UNIVERSITY OF REGINA

ENSE 477: SOFTWARE CAPSTONE PROJECT

SOFTWARE SYSTEMS ENGINEERING

Workshop Enterprise Resource Planning Suite Resources and Specifications Document

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1 Introduction

The Workshop Enterprise Resource Planning Suite, or ERP for short, is an administrative task management web application primarily designed for the Engineering Workshop at University of Regina main campus. It is to be the main application to be used for managing incoming and outgoing workorders, which are student and faculty submitted forms requesting the service of the shop. The service provides workorder capacity planning, allowing for the user to actively manage the status of each project, time tracking features for large scale and small scale work, as well as the ability to track the inventory of the workshop, including but not limited to, materials, tools and equipment.

1.1 Purpose

This system was designed to replace the previous methods of workorder, time, and inventory tracking, centralizing all aspects into one powerful application that can be accessed online. Workorders currently must be submitted via paper form directly to the workshop during its operating hours. The form must then be reviewed by the workshop manager and if accepted, future meetings are scheduled. All workorders submitted are then stored physically in binders, which date back to the opening of the workshop. All materials and inventory are also stored physically. This project intends to automate all workorders and have then be submitted and archived electronically. As well, the system is intended to track all scopes of projects, ranging from small miscellaneous tasks to larger scale projects in such a fashion that the workshop manager can schedule them effectively in advance.

1.2 Scope

ERP is designed as a Web API, such that it is run in browser and is able to be accessed from any computer with a sufficient internet connection. It will be a local application that will be primarily accessed by the workshop manager, who is this project's main client. Secondary clients include faculty and staff that wish to submit workorders over the ERP suite. The primary client is the only one intended to have full control of all features of the ERP suite.

The ERP Suite currently is planned to be exclusive to the engineering workshop based on its design as of the completion of this capstone project, as future work on this project will require a redesign to be re-purposed for future clients. The ideal future client for this program is for machine and workshop owners with a staff less than 50.

2 Overall Description

2.1 Product Perspective

The Workshop ERP suite is broken up into its 3 main functionalities:

1. Workorders
2. Time Tracking and Project Management
3. Inventory

Each feature can be accessed from the navigation side bar, which is present on all pages of the web application.

Workorders:

On the workorder page, the client is able to access all workorders currently present in the system, whether they be first or historical submissions. Options include but not limited to, viewing user submissions, filter through all workorders, and tag them based on progress status and importance.

Time Tracking and Project Management:

This page includes all of the time tracking features such as submitting current activities/projects into the system's calendar and creating a plan for workorders to be completed in the future. The time tracking page is also used for an accurate description of each semester, highlighting which project was worked each day. Functionality from this feature is also shown on the right navigation bar, allowing for quick access to daily tasks and which project deadlines are approaching the current date.

Inventory:

The inventory page is where the client is able to access and filter through the materials that are currently or previous were in stock in the workshop. Each material is able to be found inside the inventory database, as well as describing each based on filters such as type, amount, and length. Vendor information from where the material was purchased from and price per pound is also accessed from here.

3 System Features

4 External Interface Requirements

5 Non-Functional Requirements

6 References