EvoMBT tool replication package

This package contains experimental data reported in the tool paper `EvoMBT: Evolutionary Model Based Testing` and an executable jar of the `EvoMBT` tool itself.

Package contents

All experimental data is in the compressed file `ReplicationPackage.zip`. Extracting the zip file, at the root level, there are folders named `<algorithm>_K=<num-transitions>` (e.g., Mosa_K=1) that contain the test cases generated by `EvoMBT` as well as other artefacts such as the EFSM model used for the test generation, organized in subfolders corresponding to each independent run of the tool. Algorithms used to generate the data are `Mosa` and `Random`, and the number of transitions (k) is either 1 or 2. In the folder corresponding to each independent run there are also the results of running the tests against the `beamng` self-driving car simulator. These results include the instance of `out of bound` errors that the simulator run into.

At the root level of the replication package there is a `SummaryTable.csv` spreadsheet that gives an overview of the results.

The python script that was used to check for the validity of the road configurations generated by `EvoMBT` is also included at the root level of the replication package, with file name `Filter.py`.

The file `EvoMBT-1.2.0-jar-with-dependencies.jar` is a self-contained executable jar that can be run directly using a suitable Java runtime. For details about `EvoMBT`, please refer to the GitHub repository: https://github.com/iv4xr-project/iv4xr-mbt

For more information about the simulation environment and the corresponding implementation that enables the use of `EvoMBT`, please refer to the GitHub repository: https://github.com/chiakangZacHung/tool-competition-av.