

Rough Assignment Run-through

- Programming:
 - Contest:
 - Printf, scanf
 - If else
 - If else
 - Loops
 - Arrays
 - Loops
 - Array
 - Loops
 - Stack
 - Queue, functions
 - Queue - no code snippet
 - Queue - no code snippet
 - Introduction to Python Programming - 1 assignment
 - Contest: Implementing structs and graph - 1 assignment
 - Contest: Implementing BFS - 1 assignment
 - i. Pointers
 - ii. Data Structures
- Designing:
 - Verbal Assignment - Design explanation - 1 assignment
 - Designing a part, gear - 1 assignment
 - CAD Design of Theo Jansen Mechanism - 1 assignment
- Computer Vision:
 - Averaging filters - 1 assignment
 - Filters 2 - 1 assignment
 - Converting image of blue and yellow squares into a matrix of 0s and 1s - 1 assignment
 - Hough transformations - 1 assignment
- Microcontrollers:
 - Potentiometer + led brightness- Arduino, Raspberry Pi- 1 assignment
 - Ultrasonic Sensor Mobile Interfacing: HC05, ESP - 1 assignment
 - Potentiometer circuit on RPi
 - Potentiometer Circuit on Arduino

- Ultrasonic Circuit using ESP module
- ROS:
 - Refer to photos on group

Project Work:

- Implementing Modified Flood-fill Algo: Micromouse paper
- IARC bot design
- Lane Detection, Finger Detection
- Microcontrollers project

Roles of Tutors:

- Solve all assignments of their topic before 30th November 2019
- Attend the Workshop of the topic you are assigned - ALL 3/4 DAYS. (You can go to the lecture hall/ CC lab and do your own work, but you have to be physically present there without fail)
- Help the Y19s in their assignments. (This will be easy as you have already solved them)

Venues:

Day	Date	Activity	Venue
1	Nov 30	Programming basics/ Graphs basics	NCL Windows Lab
2	Dec 1	Personal Mentoring	Robotics Club
3	Dec 2	Programming Stacks, Queues/ BFS Basics	NCL Windows Lab
4	Dec 3	Microcontrollers	KD101
5	Dec 4	Microcontrollers	KD101
6	Dec 5	Microcontrollers	KD101
7	Dec 6	Designing	KD101

8	Dec 7	Designing	NCL Windows Lab
9	Dec 8	Designing	NCL Windows Lab
10	Dec 9	CV	NCL Windows Lab
11	Dec 10	CV	NCL Windows Lab
12	Dec 11	CV	NCL Windows Lab
13	Dec 12	Spare Day	NCL Windows Lab
14	Dec 13	ROS	KD101
15	Dec 14	ROS	KD101
16	Dec 15	ROS	KD101
17	Dec 16	ROS	KD101

Slides

Deadlines