CENG 355: Computer Systems Project (Week 5 Deliverable)
Team Members: Ifeoluwa David Adese, Mohand Ferawana & Tosin Ajayi.
Parts Crib Database Project: Technical Report Structure

1. **Title page**: This simply briefly indicates the project name, team members involved and date created.

2. **Overall Summary**: This is a very short and less detailed description of the project in general. It simply outlines the main points stated in the report about the project. The main aim here is to provide the reader with a short, clear and helpful overview of the project is about. Shouldn't be more than a page in length.

3. **Table of Contents**: This will list out each section of the report in a hierarchical order including their page numbers, starting from the introduction to the very last section. The main aim here is just to help the reader easily and quickly locate specific areas of the report.

4. **Main Introduction**: Here, we simply plan to describe in detail what the project is all about. This will include the main aim and objectives, the problem we're trying to solve, why we actually consider the problem a problem, as well as benefits or advantages of a successful implementation.

5. **The Body**: This will include different numbered headings and sub-headings that'll make up the main content of the report. Each section, in a logical order, will discuss a certain topic related to the project in general. These sections could include the conceptual system design, the functionality of each part, the implementation, the requirements and dependencies etc. The aim is give a detailed description of how the project is built and how each part of the system plays a role in fulfilling its general purpose.

6. **Conclusions**: Here we'll briefly sum up the themes developed from the report's main content by highlighting the overall significance of the project and pointing out to the reader the major inferences that can be extracted from the discussion, without adding any new content.

7. **References**: Details of published sources of material referred to or quoted in the text (including any lecture notes and URL addresses of any websites used.

8. **Bibliography**: In this section we'll simply list out all other published sources of material, including websites, books etc. not necessarily referred to in the report, but useful for some related background information or further reading. It is usually sorted in alphabetical order by author using the Humber College standard APA format.

9. **Appendices**: We don't consider this section a very necessary part of our report, but if for any reason along the line, we have some large-scale diagrams, source code, raw data or specifications that we find essential for full understanding of the report, then it will be included.

10. **Glossary:** A list of short descriptions of the technical terms used in the report.

Parts Crib Database Project: Introduction

The Applied Technology Parts Crib department is presently operating on an exchange system, whereby students who need to borrow certain lab related materials are expected to provide some sort of college or government issued piece of identification in exchange for what they need. This is done with the expectation that the borrowed item will definitely be returned back in exchange for their personal possessions. However, this form of exchange system has happened to be not-so-efficient in recent times, especially in most cases when a college issued ID is provided by the student.

The major problems identified with the present system is the time and resources required. Usually during college's open hours, there are specific times of the day when the parts crib experiences a traffic i.e. high number of requests by students needing to borrow specific materials for lab sessions. Now, there could be several lab sessions starting or ending during these "Peak hours" and there is usually only one parts crib employee available to attend to these large number of students. This creates room for possible errors by the employee and leaves the part crib highly vulnerable to loss of materials. In terms of resources used, we intend to save paper. The normal procedure requires that before any item can be given out, students, in maximum of twos, write out their item requests on a piece of paper and hand them over to the parts crib employee along with an ID card. This exactly, is responsible for the time wasted and the high traffic at the parts crib during lab hours, as well as a significant amount of money spent on paper by the college.

So, our proposed solution was to develop an online rental service system which includes a mobile and web application to digitize this exchange process, by providing students with the ability to easily and remotely prepare their item requests before arriving at the parts crib. After which in one click of a button, employees can approve these requests in a less time-consuming manner. The main objective to be achieved here, is to improve accountability for tools and equipment owned by the Parts Crib department. This platform will not only help identify areas of losses and students yet to return borrowed items upon due time, but also improve the accuracy of inventory records.

Parts Crib Database Project: Abstract

The project discussed in this report is a rental service system designed to improve the current rental process at the Applied Technology's Parts Crib department, in the areas of time-consumption and resource management. The system simply enables students easily rent out the required materials for their upcoming lab sessions. It is an online system consisting of a mobile and web application as well as a remote database for fetching the necessary user or item information. The overall goal is to speed up the lending procedure at the part crib during peak lab hours, keep a monitored record of students with pending returns as well as an easy update of inventory record for all items.

The main idea behind having two separate platforms built to perform the same function is that the web application is designed for both administrative users and registered students but will be mainly used by administrators i.e. the parts crib employees, while the mobile application is also designed for both administrative users & registered students but will be mainly used by students. In that manner, students are provided with an easy on-the-go access to their accounts, in order to keep them updated on available items and also make personal account updates from anywhere, at any time.

Declaration of Authorship

We, ***Ifeoluwa Adese, Mohand Ferawana and Tosin Ajayi*** hereby certify that this report and every other material used in the development of the overall project is entirely our work and a product of our research, other than wherever we have indicated that a third-party resource has been implemented.

Signed: Ifeoluwa Adese, Mohand Ferawana, Tosin Ajayi

Date: 24th February, 2018

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