

Exercise: Billy's car

Billy's car is a simple remote controlled toy car. In the exercises below you have to design using a UML state machine diagram and the UML class diagram for the program (but no implementation)

You can assume the remote for the car has only one button, the power button. If the power is off, the button turns the power on, and vice versa.

The events below are in order, one state leads to the state below.

- Power is turned on
 - Car moves forward and car headlights shine
- Power is turned off
 - Car stops and headlights turn off
- Power is turned on
 - Headlights shine
- Power is turned off
 - Headlights turn off
- Power is turned on
 - Car drives backwards with headlights on
- Power is turned off
 - Car stops, headlights go out.
- Power is turned on
 - Headlights shine
- Power is turned off
 - Headlights go out
- Power is turned on
 - Car goes forward with it headlights shining

Notice the states start over at the last event above.

Given that it is a bit complicated to simulate a car driving and shining its headlights, you could for example do system print outs.

Create in Astah: Class diagram and State machine diagram. DON'T write the java program yet.....