Client Name: DVT
Project Name: KinderFinder

Project Management Information

Team Name: MAU Technologies

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1 Software development process

Our development process employed the Scrum methodology.

Development Team The development team consisted of all of us in team MAU Tech.

Scrum Master Each project undertaken requires a scrum master; Scrum is facilitated by a Scrum Master who is accountable for removing impediments to the ability of the team to deliver the product goals and deliverables. The Scrum Master is not a traditional team lead or project manager, but acts as a buffer between the team and any distracting influences. Our scrum Master was the Team Leader who made sure the scrum was followed.

2 How Our Software Development Process was Implemented

2.1 Sprints

A sprint (or iteration) is the basic unit of development in Scrum. Our Sprints involved iterating through the different use cases we had developed and completing them before moving on to the next use case.

Each sprint was started by a planning meeting, where the tasks for the sprint were identified and an estimated commitment for the sprint goal was made, and ended by a sprint review-and-retrospective meeting where the progress is reviewed and lessons for the next sprint were identified.

2.2 Meetings

2.2.1 Sprint planning meetings

At the beginning of the sprint cycle, a Sprint planning meeting was held where we

- Select what work is to be done
- Prepared the Sprint Backlog that details the time it will take to do that work, with the entire team
- Identify and communicate how much of the work is likely to be done during the current sprint

2.2.2 Daily scrum meeting (Almost Daily)

Each day during the sprint, a project team communication meeting occurred.

All members of the development team came prepared with the updates for the meeting

All meetings started precisely on time even if some development team members are missing

During the meeting, each team member answers three questions

1. What have you done since yesterday?
2. What are you planning to do today?
3. Any impediments/stumbling blocks?

Any impediment/stumbling block identified in these meetings were documented by the Scrum Master and worked towards resolution outside of the meeting in the usual sessions we saved for discussion of problem resolution.

2.2.3 End meetings

At the end of a sprint cycle, two meetings were held: the Sprint Review Meeting and the Sprint Retrospective meeting.

At the Sprint Review Meeting we

- Reviewed the work that was completed and the planned work that was not completed
- Presented the completed work to the stakeholders

At the Sprint Retrospective meeting we

- Reflected on the past sprint
- Made continuous process improvement

This meeting is facilitated by the Scrum Master.

2.3 Burndown chart

The sprint burndown chart was publicly displayed where we worked on a white board, it then moved online so we could all see and edit it as need be. It was a chart showing remaining work in the sprint backlog. Updated every day, it gave us a simple view of the sprint progress. It also provided quick visualizations for reference.

3 Profile of Team Members and Responsibilities

MAU Tech consisted of three members

- Uteshlen Nadesan
  - Team Leader
  - Scrum master
  - Application Developer
  - Trilateration algorithm
  - Documentation
- Michael K Johnston
  - Vice Team Leader
  - Application Developer
  - Administration Portal Developer
  - Documentation
  - Scrum Board Keeper
- Po-Han Chiu
  - Reporting Developer
  - Application Developer
  - Documentation

4 Plan Used for Issue Management

We developed a small program that we used as our tracking tool. In this all issues were logged. After the completion of a sprint all issues encountered were checked, and worked on by the entire group with the guidance of our scrum master.

If there existed an issue we could not fix we were told to contact our client who was always willing to advise us on a way to move forward and a way to fix the issue faced.

5 Project Status Through Time

To keep track of the project as time progressed, we maintained a list of features that have been implemented and that still need to be implemented.

We had weekly team meetings where we discussed the progress that each member had made, and updated the list accordingly.

6 List of Functionality You Could Not Implement

We have implemented everything in the scope. However, there are areas that can be expanded upon. For example, customisations can be added to the main Android application, which allow the user to set custom sounds for the alarm or alter the colour scheme.

A possible expansion of the system (which was not in scope) is to place a device on each table, which lights up different LEDs depending on where in the restaurant the children are. This means that the parents don't need to constantly check their phones to see where their children are; they can glance at the device and quickly see who is where.

7 Discussion of the Main Risks and Challenges Faced

One of the biggest challenges that was faced, was integrating all the components. There are three separate applications that need to communicate with each other, which was challenging to get right. At times, some HTTP requests weren't being sent properly, so the problem application had to be restructured in such a way that it efficiently communicated with the server.

It was also a challenge to learn the new technologies, as we have never used them before. These technologies include ASP.NET MVC 5 and Xamarin. Once we learnt these technologies, they became very easy to use and made development much easier. We enjoyed using them and will most likely use them again in the future.

Finally, it was difficult to integrate the hardware into the system. Luckily the hardware provider maintains a Java library that allows our system to interface with their hardware by adding a custom listener.