RoboVR

SRB GOLF

About the game:

Golf is one of the most popular games played throughout the world. In this game, the player uses a golf stick to shoot a ball of roughly 4 cm in diameter into a hole to score points. Here, we will show you how you can make a robot which can play the game Golf.

Components and its Specifications:

Sr. No.	Components	Specifications
1.	Chassis	Aluminum Sheet (5mm thick)
2.	DC Motor(x1)	60 rpm
3.	Johnson Motors (x4)	300 rpm
4.	Wheels(x4)	Off-road type
5.	Battery	5A, 12V
6.	Remote	With 3 DPDT switches
7.	Wires	8m-10m

Robot Details:

Robot Dimensions: 10” x 13” x 7”

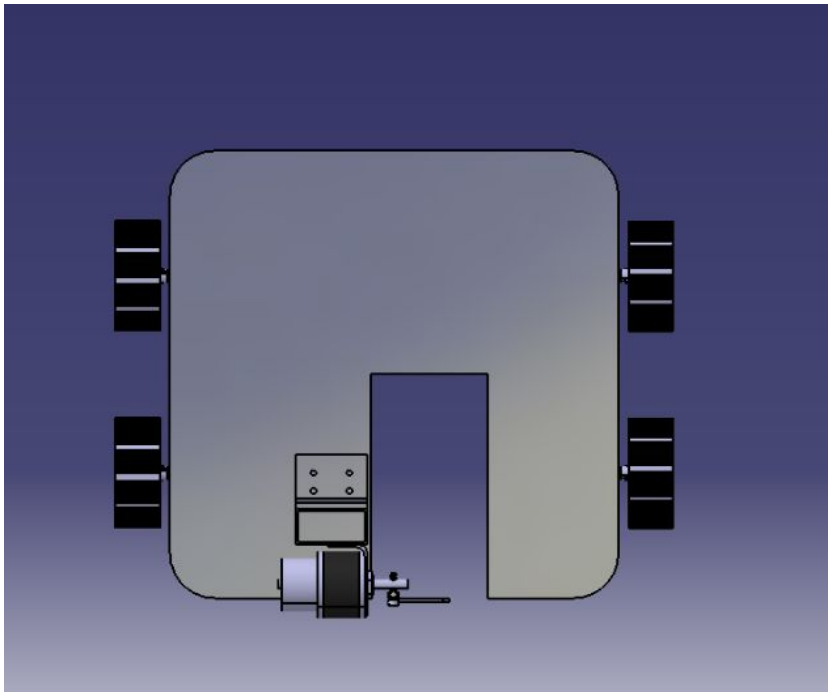
Robot Weight: 2kg

Robot Control: Wired

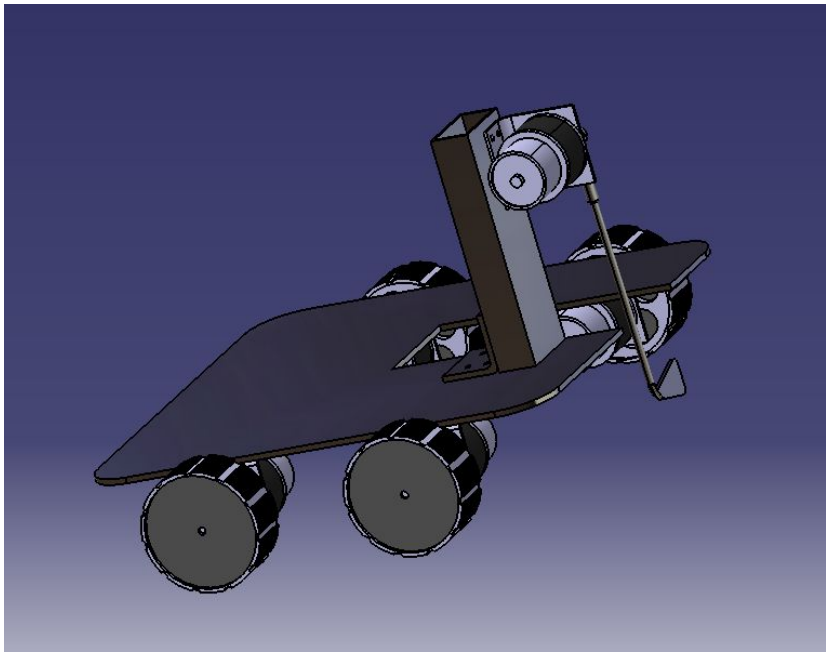
Robot Drive: 4 Wheel Drive

Mechanical Design:

