1. What is the status of your project? Is it complete, if not then by what date will it get completed?

Our balancing robot is balancing itself for 5 to 10 seconds and then it falls down. But we want better result. It should balance itself for even more time (30 sec or more).We think we would complete it before 15th June.

2.According to your Plan of Action, what is your last week's work?

We made PCB consisting of IC L298N . WE attached johnson motors. Assembled the complete robot and started running it. We completed everything as we had planned. But a new problem arose. It is mentioned below.

3.How much work is left to be done on your project?

This is the calibration part going on. We are doing appropriate changes to robot body , code so that robot get good balance over itself.

4.Mention ALL purchases were made for your project, including the ones you think to buy in the coming week?

- sharp Sensors GP2D120
- Arduino Duemilanove w/ atmega328,
- Li-on battery,
- NiMH battery
- Motors 60 rpm 12 V,
- Johnson motors,
- L293D,L298,
- IC 7805,7809,
- Motor driver (supporting 2 dc motors and 2A current for each motor)
- two wheels (diameter =10.5cm),
- two wheels (diameter =7cm),
- acrylic sheets, L-clamps, connecting wires, connectors, pcb, double sided tape,wire joining tape,

5. What problems did you face with respect to project work in this week? What was the solution to these problems?

When we started running the robot IC L298N was also heating.We thought because of some problem in PCB it was happening so. We bought a ready made motor driver having same L298N motor driver IC. It was also getting heated. When we joined PCB and readymade motor driver in parallel that combination too got heated. After discussing with some senior mentors we came to know that because of high current flowing through it ,it was getting heated. But it will not burst like that L293D as IC L298N is made for high current requirement.

Sensors are not giving same readings for the same inclination. Robot body is biased. Most of the time it falls to one particular side. We are modifying our code so as to get same reading for the same inclinations. We are adjusting mass configuration of the robot to remove biasing .

improvement in the code :

```
//define time, prev_time and interval in the
beginning
time=millis();
if((time-prev_time)>interval){
D=kd*(difference-prev_difference);
prev_difference=difference;
prev_time=time;
}
//we have used a time measuring function
here(millis()).Because of this change in the
code the effect of D (differential) became
noticeable.
```

We have moved our power source (Li ion battery) to the bottom of the lower platform. Also we moved circuit part and Arduino from top to upper part of lower platform.

6. Contribution made by each team member in this week?

All team members are putting equal contribution and all are engaged in calibration part.

7. Who were your MENTORS? Provide a feedback about them?

Our mentor is Debajyoti Nandy. He guided us in almost every respect. We discussed with him all our doubts and he never hesitated in clearing our doubts. Most of our problems got solved by discussing with the mentor. He provided us his tools(like soldering gun , desoldering pump ,battery). Overall we had a very good time with our mentor.

8.What is your progress on the designing of A1 size poster and video about the project?

We have made videos when we were using dc motors. We have videos when we used high response Johnson motors and bot balance well for at at max 8-10 sec. We will make A1 size poster soon.

9.What is the status on your bills? What is their total amount? Have you made the spread sheet we had asked for?

Yes, we have made the spreadsheet.

10. Project Pictures (Compulsory) - Upload these pictures on the facebook group (ITSP 2012) also.