Cruise Control Functional Requirements

Cruise control systems were first introduced during the mid 1960′s as a means of reducing driver's fatigue on long motorway journeys. The cruise control function allows the driver of a car to maintain speed without pressing the accelerator pedal. The driver can switch on the cruise control by pressing the button "on" the dashboard of the car. The cruise control will switch on only when the engine is running, the speed is at least 40 km/h, and the brake pedal is not depressed.

When the cruise control is switched on, the cruise control sets the desired speed to the currently measured speed and then attempts to maintain the measured speed within a margin of 1.5 km/h of the desired speed.

Req ID	Functional Requirements
R1	To activate Cruise Control, the engine should be turned on
R2	The activation of the CC will hold the vehicle speed at the selected value.
R3	When the CC is enabled, accelerating the vehicle, will disable the CC.
R4	When the CC is enabled, braking will disable the CC.
R5	The user can turn the engine off anytime.
R6	When CC is enabled, the CC GUI should store and display the correct speed.
R7	Pressing the resume button should set the CC to last fixed speed.
R8	When we turn the engine on, the CC should be off.
R9	When the engine is turned off, the CC should be turned off.
R10	The odometer should show the correct distance when the CC is enabled/disabled.
R11	When the engine is off, clicking on the CC on/off should have no impact.
R12	System should display the Cruise control status (Green for on, Red for off).
R13	When the CC is turned on, clicking on the button "on" should have no impact.
R14	When the CC is turned off, clicking on the button "off" should have no impact.
R15	The CC cannot be set for a speed less than 40km/h
R16	The user should be able to run turn the CC on and off with no limit.
R17	When the engine is turned off then on, the CC should be turned off and showing the initial speed as zero.