

# **-: Segway Swaggers :-**

## **Team members:-**

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## **Description:-**

We are making a clone of Segway. It will work on dynamic stabilization ( self balance ). This will be controlled by a network of sensors for eg gyroscopic sensor. Below is a video attached on how we are going to make it self balancing. It can equipped with solar panel to charge its batteries.

## **Components required:- (may change)**

1. Body parts( will be taken from scrap or say 500 INR max)
2. Motor controller( 1000-1500 INR)( can be made using arduino and cost can be cut)
3. Tyres(1000 INR)
4. Micro controllers (arduino)(500 INR)
5. 5DOF module accelerometer + dual-axis gyro instrument IDG500/IDG655 650 ADXL335 (1200 INR) or gyroscopic sensor (1000 INR)
6. Batteries 12V 7amp (2\*350=700 INR)
7. Battery charger ( approx 700 INR )
8. Motor 24 volts 280-350 W electric motors (aprox 5000 INR)

\*\*\* the price mentioned above are extreme prices, we can easily arrange some parts like motors, battery, tyres, body parts etc. in very cheap rates.

# Implementation steps:-

Week 1 – Gather required knowledge for the project from wherever we can get.

Week 2 – Get components and start assembling of components of device and start building mechanical part.

Week 3 –complete dummy model and start testing and remove any bugs and any other difficulties.

Week 4 –prepare final model and present the project.

Week 5 - if still have have time we will go further and add some new features like adding head lamp, charging system for mobile and solar power system etc.

Some links we found useful to us:-

Video regarding “ how to make it self balancing”( <https://www.youtube.com/watch?v=S5IF9k65758> )

<http://www.instructables.com/id/Rideable-Segway-Clone-Low-Cost-and-Easy-Build/?ALLSTEPS>

Circuit for battery charger(

<http://www.circuitsgallery.com/2013/04/automatic-battery-charger-controller.html> )

Cost-around 10,000 INR( we have included extreme costs for some parts,it will be not that much.if the cost goes above the budget of itsp we are ready to pay from our pockets.)

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