BTECH PROJECT PROPOSAL FORMAT

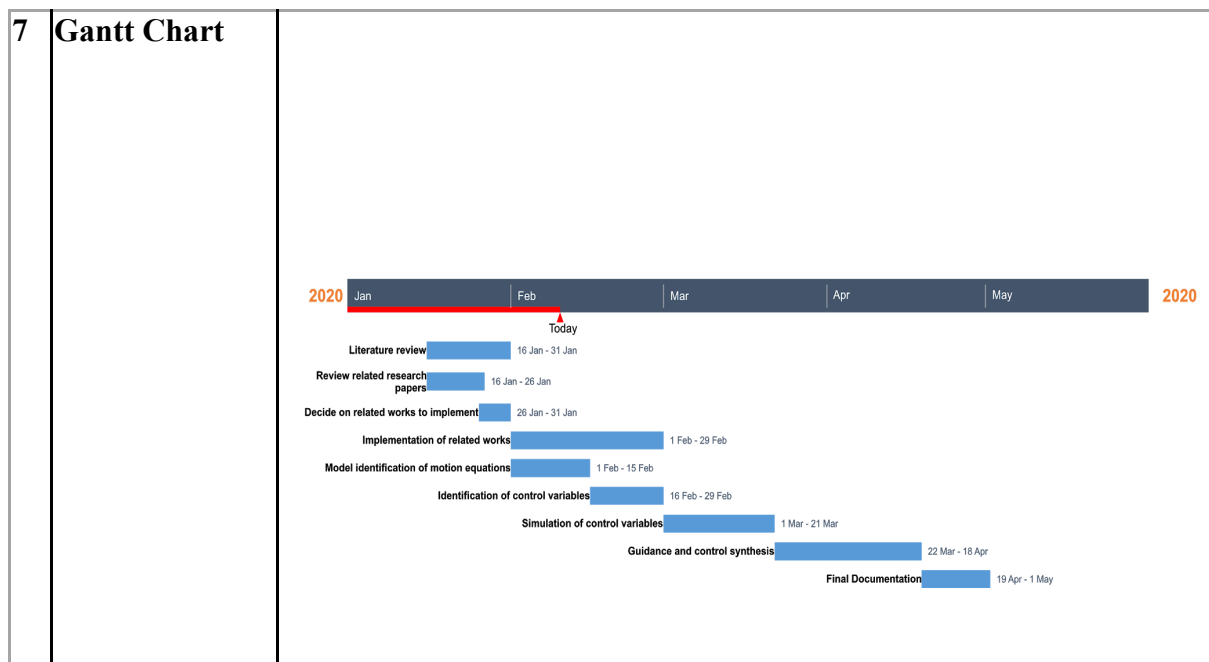| 1	Project Title	Laser Propulsion of Nanosat to Low Earth Orbit

2	Team Formation				
		Name	**Roll no**	**Branch**	**Contact no**
		Sakshi Shrivastava	AU1401090	ICT	9409572816

3	Project Mentor	Dr. Harshal Oza Assistant Professor School of Engineering and Applied Sciences, Ahmedabad University

4	Motivation	Current propulsion systems are reaching maturity and we have been unable to achieve even a fraction of relativistic speeds. Considering the time taken to travel the huge distances in space and the shortspan of our lifetime, travelling to another Earth like planet seems like an impossible dream. Even conducting research becomes difficult. Laser propulsion gives us the ability to heavily reduce spacecraft weight and a way to achieve relativistic speeds.

5	Expected Outcomes	At the end of this project, we would have the following outcomes: 1. Feasibility study of navigation using laser propulsion method. 2. Simulating propulsion of nanosat using relevant software. 3. Guidance and control synthesis for nanosat.

6	Work Plan	The work plan includes spending considerable time understanding the problem statement and doing a feasibility study of the project by conducting extensive literature review. Understanding and implementation of the mathematics of relevant research papers. Testing in a simulation environment of the concept.

7	Gantt Chart	

8	Milestones	To achieve the outcomes mentioned above, the proposed work is divided into three major milestones: 1. Model identification of motion equations. 2. Identification of control variables. 3. Guidance and control synthesis.

9	Support and Requirement	Tools used: MATLAB, General Mission Analysis tool (GMAT)

10	Space	**Where: College Campus** **Area Needed (in m²): N.A**

11	Infrastructural Support (Water, Electrical, Power Supply ,Internet)	1. Internet supply needed along with open access to journals and conferences for literature review. 2. Access to software programs like MATLAB and GMAT.

12	Travel (With Justification)	N.A. (Currently no need for any kind of travel as a part of the project)

13	Budget	N.A. (Currently no need for any kind of travel as a part of the project)

14	Fabrication Facility	N.A. (Currently no need for any kind of fabrication facility as a part of the project)

15	End Of The Project	1. Literature Review. 2. BTech Project Report. 3. Exploring the possibility of publishing the results.
	What is to be done?	