Course Work Cover Sheet - The School of Computing

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Lessons learned in carrying out user cantered design

Introduction
The purpose of this document is to overview the key lessons learned in carrying out user centered design during group projects as part of AC22003.

With the intention of being brief, focus is placed on four key areas that were the basis of problems encountered in the group and covers some discussion on how they happened and the issues involved.

1 Focus on the user as early as possible.
During the course of this project it became clear to me that we as a group spent a reasonable amount of time thinking about how the user would be able to interact with the system and a lot of that thinking happened at points where it was harder to react to identified issues.

From a planning perspective several things started to go majorly wrong around half way through the project where most of the HCI activities were planned for, which in itself created issues. However that is a slightly different problem, we shouldn't have been thinking about how the user was going to use and interact with the system half way through the project time. It would has been a better decision to carry out the research activities and model how the system would fit the business needs through methods such as storyboarding or flow diagrams in weeks 2 or 3 on a very basic level as part of the initial analysis.

Instead we had planned to do most of this over weeks 5-7 which meant we were under pressure to produce functionality and iteratively refining the design involved making much harder and more time consuming changes to fix fundamental issues (many of which still exist).

2 The importance of iterative design.
While it was made absolutely clear during lectures, the weight of this point didn't really sink in until it was clear we had made a mess of things.

We made several mistakes with regard to iterative design process. Our process in essence followed a waterfall model for the first half while the basics of each topic in the module were covered and in some areas this was perhaps unavoidable due to the nature of the situation. Despite the fact that technical progress had to at the start follow this structure, a mistake was made in allowing the design considerations to fall in with this. As mentioned in the previous point, they were considered a little too late to effectively handle but looking back this didn't have to happen in the research and design areas, they could have underwent several cycles modeling sequences and barebones prototypes during this time.

The second half of the project took a much better approach to iterative design but at that point the earlier mistakes were harder to rectify. It would have been better to use significantly smaller iteration cycles during the second half of the project in order to identify problems while they were easier to fix.

3 Ethical considerations.
The importance of ethical considerations regarding both the university policy and business concerns were not properly considered during the course of the project. It was relatively late on in the project before we had managed to put together some models that could be used in user evaluation activities and around the same time we were made aware of the issues involved that needed to be addressed. The user evaluation of designs in the project suffered drastically due to this mistake.

4 Fewer features with carefully considered design is better than many less considered features.
As the functionality increases in its feature set the interface required to access the functionality becomes more complex and requires more consideration and evaluation to ensure that the functionality can be of benefit to the user.

In approaching the project our team had a lot of thoughts for strong and useful features that would be useful in supporting the users of the system. In reality attempting to work on these was negative to the system as a whole and focused on bringing things slightly out of scope into the project in order to make information held in the system useful to other tasks within the garage than simply making/managing bookings.

The focus should really have been on making/managing bookings however with the amount of additional functionality that could be provided at little cost by presenting information in different ways we were overly inclined to add unnecessary features.

As the project progressed it became clear that supporting functionality that wasn't strictly necessary was massively increasing the complexity of the interface and the ease of achieving the core tasks.

Near the end some of these features were cut out in order to improve the usability and some were cut out because of time issues.

Looking back it seems clear that we would have been better to think only about the core function and concentrate on designing the system to support these tasks with the greatest ease and clarity.

In the end the interface is more cluttered and complex than it needs to be to support key features and some of the key features are lacking due to bad time management. None of the features are implemented in a way that provides the user with good feedback or that makes it particularly easy to input correct data.

Conclusions
From the point of view of creating a well considered product that meets the users identified needs efficiently and effectively it is clear that our group was not very successful.

One of the main themes running throughout the problems encountered and the issues involved is to do with the relationship between effective planning/management and HCI activities. Simply doing activities and using the information gained is not enough, deciding which activities and when they are used is extremely important in how effective these can be. In almost all of the major failures in our HCI considerations there is a planning or time management issue that is related to it whether that is because a failure to effectively think about the user has caused a management problem or failure to properly consider HCI in the planning has cause HCI to suffer in the end.