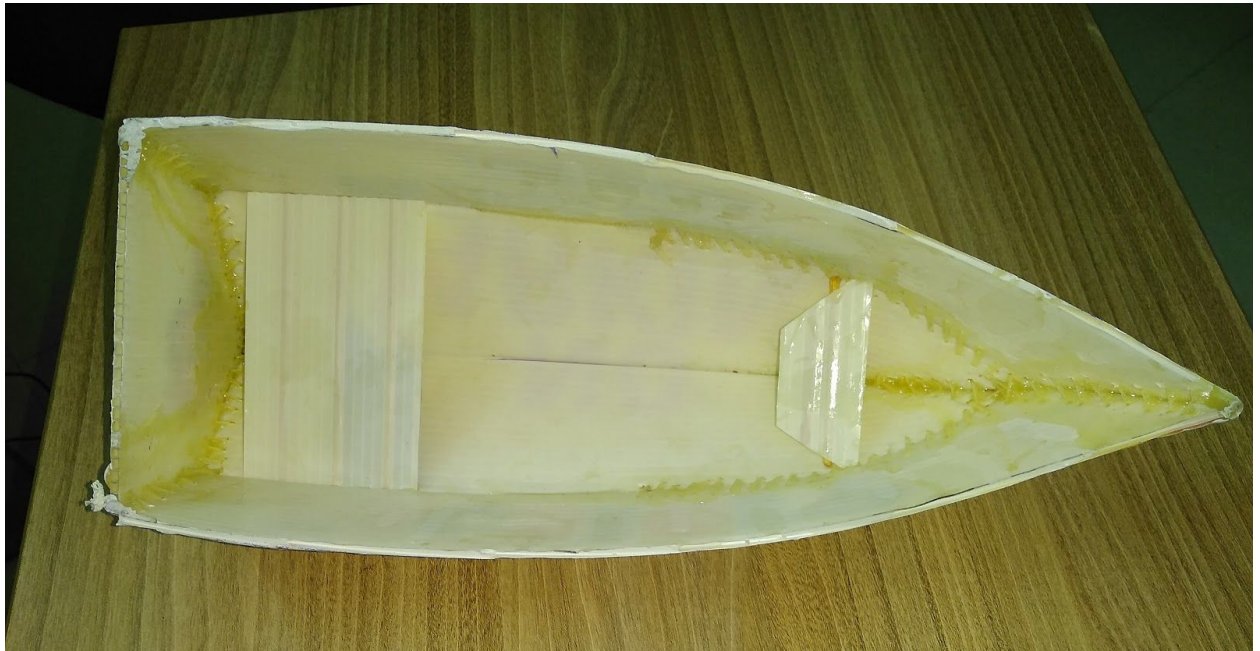
3.Foam

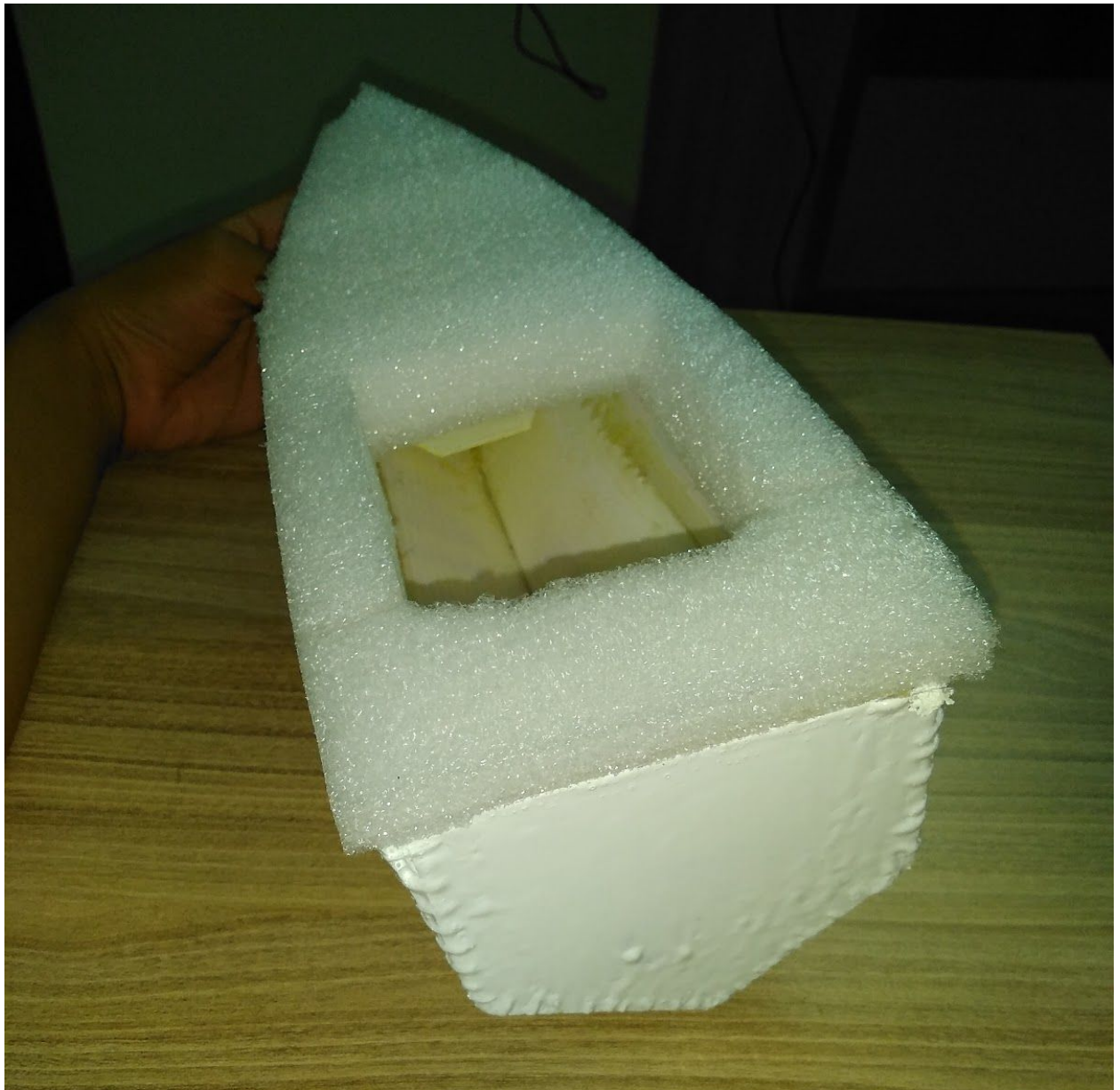
Team Members :

1. Sakshi Vattikuti
2. Nikitha Sharma
3. Manjunath Hegde

MODEL









Model not fully constructed , this is just for a reference as to how it's constructed .