

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 1 of 18

# HR Employee Tracking Application

## Software Requirements Speciation

## Revision History

Name	Role	Purpose	Date	Document Status
Zach Comstock	Documentation Engineer	Initial Creation	9/3/17	Draft
Zach Comstock	Documentation Engineer	Revision of User Stories	9/19/17	Draft
Zach Comstock	Documentation Engineer	Reformatting, added system overview	9/27/17	Draft
Zach Comstock	Documentation Engineer	Added Defined Input and Outputs for Functional Requirements	11/8/17	Complete

## Table of Contents

1. Introduction .....	3
1.1 Purpose of This Document .....	3
1.2 How to use This Document .....	3
1.3 Scope of Product .....	4
1.4 Product Business Case .....	5
1.5 Overview of the Requirements Document .....	5
2. General Description .....	7
2.1 Stakeholder Profiles .....	7
2.2 Product Functions .....	9
2.3 General Constraints .....	9
2.4 Assumptions and Dependencies .....	9
3. Specific Requirements .....	10
3.1 Functional Requirements .....	10
3.2 Non-Functional Requirements .....	17
4. Prioritization .....	18
4.1 Choice of Prioritization .....	18

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 3 of 18

# 1. Introduction

## 1.1 Purpose of This Document

This document was created and designed for the purpose of guiding the Software Development process. For this project we will be using an iterative software development process; we will go through several cycles of defining requirements, designing the system, and implementation. Therefore the project's requirements will go through various revisions as critical functionality is identified in each cycle. The document's status will be marked as a 'Draft' until the requirements have been finalized for the final development cycle, in which case the status will be marked as 'Complete'.

## 1.2 How to use This Document

We anticipate that this document will be edited frequently by Requirements Engineers, System Architects, and Software Developers. It will be critical for other users of this document to be able to identify when changes are made. Please follow the document use guidelines as follows:

Requirement Engineers should highlight any critical changes in red and non-critical changes in yellow. When critical changes are made please be sure to alert the team so that they will be sure to acknowledge these alterations in this document. Anything highlighted in blue is a change made by another role (design or development), it is your duty to review, revise, or remove these alterations and alert the team of the changes made.

System Architects are likely to find logical errors or missing functionality in the requirements specification. If this is the case, they must add the proposed features or alterations to the requirements section of this document. The proposed change should be highlighted in blue and accompanied by a short justification for the change request, to later be reviewed by a requirements engineer. If the change is critical or blocking, it is your duty to alert the team of this requested change. As a footnote, it should be apparent that anything in this document highlighted in blue is not to be implemented in your design.

Software Developers are likely to find logical errors or missing functionality in the requirements specification. If this is the case, they must add the proposed features or alterations to the requirements section of this document. The proposed change should be highlighted in blue and accompanied by a short justification for the change request, to later be reviewed by a requirements engineer. If the change is critical or blocking, it is your duty to alert the team of this requested change. As a footnote, it should be apparent that anything in this document highlighted in blue is not to be included in your implementation.

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 4 of 18

## 1.3 Scope of Product

The ultimate goal of this project, as it is understood, is to create a software application that is able to track and monitor an employee's current standing in the company. The project shall hereby be referred to as the "HR Employee Tracking Application". The target user group for the HR Employee Tracking Application is expected to primary be Human Resources. However, the application will also be used by managers and general employees, with restricted functionality of course. The HR Employee Tracking Application is intended to assist Human Resources with the management and tracking of employees' and managers' productivity and employment information vacation and sick hours. Human Resources shall also be able to use the HR Employee Tracking Application to approve or employees' and managers' requests, such as vacation, raise, or promotion requests.

The application is meant to be a web based application containing a frontend to handle the views, a backend to process the logic, and a database to store the data. The database should handle modifications to the information (add, read, edit, delete) stored within based on the permissions granted to each specific user.

