APPENDIX D:

Individual Project Report

Zhou Zhe
A0213542R

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1. Personal contribution

Market Research: I was involved in the market research of feasibility of the project business value and find the competition solutions/products are available in the open market. To share my own opinions about the business value for this project that is a good advisory product for those people who want to save money and spend smartly, as well as we could also benefit from this product using advertisement banner in search page and referrer integration with banks.

Teamwork Establishment: I was responsible for establishing the teamwork place using Internet shared drive service (OneDrive) and source code GitHub repository setup. Bring each team member to one place and work together.

Knowledge Acquisition: I was responsible for collecting and documenting all terms and conditions of saving account and rebate credit card from each bank website. In the meantime, I consolidated and converted that raw knowledge information to rules in actual development.

System Implementation (Backend API): I was fully responsible for developing the rules-based backend API for the Saving Robot Advisor product. That is mainly categorized in terms of techniques as follows:

1. .NET Core (MVC) is chosen as REST API framework that is benefited from easy setup and cross platform.
2. Lightweight JSON format is used as standard Request/Response message to consume backend API.
3. Single Responsible Design Principle Rule classes are designed for each type of computation.
4. Easy extensible bridge design pattern is used for all saving and rebate computation.
5. The combination of reflection and factory design pattern is used for dynamic comparison to find the best saving and rebate program.

2. Learnt useful

The core things that I have learnt from this project include knowledge acquisition, knowledge document, rule development and the implementation of rule based decision-making API excepting team collaboration and project management related stuffs. Along with the learning from courses, I have also a more comprehensive understanding of the fundamental of reasoning system and what we are going to learn for upcoming study of artificial intelligence using known knowledge.

3. Apply to other situations

There are many new learnt concept and knowledge that can be used for my future projects. The methodology of reasoning system could give more fundamental analysis that not only can be used AI/machine learning, but also can support those traditional system implementations using a good alternative way, such as classification, prediction and coding improvement using decision tree algorithms and so on. The rule-based design knowledge and library also help to have a good support for future system implementations which include more computation with more if-else statement.

Furthermore, I believe that the usage of learnt from this course will be explored in upcoming study.