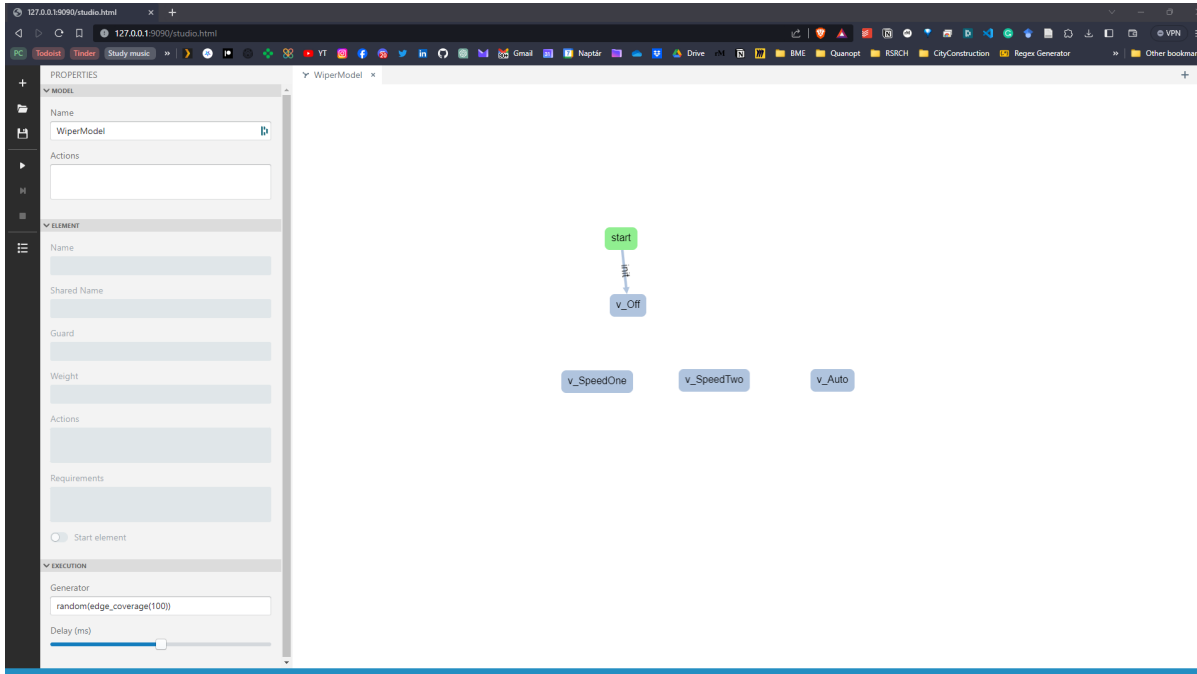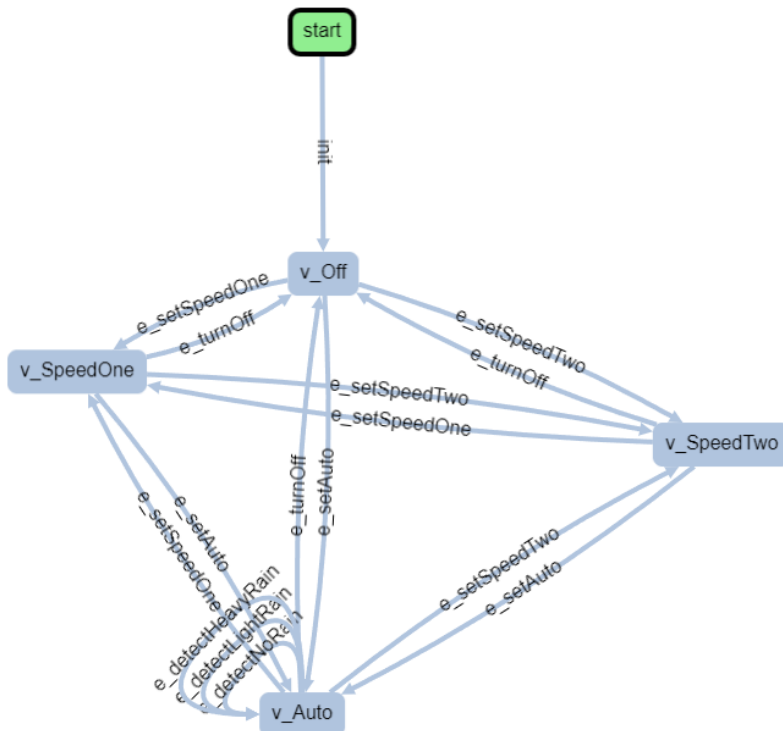# HW1 - Test generation

1st task: Getting graphwalker running

2nd task: Windshield wiper

Final model

Final test code


```
        package hu.bme.mit.avt;

        import hu.bme.mit.avt.impl.WiperControllerImpl;
        import org.graphwalker.core.machine.ExecutionContext;
        import org.graphwalker.java.annotation.GraphWalker;

        import static org.mockito.Mockito.*;

        @GraphWalker(start = "init")
        public class WiperModelTest extends ExecutionContext implements WiperModel {
            WiperMotor motor = mock(WiperMotor.class);
            WiperController controller = new WiperControllerImpl(motor);
            RainMode rainMode = RainMode.NO;

            @Override
            public void init() {
            }

            @Override
            public void e_turnOff() {
                controller.setWiperSwitch(WiperMode.OFF);
            }

            @Override
            public void e_setSpeedOne() {
                controller.setWiperSwitch(WiperMode.SPEED_ONE);
            }

            @Override
            public void e_setSpeedTwo() {
                controller.setWiperSwitch(WiperMode.SPEED_TWO);
            }
```

Test output


```
[ERROR] Failed to execute goal org.graphwalker:graphwalker-maven-plugin:4.3.1:test (default-cli) on project wiper-test: Execution default-cli of goal org.graphwalker:graphwalker-maven-plugin:4.3.1:test failed: java.lang.reflect.In
vocationTargetException: There are test failures.
[ERROR]
[ERROR]  Please refer to /mnt/c/Users/black/OneDrive/BME/Automatizált ellenőrzési technikák/HF/avt-labs/hw1-test-generation/WindshieldWiper/wiper-test/target/graphwalker-reports for the individual test results.
[ERROR] -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/PluginExecutionException
```

Uncovered problems

The test uncovered a problem with the implementation, specifically that the AUTO setting doesn't check the data from the rain sensor when it is initially set, but just defaults to 0.5, and only changes when the raindata is updated. This violates the the spec.