Student Individual Report

Yun Ma

Course: 5911 Capstone

Team name: iBot

Team member: Yun Ma(me), Xuzhou Yin, Xiao Liang, Young Liu

Instructor: Perumal N. Ramasamy

Sponsor: Branden Bellance

0. Background

Our team choose virtual assistant as our topic for CSE5911 Capstone course. The goal of this virtual assistant is to simplify the work steps and improve the efficiency of work. We decide to build a chatting bot named iBot as our virtual assistant. With simple commands, users are able to finish works in a few steps. We choose Jira as our interacting platform with iBot, which can be installed in Emulator or Skype. IBot provides many useful features for users to use, such as create issues, modify issues and search issues. These features can build cards easily in the Jira board for users. With the help of iBot, users can work efficiently and extend further customized features from iBot.

1. Individual Contribution

My roles are primary test manager, secondary design manager and primary documentation manager. I contribute many areas such as designing, coding, testing and documentations.

1.1 Designing of iBot feature

Since I am the design manager of iBot, I take part in the design of iBot. In the beginning of this semester, I discuss with my teammates and we come up of several choice: Hubot, Alexa and Bot Framework. Finally, we choose Bot Framework and we come up with several features:

- Create: issues, one type (story, task, sub-task, epic and bug), direct summary with double quotes

- Modify: fields including priority, status, comment, description and assign to user

- Search: search by keyword and search by user

Then I take part in the design of details of features, for instant, when create a sub-task type, there is a need to find the parent task first; when asking for burn down rate, we need to make sure that the issues we calculate need to include an estimate time; when search for cards, the limit of cards should be less than 10, or we need a new feature to manage page turn.

The use cases of features are included in the Project work and I add explanation for each feature.

1.2 Coding for iBot features

I take part in the coding with my teammates and we finish some features' building together. For the create part, we figure out there is a need to add an epic name after we type the summary for the epic; for the search part, we need to include LUIS to deal with the natural language. I also take part in the development of LUIS language and expand ways to improve of natural language in coding. Furthermore, I code for some unit testing cases, for some simple and basic features, for instant, iBot should be able to response when user types some commands.

1.3 Testing

Since I am the primary testing manager, I take care of almost the testing & debugging of iBot. When my teammates finish a part of iBot features, I talk with Ibot to make sure all the steps go well. If there is a bug, I document it into a testing table with its testing scenario. I test both on Emulator and Skype and return the bugs or suggestions to my teammates. Manual testing is one of the ways I test the code and the other is unit testing.

There is a use case testing table in the Project Workbook explaining the steps. Some files related to testing in Project Documentation describe the bugs during the testing of iBot.

1.4 Documentations

I do almost all the documentation for our team in order to help them focus on other tasks. I build the structure and write contents for these presentations:

- Weekly Standups

- Risk Presentation

- Midterm Presentation

- Final Presentation

- VP Presentation

- Poster

- Final Report/Project Book

- Testing files

- Team Calendar & Project Schedule

- Jira Board

I decided the topics we needed to include in these presentations and fill the main parts of the PowerPoints. Some complex parts like risks or future plan I would discuss with my teammates and fill the content later. After the presentations, I collect the feedback from teacher and classmates and make an improvement on the PowerPoints. Other teammates help me to finish documentation and give me feedback and suggestions.

For the Project workbook, Xuzhou and I contribute most of the information of the project.

1.5 Participation

I take part in all kinds of meeting such as lectures, group meetings and sponsor meetings and I seldom miss these meetings. I record the contents for these meetings.

1.6 Peer Evaluation

I would say each teammate in our group contributes to this project in a different way with their best. Although each teammate has different roles, but our team tries to finish the project and contributes to the project evenly.

2 Technologies Involved

We have learnt a lot of new tools in CSE5911 Capstone course and they bring us many new ideas.

2.1 Jira board

Jira board is a great tool I used in our project. It combines lots of convenient features such as calendar, sprint schedule and notepads. Our team records our project plan in Jira and the project name is "Capstone".

2.2 LUIS

LUIS is a natural language processing tool we used for iBot language. It is easy for Ibot to misunderstand user's commands, so we make a language for it. When iBot catches keywords like "create", "story" and "search", LUIS will deal with these words and understand the user's

commands. We also build some rules for users' commands. If user types commands following these rules, iBot can understand the tasks easily and handle the work for user.

2.3 Bot Framework

Ibot is the chatting bot we created from the bot Framework. Bot Framework is a useful tool and it provides us a simple chatting bot demo to start with. We design and write features for iBot to make it understand user's needs and improve user's work efficiency.

2.4 Node.js

Node.js is the tool we used for coding features for iBot. It is new to my teammates and I. But it is powerful and we can design new features for iBot. We also include Typescript for various types.

3 Teammates

The following are our teammates.

3.1 Xiao Liang

Xiao is the leader of our team. He knows Node.js well and guides us about this tool. We discuss and design iBot together and he codes useful features of iBot. He also takes care of Jira Board and contacts for our sponsor meetings.

3.2 Xuzhou Yin

Xuzhou contributes to many areas of iBot. He comes up with some features of iBot and help teammates test iBot. He also takes part in the documentations of iBot.

3.3 Young Liu

Young contributes to some areas of iBot too. He takes part in the design of features of iBot and help teammates test iBot. He also takes part in the documentations of iBot.

4 Activities

The activities of our team include: lecture, class meetings, group meetings, Google hangouts and sponsor meetings.

5 Conclusion

CSE 5911 is a useful capstone course and we learn lots of things from it. Dr. Ramasamy teaches us both the course contents and the problems we may meet in the future life. It is important to listen to others' advice and make an improvement on our own work in order to avoid the same problems in the future. Moreover, this is the chance we can communicate with different people like managers, leaders and sponsors and receive great suggestions and ideas. Thanks to my teacher, sponsor and classmates in CSE 5911!