**Theoretical foundation:**

Second car measures distance from the first car by Ultrasonic sensor of EV3. Depending on the distance the car decides whether to move or not, increase or decrease speed. There are three bounds of distance on which the speed is balanced. These are transition distance, constant distance, and critical value. Transition distance is used for speed up or down. If the second car stays in the transition distance area, it follows a certain speed. Constant distance is used to keep a certain distance from the first car. The car keeps it moving in a balanced speed while staying in constant distance area. Critical value is used to stop the car when the first car also stops. A very small distance is used to stop the whole program for safety reason so that it does not clash with any object.

Some topics to describe:-

* Lego Mindstorm EV3
* Ultrasonic sensor
* leJOS
* Some pictures of EV3 and Ultrasonic sensor
* Input and output port(which port we are using)
* Diagram of car position and corresponding speed
* Algorithm
* Sequence diagram
* Tools(Hardware/Software)

Lego Mindstorm EV3: