Project Introductieproject
Review date 18-01-2021 **Supervisor** Group Pandey

Review ☒ Tussenrapport 2

1 DESIGN

Insight	The team has a clear description about how their program works, but at the moment the report is not finished yet. For the description of the program MosCow is used to describe how it works, that is fine.
Modularity	Yes ,the project is modular. The whole code is not crammed into one cs.file. The code is splitted up.
Extensibility	The simulation function of the project does not work yet. You might want to consider to add the traffic signs as classes, to make the code more efficient. At the moment most declarations are done using hardcoded values. Try to make the code as dynamic as possible. Threading is used to create the simulation, but another alternative should be considered, because this can result in a pretty high-cost program. We advice to use packages since it can simplify the code .
Supporting documentation	There are explanation files, which is good . An advice is to expand the readme.file .

Advice:

- Finish the class diagram, so that the reader has a clear image of the program.
- Try to re-use classes.
- Prevent the simulation function from being high cost (processing power).

2 FUNCTION

Division of methods	The program is divided in multiple methods and have obvious names.
Construction of methods	Variables have clear names. A positive of the methods is that Lists and arrays are used to prevent making functions. A lot of void methods are made. Try to make more use of return statements. Consider get set properties, instead of only adding elements into lists.
Cohesion between methods	Classes are fine. Each cs.file has a clear purpose and it is clear what it does. But there are a lot of declarations. Try to minimize it. Also there is a bug that shifts the road elements, instead of adding a new one. A copy function (copies the element) would make building a model a lot faster. The program is going to crash for a pretty big model. Also it is handy to make a de-select function.

Error handling

The current codebase works fine. So we assume that the debugger is used efficiently. That means that the group is still consistently using the error logs and debugger to solve issues. But at the moment there are no error messages, meaning that if an error occurs the program simply just crash.

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Advice:

- Try to fix the bugs. It is bad to not have a scalable program. At the moment you can notice that 3+ GB memory is needed to run a simple model. So that means that the program can not be upscaled.

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3 STRUCTURE

Clarity

The program has all their scripts in one project folder. It would be nice, if a text - file is made that shows the locations of the methods and it is really good that there is a pseudo code available in the report. Else make a short comment that describes the connection between the classes/methods with the visual components on the GUI.

Layout

Tidiness

The layout is good. Try to keep it as clean and as consistent when finishing the codebase. The file is tidy : no unnecessary white spaces, taking into account case sensitivity and the methods are not crammed in one cs.file (splitting up the namespace).

Comments

There are comments present in the code, but most cs.files lack comments. We recommend to comment specific command lines that need more in-depth explanation.

Advice

- The most important thing is to add more comments for example in class RoundButtons. At this moment there are not enough comments to justify a good read of the code. So if this slight detail can be fixed, it would make the whole structure of the code a lot better.
- Also it is important to prevent crashes. Try to note all problems and then try to solve them.

4 VERSION CONTROL

Use of VCS

So there are a lot of commits by the group members. All commits have clear names and branches are merged and added to master that is a good. And pull requests are used.

Use of issue tracker

This group has a clear schedule at the moment. It is clear to understand when tasks and issues where done.

Advice

- Use a protected master and development branch in case decisions on commits can not be made directly.