

## **PROJECT ABSTRACT**

- **Project Title:-** Reading robot

- **Implementation:-**

### **Week 1 (4 May-10 May):-**

- i) To learn basics of image processing, Open CV and solid works.
- ii) To acquire the necessary components forming the mechanical and electrical part of the robot.
- iii) Discussing image processing with mentors and getting acquainted about the knowledge of image processing.

### **Week 2 (11 May-17 May):-**

- i) Implementing and testing the basics of image processing using webcam.
- ii) Identifying letters and digits in the image.

### **Week 3 (18 May- 24 May):-**

- i) Designing the mechanical structure of robot using Solidworks.
- ii) Constructing circuit to convert extracted letters and digits into speech.

### **Week 4 (25 May- 31 May):-**

- i) Assembling the bot and making it pronounce the recorded text using text to speech module.
- ii) Extending its ability to read short words and numbers.

**Week 5 (1 June- 7 June):-**

i) Completing the mechanism of bot and giving finishing touches to the bot.

**Week 6 (8 June- 14 June):-**

i) Final testing the bot for all types of words.

- Components and cost:-

- 1) Arduino:- Rs. 900
- 2) Webcam module:- Rs. 1000
- 3) Lead acid battery:- Rs. 250
- 4) Other components.

- What do we aim to learn from this project:-

- 1) Image processing is a major aspect to learn from this project.
- 2) Learning to code in Open CV.
- 3) Learning the functioning of various components of bot.