**Why I chose Cruise control?**

Chosen Java virtual machine JamaicaVM was used more in automobile industry so we chose an application based on that.

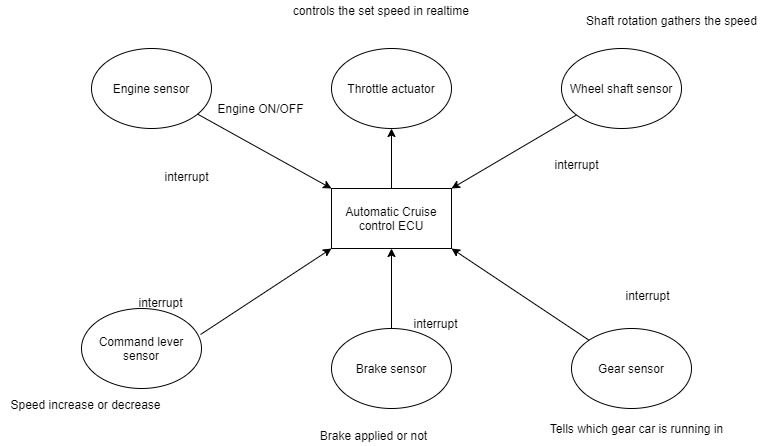
**Things which I found:**

* Automotive domain people test and develop in Matlab->Simulink they do software testing and then they convert the code for specific thing like autosar, emdedded code, we can generate C/C++ code. Then they implement in board. But in out college they keep a board and do freertos code simply.
* Should I use the sensors used in this also or random variable number generation will do.
* If you go to matlab and addons->> Hardware support tools we get everything like Arduino, beagle bone, raspberry pi and all.
* Using HIL(Hardware in loop) they can simulate and test the hardware
* To see the Simulink block this is the path to matlab example files C->Users->Prashaanth->Documents->Matlab->Examples->mpc\_featured. This Simulink aims at correcting the safe distance gap and telling the host car.

**Functionalities:**

* There will be a button for adjusting the necessary speed.
* The system will work only in top gear and above 70 KM/hr.
* If the brake is pressed the system will be deactivated.
* If the speed is set and activate button is pressed the cruise control system will be turned ON. I the system is ON the set speed will be maintained the driver has to lower or higher the speed manually based on the need and vehicle coming.
* Only when the engine is ON cruise control system works.
* If the driver tends to lower the gear the cruise control will be deactivated.

**Block diagram:**



**References:**

1. [https://in.mathworks.com/matlabcentral/answers/339523-compile-simulink-generated-code-in-arduino-ide](https://www.google.com/url?q=https://in.mathworks.com/matlabcentral/answers/339523-compile-simulink-generated-code-in-arduino-ide&sa=D&source=hangouts&ust=1590125485758000&usg=AFQjCNEu1kU7YaLXUCYuDctbBjAVEJmKnw)
2. <https://www.youtube.com/watch?v=9ttIZoUXCKY>  = This video shows how you can include different boards to dump the matlab code.
3. <https://en.wikipedia.org/wiki/Hardware-in-the-loop_simulation>
4. <https://www.youtube.com/watch?v=lOJLlc48VH0> =video shows the cruise control Simulink matlab

t1. get.priority() tells you the priority.

T1. Getname() tells you the thread number it’s available in Eclipse platform.

<https://www.youtube.com/watch?v=BeV8eh84tEM> = Check this link if you want to know priority or getname.