**First Year Internship 2022**

11 July 2022

Morning Session

**Problem Statement 1**

**We need an E-Stroller**

1. Mummy wheels the baby out.
2. Sometimes she is not able to push it, so we need assistance.
3. Sometimes going down the slope the stroller pulls her, and she is likely to fall.
4. Sometimes she must handle it with one hand as she is likely taking her knitting bag.
5. She is worried that somebody will lift the baby when granny is busy knitting.
6. She also needs some assistance while steering the stroller

Give some features to be added to an E-Stroller while keeping the above points in mind.

**Ans**

1. A sensor can be added to monitor position of mom along with motorized stroller to move along with her.
2. A weight sensor to see if the baby is in the stroller or not.
3. A GPS device to know the location of the stroller at any time.
4. A GPS device on the baby’s clothes to know the location of the baby at any time.
5. A sensor to sense the speed of the stroller and apply brakes if it is too fast.
6. A sensor to sense if the obstacles are in front of the stroller and control the wheels depending on the situation, to stop or to avoid the obstacle.
7. A sensor to see if the stroller is right side up or fallen.
8. Camera to monitor the baby and environment.
9. Fingerprint sensor to identify if the person using the stroller is a family member or not.
10. Audio device to check if the baby cries.
11. Sensor to sense intensity of sun and apply sun shield if required.
12. Sensor to see if it is raining and apply a cover over the baby to protect it from rain.
13. Switch to change from manual control to automated control.
14. An app to connect to smart watch which can track location of the mom and the gestures made by her.
15. The gestures can be linked to specific commands like stop or go or even direction control for the stroller.
16. Alarm that will be triggered if unauthorized user accesses the stroller