M8: Code Review

Each group must submit a report by 12pm on the day before the weekly meeting with the TA.
A report must contain two parts, in one pdf file. Only one report per group is submitted.

PART 1

A 1-page status update that includes:

1. A high-level description of the progress since the previous milestone (M7).
2. The plans until the next milestone (M9).
3. Major decisions and changes in the scope of the project (from the requirements and design document submitted when the groups were formed).
4. The contributions of individual team members to the work done so far.

PART 2

For this milestone, you will perform **automated and manual code reviews.**

- An automated code review will be performed **on your own project**, for both the front-end and the back-end.
- A manual code review will be performed **on the project of your customer** (your community peer team), for both the front-end and the back-end.
- You will need to analyze the results of the performed code review and implement the suggested changes. For that reason, please **make sure to meet your customer team (online) way before the deadline.**

Prepare and submit the following artefacts:

1. The automated code review [50 points]
   - Run Codacy – an automated code review tool – on your project [5 points].
   - Report the number of identified issues in each of the following categories: security, error prone, code style, compatibility, unused code, and performance. You can simply copy Codacy's results table into your report [5 points].
   - Report the number of issues for each of the identified "problem" patterns (again, you can copy it directly from Codacy). Give one concrete example of an issue in your code for each pattern [10 points].
   - Fix the identified issues [15 points].
   - Run Codacy again.

- Report the number of identified issues in each category and the number of identified issues for each pattern after the fix [5 points].
- If the numbers after the fix are not zero, write 2-3 sentences explaining **each remaining issue type** [10 points; points will be deduced for remaining issues that do not have an adequate explanation. The full mark will be given if there are 0 issues left.]

2. The manual code review [50 points]
   - Meet with your customer team and review the front-end and back-end code of their use case with "complex logic". Ask them to review your code for your "complex logic" use case.
   - Report two major issues you found in **your customer code** [25 points]
     - Major issues are those that typically cannot be found by automated tools and relate to security, inefficiency in algorithms, etc. They should not be minor issues such as comments.
     - Yes, you will find some major issues – there is no code without issues.
     - If the code of the "complex logic" use case is issue-free, you can consider other parts of the code.
     - If you report that you cannot find any major issues in your partner team code and then your TA does, you will lose marks. However, if the TA does not find any issues either, you will get the full mark.
   - Report two major issues that your peer team found **in your code** [5 points].
   - Specify how you addressed these issues, ex., by showing screenshots of the corresponding code before and after the change and providing 2-3 sentence explanations about each fix [20 points].
     - If your peer team did not find any major issues in your code, ask your teammates working on the backend to review front-end code and vice-versa. Report on and fix the identified issues.
     - If you report that neither your peer team nor your own team member can find major issues in your code and then your TA does, you both will lose marks. However, if the TA does not find any issues in your code, you will get the full mark.

Be prepared to dig into your code with your customer and the TA during the milestone meeting!