

CS6102 - COMPUTATIONAL THINKING LAB
(Week 11 – 02.02.2023)

1. Design a traffic control system that is to be installed in a four-way intersection. The algorithm should provide efficient traffic flow, reduce vehicle emissions, reduce rear end collisions and reduce waiting time.

Pointers:

- a. How much time is allocated for each direction?
- b. What happens if there is more traffic in one direction compared to the others?
- c. Can a traffic signal know if there is a vehicle waiting?
- d. What happens if there are VIP vehicles / ambulances / late buses?
- e. What about pedestrians?
- f. Monitoring of speeding vehicles / violators
- g. In times of calamities?
- h. If there are four traffic signals on a long road, should all the four traffic signals be coordinated? How?
- i. Learn from past experience?

2. Prepare a time schedule for yourself for the next two months.

Pointers:

- a. Less/ high priority jobs for each day / week /month
- b. Towards long term goals
- c. Towards short term goals
- d. Use of social networks

Find tools available for time management (Remember the Milk, Todoist)

3. Design a system that will assign tables in restaurants to customers:

Pointers:

- a. Number of tables
- b. Number of people that can be seated in a table
- c. Details of arriving people
- d. Handling customers who arrive without reserving a table earlier and customers who arrive with prior reservation
- e. Cancelling of reservation
- f. Changing the arrangement of tables based on the reservation