In order to create a fully functioning HR Employee Tracking Application, the project must include the following features per each user group:

User Group	Functionality Needs
Employees	Employees should be able to view all of this information and be able to file a discrepancy complaint if something is inconsistent with what they know. HR Should be able to send this complaint to the manager for them to review. Employees should also be able to request vacation and it should show that the vacation days are subtracted from the amount they accumulated over the course of their work. In the same way, employees should be able to request sick leave. The manager should get a notification that their employee is requesting sick leave and should be able to easily see whether or not the request can be confirmed or denied. Employees should be able to also quit their job whenever they so choose by putting in a two weeks notice.
Managers	The managers should be able to write reviews on their employees, approve or deny sick leave & vacations, and see whether or not an employee is in good standing with the company. The manager should also be able to give raises to an employee, which should be cleared by HR before being set into place.
Human Resources	The HR Department should be able to terminate employees, but still keep their records on file. They should be able to approve of vacations that exceed the number set by the company and a negative result should go into the manager's file if that occurs. HR should be able to send a manager a warning about potentially failing employees. HR should also be able to accept or deny increased in salary and decreases in salary.

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 5 of 18

## 1.4 Product Business Case

This project shall automate general Human Resources tasks and provide a convenience for Employees and Human Resources alike, that we believe will be used heavily. By allowing Human Resources to manage and monitor employees with ease, we hope to reduce the cost and total expended manhours, which should in turn free up more resources for the company. The reduced costs will help contribute to overall profits and the reduced stress on the employees will allow them to attend to other, more critical tasks.

## 1.5 Overview of the Requirements Document

The most critical requirements are listed below as non-technical user stories.

ID/Number	Description	Type	Status
1.0.0	Human Resource Users shall be able to track the salaries of any employee or manager.	User - HR	Incomplete
1.0.1	Human Resource Users shall be able to track the amount of sick hours available for any employee or manager.	User - HR	Incomplete
1.0.2	Human Resource Users shall be able to view the cause and duration of a sick leave for any employee or manager.	User - HR	Incomplete
1.0.3	Human Resource Users shall be able to track the amount of vacation hours available for any employee or manager.	User - HR	Incomplete
1.0.4	Human Resource Users shall be able to view the duration of vacation for any employee or manager.	User - HR	Incomplete
1.0.5	Human Resource Users shall be able to view any complaints filed about each employee or manager.	User - HR	Incomplete
1.0.6	Human Resource Users shall be able to view any reviews filed about each employee or manager.	User - HR	Incomplete
1.0.7	Human Resource Users shall be able to view any employee's or manager's start and end date for each position held at the company.	User - HR	Incomplete
1.0.8	Human Resource Users shall be able to view the department of any employee or manager.	User - HR	Incomplete
1.0.9	Human Resource Users shall be able to approve or deny an employee or manager salary increase.	User - HR	Incomplete
2.0.0	Management Users shall be able to write reviews on their employees.	User - Manager	Incomplete
2.0.1	Management Users shall be able to approve or deny sick leave & vacations.	User - Manager	Incomplete
2.0.2	Management Users shall be able to check and see if an employee is in good standing with the company.	User - Manager	Incomplete
2.0.3	Management Users shall be able to submit a request to HR to give an employee a raise.	User - Manager	Incomplete

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 6 of 18

3.0.0	Employee Users shall be able to view his/her salary, sick hours, vacation hours, complaints, and reviews.	User - Employee	Incomplete
3.0.1	Employee Users shall be able to view the cause and duration of a sick leave.	User - Employee	Incomplete
3.0.2	Employee Users shall be able to view the duration of vacation.	User - Employee	Incomplete
3.0.3	Employee Users shall be able to view his/her overall employee ranking.	User - Employee	Incomplete

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 7 of 18

## 2. General Description

### 2.1 Stakeholder Profiles

There are various stakeholders that all stand to gain something from the completion of this project. The development of the HR Employee Tracking Application is sponsored by the company. Therefore, requirements presented by the company will be given higher priority than those presented by other stakeholders.

The users of the application represent another critical stakeholder group. Adhering to the user's requested features and needs will likely help us better understand current issues that block or stall the user's productivity. Identifying the projected volume of users for the application will also be helpful in the system design phase of the project.