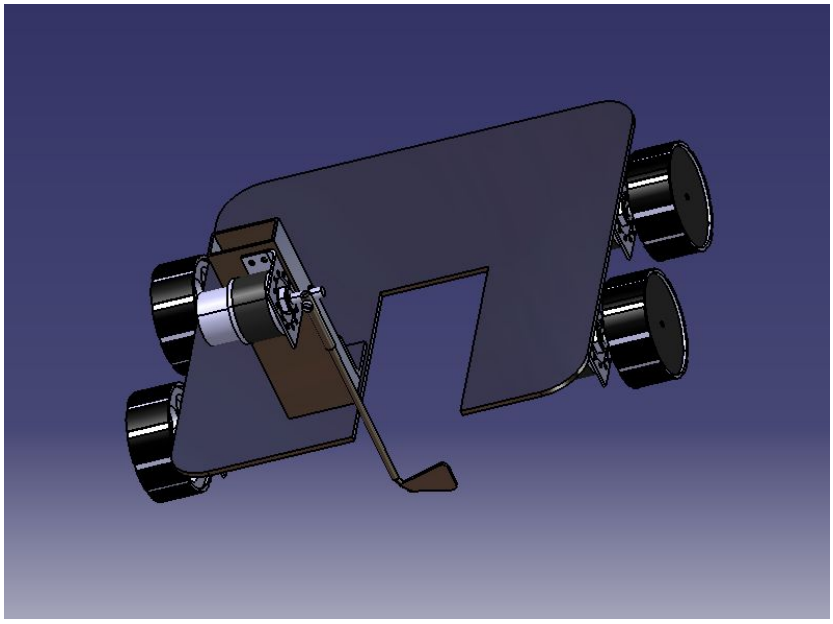
Top View



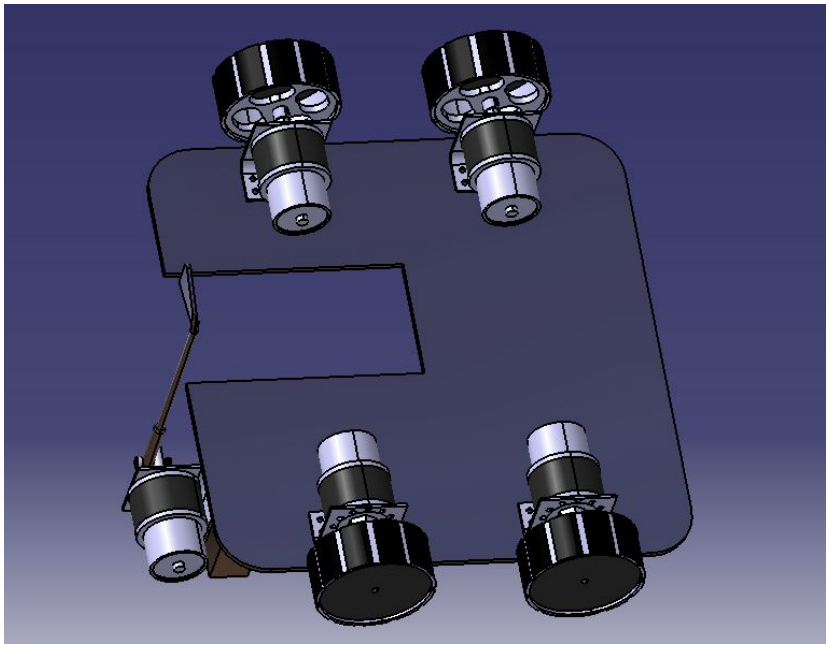
Side View



Front View



Bottom View

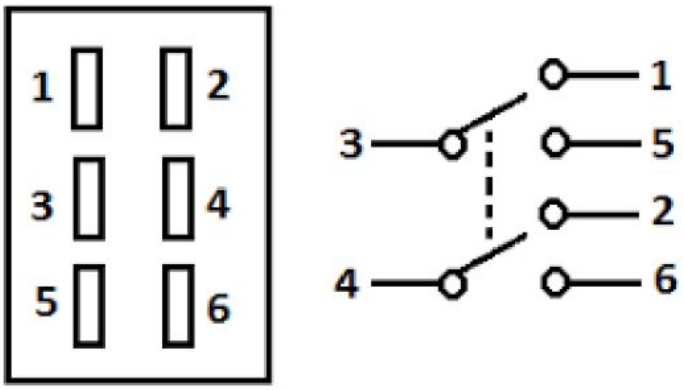


Remote Details:

A similar remote is needed to be built for this robot in which 3 DPDT switches are to be attached instead of 2 as shown in the above figure.

A Double Pole Double Throw (DPDT) switch is an electromechanical switch that has 2 inputs and 4 outputs and each input has 2 corresponding outputs that it can connect to.

Given below is the diagram of a DPDT switch.



