Glimpse
Project Plan

Version 1.0

Revision History

Date	Version	Description	Author

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1. Introduction

1.1 Purpose of this document

The purpose of this document is to provide a detailed project description of the application called Glimpse, which is designed to aid management in the task of monitoring company wide information on departments and employees. This document includes details about organization, roles, deliverables, project risks, time plans and financial plans.

1.2 Intended Audience

This document shall be used in all phases of the project as a guideline. Intended audiences of this project are all project stakeholders:
- Project Supervisor: Professor Andrew Bond
- Project Leader: Alex Richards
- Developers: Brandon Abajelo, Jiajun Wu, Paul Nguyen

1.3 Scope

This document defines the project plan of the Glimpse management dashboard application. The overview includes objectives of the project, organization of the project team, development process that is going to be used during the project, assessment of possible risks, communication used between project stakeholders and project plan that includes time schedule and activity plan.

1.4 Definitions and acronyms

1.4.1 Definitions

Keyword	Definitions
Glimpse	The name of the project
Project Supervisor	A person in charge of supervising the project
Project Leader	A person in charge of organizing the team and communicating with the project supervisor
Team Member	An active member of the team responsible for making the job done
Milestone	A time in a project that marks the end of a project phase or the completion of an important deliverable.
Git	Version control system that will be used in this project
Scrum	An iterative and incremental agile software development method for managing software projects and product or application development
Scrum sprint	The basic unit of development in Scrum
Scrum master	Ensures the smooth working of the Scrum team and enforces Scrum practices
Product owner	Responsible for product management and its quality

1.4.2   Acronyms and abbreviations

Acronym or abbreviation	Definitions
SSO	Single Sign On: An access control standard that allows a user to authenticate themselves with the use of a single account across multiple platforms
SAML	Security Assertion Markup Language: An XML based authentication and authorization standard
EC2	Elastic Compute Cloud: Amazon's cloud computing service used as a server in our project
XML	Extensible Markup Language: A markup language that defines a set of rules in a format that is easy for humans and machines to interpret
CI	Continuous Integration: The process of merging developer code into a mainline server

1.5   References

1. Homepage. (n.d.). Retrieved April 30, 2018, from http://www.scrum.org
2. Jenkins and Python. (n.d.). Retrieved April 30, 2018, from https://jenkins.io/solutions/python/
3. D. (n.d.). D3. Retrieved April 30, 2018, from https://github.com/d3/d3/wiki
4. Flask-SSO. (n.d.). Retrieved April 30, 2018, from https://flask-sso.readthedocs.io/en/latest/

2.   Background and Objectives

Our objective is to develop a simple dashboard where users can access an elegant view for a provided dataset. The Flask app serves constructed subsets of JSON data extracted from the provided SQL database tables. The data is rendered for the user with D3 and jQuery allowing the users to view each individual's details or view a number of system wide summary graphics.

3.   Architecture & High Level Design

The app consists of a few basic features. A login/register page that allows single sign on using Shibboleth via a Flask extension Flask-SSO and Flask's built-in session module, a basic set of tables constructed with the DataTable jQuery plugin that displays company-wide data group by department, and an assortment of D3 visualizations. The tables can display from a selection of 10, 25, 50, and 100 entries per page, is sortable by all the indexed columns, and shows an alert window when displaying series information like an individual employee's salary or department history. The visualizations consist of two bar charts

displaying the gender distribution by department and overall, a scalable scatter plot displaying the age distribution of employees, and a circle plot that shows the frequency of different salary values.

4. Organization

4.1 Project group

Name	Initials	Responsibility (roles)
Alex Richards	AR	Project Manager
Brandon Abajelo	BA	Developer
Jiajun Wu	JW	Developer
Paul Nguyen	PN	Writeups and Documentation

4.2 Customers

The target customers are listed below:
- Professor Andrew Bond
- TA Avleen Singh Khanuja

5. Development process

The project utilizes Python as the application's main language with Flask as the web framework. The app itself is then hosted on an Amazon EC2 web server. For deployment, we chose to integrate Jenkins on GitHub since it eliminates build processes for Python and plugins such as Pylint and Pytest for code checking and report generation. Additionally, we used Ansible to deploy our app automatically when our Jenkins integration detects a commit to the master branch on the GitHub repo.

6. Deliverables

To	Output	Planned week	Promised week	Late +/-	Delivered week	Notes
Andrew Bond	Project Demo	May 3rd	May 3rd		May 3rd	
Avleen Singh Khanuja	Project Report	May 7th	May 7th		May 7th	

7. Project risks

Possibility	Risk	Preventive action
Data processing speed	Med	Convert data type into a lighter format for quicker reads
Load balancing	Med	Deployed using gunicorn server with multi-thread

		support
Amount of content in data	Med	Convert data type
Readability of data	High	Focus on finding ways to evenly distribute data despite similarities

8.   Communication

8.1   Collaboration

For project coordination, we used Slack as our main communication tool. All members established their assigned tasks and notify others upon completion or if assistance was required.

8.2   Git

All source code and finished documentation will be uploaded to GitHub repository. Repository URL: https://github.com/a-rich/Enterprise-Software/tree/master/project

9.   Project plan

9.1   Time schedule

Id	Milestone Description	Responsible Dept./Initials	Finished week	Forecast Week	+/-	Actual	Metr.	Rem.
01	Complete Project	Devs	5/3	5/3	0	5/3		
02	Complete Report	Documenter	5/7	5/7	0	5/7		
03	Complete Presentation	Documenter	5/3	5/3	0	5/3		

9.1.1   Remarks

Remark Id	Description
01	Close enough

9.2   Test plan

Test No.	001	Phase:	1	Author:	paulng1409	Date: 5/1
Test Category:		**Performance**				
Software Product:		Glimpse				
Test Title:		Analyze performance of dataset loading				
Test Purpose:		Determine if optimization for data access is necessary				
Test Setup:		Put dataset in backend and have front end access				
Prerequisites:		Datasets from Bond				

Procedure:	Load up the site and wait for a table to load
Checks:	**Speed**
Expected Results:	<5s load time
Result:	<u>Dataset doesn't load at all</u>
Reason for Failure:	Dataset too large to load efficiently
Remarks:	Dataset conversion required to increase performance

9.2.1   Testing Remarks

Remark Id	Description
01	Probably easier to keep the data in a json format and trim whatever's missing