A description of each stakeholder involved in this project along with said stakeholders' perspective on the project is listed below in order of priority.

Company – Sponsor	
Relation to the project	The sponsoring company is the most important stakeholder, as they will be the ones funding the project. Most, if not all, of the functionality requested by the company will be marked as high priority in the requirements section. Excessive communication with the company will be frowned upon, therefore it is our responsibility to gather the bulk of the requirements from the company in the initial phase of the development cycle.
Stakeholder needs	<p>This stakeholder is concerned primarily with high-level business requirements and expects the product to improve productivity in the Human Resources departments and all other departments using the HR Employee Tracking Application. Improving productivity is the main objective of the application and this will likely be a strong influencing factor in decision making throughout every phase of the software development process.</p> <p>The sponsoring company also requests that a working prototype will be ready for display no later than November 3<sup>rd</sup> 2017.</p>

Human Resources - User	
Relation to the project	Employees working in the Human Resources department of the company will be the primary users of the HR Employee Tracking Application. We anticipate that they will be using the application heavily, on a daily basis. Therefore, it will be important for us to consider this stakeholder's prospective and needs in order to ensure the application's completeness, anticipating and identifying features that will increase this stakeholder's productivity.

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 8 of 18

Stakeholder needs	This stakeholder is concerned primarily with ease of use and functionality. Employees in Human Resources must have access to all employee records in order to perform their job. Providing an easy means of accessing these records and performing general HR tasks will greatly improve this user's productivity and quality of life at work.
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Management - User	
Relation to the project	Employees working in Management will need to use the HR Employee Tracking application to manage the employees on his/her team; this stakeholder's projected application use-time will vary and likely be directly proportional to the size of his/her team.
Stakeholder needs	This stakeholder is concerned primarily with ease of use and fast turn-around time. Managers will not be the primary users of this application and will have a large amount projects and tasks that they need to attend to on a daily basis. Therefore, keeping this user's use-time to a minimum will allow the user to attend to his/her daily duties and increase overall productivity.

General Employee - User	
Relation to the project	All employees will be using the HR Employee Tracking application to request time off and view their employee records. The employee records will include past evaluations, which may help the user identify problems in his/her work ethic or productivity. Allowing easy access to these records will help users evaluate their own performance and adjust accordingly, which may result in increased productivity.
Stakeholder needs	This stakeholder is concerned primarily with ease of use and fast turn-around time. The primary use-case for this user will be requesting time-off. Therefore, it will be important to make this use-case as accessible as possible with quick turn-around, while still ensuring that the employee will see his/her updated records and reports.

Development Team	
Relation to the project	Developers are required to plan and implement the HR Employee Tracking application, including all required features while staying on budget and meeting all deadlines.
Stakeholder needs	This stakeholder is concerned primarily with identifying all major requirements as early as possible in the software development process. Secondly, the developers' must be able to create a working prototype for the sponsoring company to evaluate on, or before November 3 <sup>rd</sup> 2017.



Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 9 of 18

## 2.2 Product Functions

The HR Employee Tracking application will operate and run in a desktop environment. In the highest level, the main technical function of the software is to allow users (human resources, managers, general employees) to add/edit/remove entities from a SQL Database in a fast and simple process. Secondly, the users need to be informed of changes made to entities in the database when the change is relevant to the specified user.

## 2.3 General Constraints

The HR Employee Tracking application will need to be connected to a network that is hosting the SQL Database in order to operate correctly. Therefore, it seems intuitive to design and build the project as a web application.

The application should only be accessible by employees of the company, so precautions must be made to prevent all outside access. We will have a log-in system as a first line of security and will host the application on the company's internal network as an additional security against outside access.

## 2.4 Assumptions and Dependencies

One assumption about the product is that it will always be accessed with an up-to-date browser, on one of the following operating systems: Windows 7, Windows 8, Windows 8.1, Windows 10. It is also implied that the computer system using these applications have sufficient hardware specifications to run said applications smoothly.

