Group 2 Requirements Specification

SWE 6623: Software Engineering

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1 Introduction

1.1 Purpose

This document will provide the requirements that must be met to complete a useful web based calendar for human resource event tracking. This document will be used by the software development team to design, implement, and test the system.

1.2 Scope

The requirements specified in this document are intended to cover all functionality of the calendar system including user interface, application logic, and data storage.

1.3 Definitions and Abbreviations

Abbreviation	Meaning
HR	Human Resources
HTTP	Hypertext Transfer Protocol
TCP	Transmission Control Protocol
IP	Internet Protocol

1.4 Reference Material

The project assignment document (Project.docx) described the requested system.

1.5 Overview

The remainder of this document will describe the specific requirements needed to make the Human Resources Calendar. Section 2 will describe at a high level what the requirements are while Section 3 will detail the specifics.

Section 2 will begin with a perspective of the system detailing the User Interface, Software Interface, Communications Interface, and Operations. Then Section 2 will list the functions of the system. Characteristics of the user of the system will then be described. Finally outside constraints and assumptions about the system will be noted.

Section 3 will then detail each requirement clearly describing the input, output, and interactions of each part of the system.

2 General Description

2.1 Product Perspective

The Human Resources Event Calendar will allow the human resources department to communicate significant company events to the entire organization. The system will provide an accessible central

repository for company event information. It is intended to help reduce the amount of work and cost that the human resources department has to expend to communicate this information organization wide.

2.2 Product Functions

2.2.1 User Authentication

The application will authenticate users based on their intranet credentials, distinguishing between HR and non-HR users automatically.

2.2.2 Monthly Overview

The application should display a calendar view of each month with events shown on each day. Display format of the application should be calendar type and events should be visible on each day in the calendar.

2.2.3 View Events

The application will allow non-HR users to view detailed information about each event displayed in the monthly overview.

2.2.4 Add/Edit Events

The application will allow HR users to add and edit events with details such as description, associated employee, begin date, end date, and category. The application will also allow unwanted events to be deleted.

2.2.5 Run Reports

The application will allow HR users to run reports such as employee vacation and sick days taken (in hours).

2.3 User Characteristics

Users are assumed to have basic computer skills including the use of internet technologies and web-based applications.

2.4 General Constraints

The system must be implemented as a web-based system that communicates using Internet protocols through the company's intranet.

3 Specific Requirements

3.1 Functional Requirements

The following tables provide specific requirements for application capabilities and behavior. In each table the left-hand column provides the unique requirement identifier while the right-hand column provides a description of each requirement.

Each requirement description should be read with an implied prefix depending on the table section:

- User Interface – The system will allow users to…
- Logic – The system will be able to…
- Storage – The system will store…

3.1.1 User Authentication

User Interface	
LUI01	Enter username and password
LUI02	Submit credentials for login
Logic	
LLG01	Distinguish between HR and regular users from credentials
Storage	
LST01	User credentials
LST02	Whether users are HR or not

3.1.2 Monthly Overview

User Interface	
OUI01	View events in monthly calendar style
OUI02	Navigate between months
OUI03	View list of events for each day
OUI04	Observe event categories from colored highlighting
OUI05	Select date to add new event
OUI06	Select event to view details
OUI07	Select event to modify details
Logic	
OLG01	Allow editing when HR users select events, but only display details to regular users
OLG02	Only allow HR users to add new events
OLG03	Retrieve title of every event for each day of a month
Storage	
OST01	All event categories
OST02	Whether categories include hours of work time
OST03	Title of each event
OST04	Category of each event
OST05	Start and end dates of each event

3.1.3 View Events

User Interface	
VUI01	View event title
VUI02	View event description
VUI03	View associated employee
VUI04	View start and end dates
VUI05	View event category
VUI06	View hours of work time
Logic	
VLG01	Retrieve event title
VLG02	Retrieve event description
VLG03	Retrieve employee associated with event
VLG04	Retrieve start and end dates of event

VLG05	Retrieve event category
VLG06	Retrieve hours of work time for event
Storage	
VST01	Description of each event
VST02	Associated employee of each event
VST03	Hours of work time for each event

3.1.4 Add/Edit Events

User Interface	
EUI01	Enter event title
EUI02	Enter event description
EUI03	Select associated employee
EUI04	Select start and end dates
EUI05	Select event category
EUI06	Enter hours of work time
EUI07	Request deletion of event
Logic	
ELG01	Only allow hours of work time to be entered for certain categories
ELG02	Retrieve list of employees for selection
ELG03	Retrieve list of event categories for selection
ELG04	Save event title
ELG05	Save event description
ELG06	Save employee associated with event
ELG07	Save start and end dates of event
ELG08	Save event category
ELG09	Save hours of work time for event
ELG10	Delete event

3.1.5 Run Reports

User Interface	
RUI01	Select associated employee
RUI02	Select event category
RUI03	Select calendar year
RUI04	View title and date of every event of selected category associated with selected employee
RUI05	View summation of time for selected category associated with selected employee for each month
RUI06	View summation of time for selected category associated with selected employee for entire year
Logic	
RLG01	Retrieve title and date of every event of selected category associated with selected employee
RLG02	Calculate summation of time for selected category associated with selected employee for each month

RLG03	Calculate summation of time for selected category associated with selected employee for entire year

3.2 Other Requirements

3.2.1 Database Communication

The system must communicate with its database using TCP/IP through the company's intranet.

3.2.2 Security

The system must prevent any HTTP request (whether intended or not) from adding, editing, or deleting events unless the user has been authenticated and authorized.

3.2.3 Web Browser

The system's web-based user interface will be compatible with the latest version of Google Chrome (at the time of release).