

Cruise Control System
SFWR ENG 3KO4 (Software Development), McMaster University
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Design the **component diagram** and **statechart(s)** for a cruise control system of an automobile with the following specifications:

- Cruise control system has an **on/off** button that activate/deactivate cruise system.
- Cruise control is disabled, after: i) **on/off** button is set to on, ii) **cancel** button is pressed; or iii) **brake** pedal is pressed.
- Cruise system will be enabled by pressing **set** or **resume** button.
- When system is enabled, it will maintain the speed of the car at the cruise speed.
- Cruise speed will be set to the car speed if cruise is enabled by the **set** button.
- When **set** button is pushed, the cruise speed will also be memorized.
- Cruise speed will be loaded from the memory, if cruise is enabled by the **resume** button.
- When cruise is enabled, **accelerate** pedal will bring the speed of the car up, but it will go down back to the cruise speed, when the pedal is released.
- When cruise is enabled, cruise speed can be adjusted by **accelerate** (up), and **coast** (down) buttons.
- Cruise speed can not be set below 40Km/h.