Working:

The robot moves on 4 wheels with the help of the DPDT switches remote. The robot is equipped with a 6” golf stick connected to it by a DC motor of 60 rpm. To hit the golf ball, you need to back-lift the golf stick and then push it forward. The power with which you want to hit the ball will depend on the back lift of the golf stick and how much you press the switch to hit the ball.

At first, place your robot so that the golf stick hits the center of the ball on its follow-through. Decide the power with which you want to hit the ball and back-lift the golf stick according to the decided power. Now, press the switch to hit the ball.

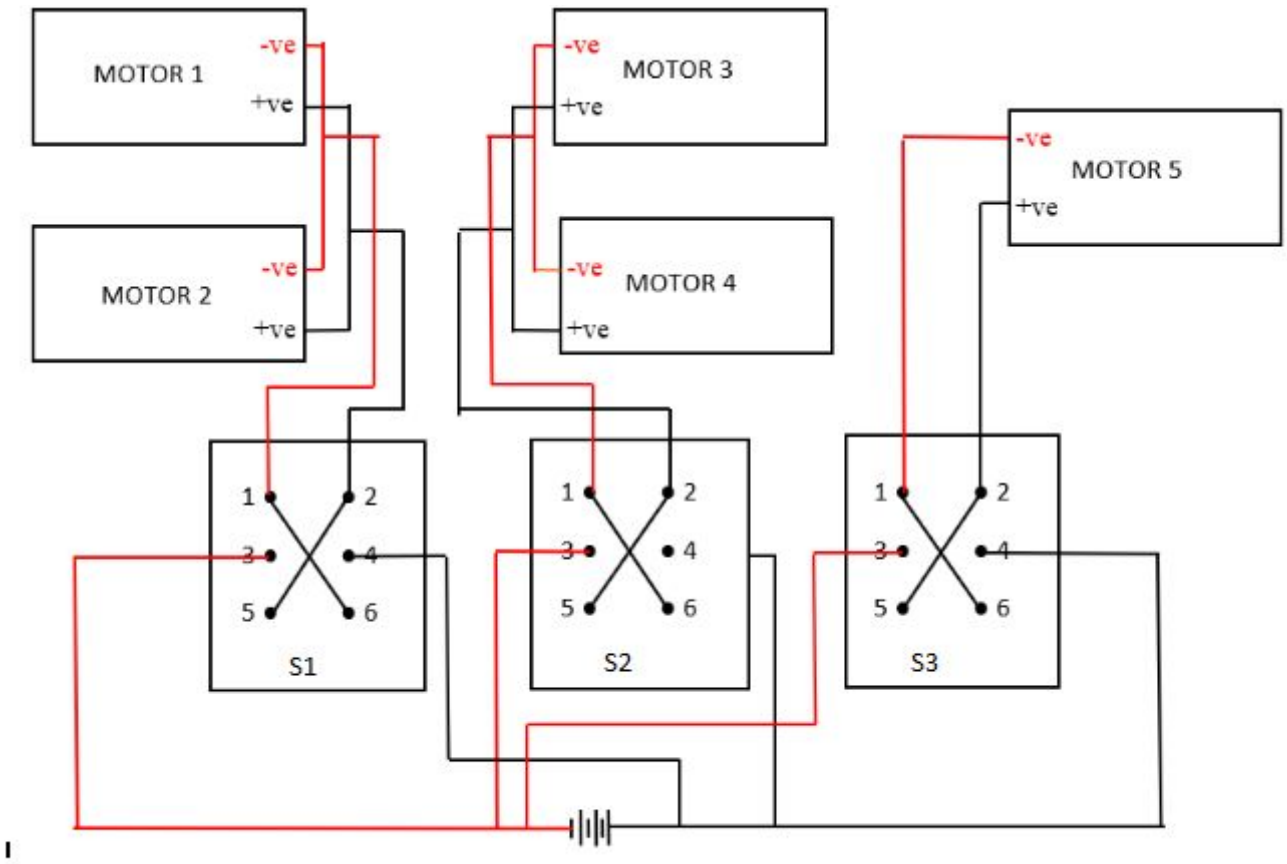
The movement of the robot with respect to the switch operation are given below in the table.

Movement of the Bot :

Motion	Switch s1	Switch s2
Forward	Forward	Forward
Backward	Backward	Backward
Left	n/c	Backward
Right	Backward	n/c
360° Right	Forward	Backward
360° Left	Backward	Forward

Movement of Stick	Switch S3
Up	Forward
Down	Backward

Connections:



Motors 1 and 2 are used to control the 2 left wheels of the robot and the Motors 3 and 4 are used to control the 2 right wheels of the robot. Motor 5 is used to rotate the golf stick and hit the ball.