Another assumption is that all work computers used to access the HR Employee Tracking Application have access to the company's internal network.

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 10 of 18

## 3. Specific Requirements

### 3.1 Functional Requirements

A list of all the detailed user requirements for every user are listed below, separated by user groups. General requirements apply to all users of the application. A more detailed description of critical use-cases, including alternate flows and outputs will be provided in the use-case section of the Software Design Specification.

General Requirements						
ID	Name	Description	Inputs	Output	Priority	Status
1.0.0	Log-In Screen	All users shall be able to login to the application using his/her employee ID and password. Upon opening the application, every user will be sent to the log-in screen.	username and password	User session has begun and user is sent to account overview page.	High	In progress
1.0.1	Log-In Error	User inputs incorrect username or password in Log-In screen.	Incorrect username and password	The user is notified that the log-in request has failed.	Medium	In progress
2.0.0	Account Overview	User session information is provided to the system and the user's account information is displayed	User session	Outputs user's informtion	High	Finished
2.1.0	Update Account Information	The user is able to update a subset of his/her employee records	First name, last name, address, email, phone number	User is notified that the change has	Medium	Finished

Requirements Speciation						Rev. 4
HR Employee Tracking Application						Page 11 of 18

				been successful		
2.1.1	Update Account Error	The user inputs invalid data and attempts to submit it	Any invalid entry of the inputs listed above	User is notified that the request failed	Medium	Finished
3.0.0	Read Message	The user selects the “messages” button in order to read his/her incoming messages	User session and query for messages	List of user’s received messages	High	Finished
3.1.0	Delete Message	The user selects “delete message” in order to remove a message from the list	User session and message ID	Removes message from database and notifies the user on successful completion	Medium	Finished
4.0.0	Change password	User attempts to change his/her employee password	Username, old password, new password, new password confirmation	Alters user’s password in database. Notifies user upon successful completion	High	Finished
5.0.0	Resign from Position	If an employee wishes to submit his/her resignation, he/she will simply need to select the “Resign from position” button	User session, two weeks notice contents	Two week notice is delivered to the employee’s manager	Medium	Finished

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 12 of 18

6.0.0	View Department	User wishes to view the names, ranks, and position of employees in his/her department. Selects "View Department" button.	User session	List of employees in the user's department	High	Finished
6.1.0	View Team Members	User wishes to view the names, ranks, and position of employees on his/her team. Selects "View Team Members" button.	User session	List of employees on the user's team	High	Finished
6.2.0	View Manager	User wishes to view his/hers manager's information. Selects "View Manager"	User session	Managers' information	High	Finished
7.0.0	Request Time-off	User wants to request time off (sick of vacation)	User session, date(s) of time off, reason	Notifies the users upon successfully submitting the request. Sends request to manager	High	Finished
7.1.0	View Time-off	User wants to see how much available vacation or sick hours he/she has.	User session	Returns: the sum of remaining sick leave. The sum of remaining	High	Finished

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 13 of 18

				vacation time		
7.2.0	Edit Time-off	User wishes to revise a time-off request	User session, new date(s), new reason	Notifies the users upon successfully revising the request. Sends request to manager	High	Finished
7.3.0	Delete Time-off	User wishes to retract a submission for time-off	User session	Notifies the user upon successfully retracting the request for time-off. Notifies the manager as well	High	Finished
7.4.0	View total Sick days	User wishes to view his/her remaining sick days	User session	Returns the sum of remaining sick time	High	Finished
7.5.0	View Total Vacation Days	User wishes to view his/her remaining vacation days	User session	Returns the sum of remaining vacation time	High	Finished
8.0.0	View Review	User wishes to write a review about another employee	User session, reviewed employee ID, review content	Sends the review to the associated employee ID's account. Notifies the current	High	Finished

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 14 of 18

				user upon successful completion		
9.0.0	View Complaints	Employee wishes to view any complaints he/she has submitted	User session	Returns list of complaints the user has submitted	High	Finished
9.1.0	Edit Complaints	Employee wishes to revise any complaints he/she has submitted	User session, revised content, complaint ID	Notifies user upon successfully revising the complaint	High	Finished
9.2.0	Delete Complaints	Employee wishes to delete any complaints he/she has submitted	User session, complaint ID	Notifies user upon successfully deleting the complaint	High	Finished
10.0.0	View Positions	Employee wishes to view his/her current position and any past positions help	User session	Returns list of all held positions, time the positions were held, and salary for each position	High	Finished
10.1.0	View Department Ranking	User wishes to view the overall ranking of all departments	User session	Returns list of all departments sorted by overall rank	Medium	Finished

#### Management Requirements

ID	Name	Description	Inputs	Output	Priority	Status
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Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 15 of 18

11.0.0	View Employee Information on team(except for complaints)	Manager wishes to view on of his/her employee's records	User session, Employee name	All employee records except for his/her complaints	High	Finished
12.0.0	Approve / Deny Time-Off	Manager wishes to approve or deny requests for time off	User session, request ID, selection (approved or denied)	Informs associated employee that his/her request has been denied. System notifies the user upon successfully completing the operation	High	Finished
13.0.0	Create Review	User wishes to write a review about another employee	User session, reviewed employee ID, review content	Sends the review to the associated employee ID's account. Notifies the current user upon successful completion	High	Finished
14.0.0	Send Message	User wishes to send a message to one of his/her employees	User session, content, employee ID	Sends the message to the employee and notifies the user upon	High	Finished

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 16 of 18

				successful completion		
Human Resources Requirements						
ID	Name	Description	Inputs	Output	Priority	Status
15.0.0	View Any Employee Information (including complaints)	User wishes to view an employee's information	User session, employee ID	Returns all the records about the selected employee	High	Finished
16.0.0	Approve / Deny promotion	User wishes to approve or deny an employee's/manager's request for promotion	User session, employee ID, selection (approved, denied)	Notifies the employee that his/her request has been approved or denied. Notifies the user upon successful completion of this task.	High	Finished
17.0.0	Terminate Employee	User wishes to terminate an employee's role at the company	User session, employee ID, reason for termination, date of termination	Notifies the employee of his/her termination . Notifies the user upon successful completion of the task.	High	Finished
Humans Resources Manager Requirements						
ID	Name	Description	Inputs	Output	Priority	Status
18.0.0	View Human Resources Information	User wishes to view a Human Resources	User session, employee ID	Returns all the records about the	High	Finished



Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 17 of 18

		employee's information		selected employee		
19.0.0	Terminate Human Resources Employee	User wishes to terminate a Human Resources employee's role at the company	User session, employee ID, reason for termination, date of termination	Notifies the employee of his/her termination . Notifies the user upon successful completion of the task.	High	Finished

### 3.2 Non-Functional Requirements

Performance Requirements				
ID	Name	Description	Priority	Status
20.0.0	Query Load Time	All queries should finished within 30 seconds or less	High	Finished
21.0.0	Browser Support	The web application should be able to run in the latest version of Google Chrome (Windows - 60.0.3112.78)	High	Finished
Design Requirements				
ID	Name	Description	Priority	Status
22.0.0	Ease of Use	Users should be able to accomplish any use-case within 3 page navigations or less	Low	Finished

Requirements Speciation	Rev. 4
HR Employee Tracking Application	Page 18 of 18

## 4. Prioritization

### 4.1 Choice of Prioritization

Given that this application is small in scope and will need to be completed within a very short timeframe, we've opted to use a three category prioritization method (low, medium, high). The amount of requirements required is relatively small and our ultimate goal is to accomplish 100% of all requirements listed above.

Any feature marked with priority status "High", is a must-have in the final product; not including this feature will result in a failed project.

Features labeled as "Medium" are important for having a fully functional application, but are not a part of the application's core functionality; the application is not dependent on "Medium" level features, therefore these features can be added after deployment if needed.

Features labeled as "Low" priority are not needed for the project to function and are simply nice-to-have features that improve the user's quality of life.