Personal Decision Making Assistant – PDA

Minor Project

IBM Career Education

Disclaimer

This Software Requirements Specification document is a guideline. The document details all the high level requirements. The document also describes the broad scope of the project. While developing the solution if the developer has a valid point to add more details being within the scope specified then it can be accommodated after consultation with IBM designated Mentor.

INTRODUCTION

The purpose of this document is to define scope and requirements of a Personal Decision Making Assistant – PDA for a leading consulting house who wanted to empower its consultants in structured decision-making. Currently the employees waste significant time to convene and run meetings for arriving at meaningful decisions.

As a first step, the proposed system – PDA will provide an online structured assistance to quickly prioritize items such as actionable items, initiatives, or to-dos.

This document is the primary input to the development team to architect a solution for this project.

System Users

All the consultants of the consulting house will primarily use the Personal Decision Making Assistant, PDA.

Assumptions

1. PDA will be integrated with the existing company's intranet and therefore it will leverage the existing Intranet's authentication mechanism.
2. Since PDA is expected to use Intranet's authentication, for the purpose of this project, entering user name will take you to the user's PDA screen. You may create sample users directly from the backend database.

REQUIREMENTS

PDA will provide a web-based formal tool for consultants to quickly prioritize items such as actionable items, initiatives, or to-dos using a structured pair-wise comparison technique. This tool will integrate with the existing employee intranet.

About Pair-wise Comparison Technique

It is a technique used in decision-making process to rank or prioritize items on a relative scale of importance against a criterion. Let us assume that there are "n" items to be ranked. In this technique, all unique pairs of "n" items are formed. Note there will be ${}^{n}C_{2}$ pairs for "n" items. The user is presented each pair sequentially and asked to select (against the criterion) his/her "preferred item" from the pair. Once all pairs have been evaluated, it is very easy to score how many times an item was selected as "preferred". At this stage, each item presented in the descending order of its score – the ranked list! The technique works well for a small list of items typically less than 10.

For more information, please follow the web cast at https://asq.webex.com/asq/lsr.php?AT=pb&SP=EC&rID=2523847&rKey=86328f722460f23c URL.

Basic System Operation

The system operation is outlined below:

1. PDA accepts the list of items from the user; editing is allowed at this stage. The list can be saved as a “draft” for later use.
2. User can click on “start comparison” button on the “item list” page to start the pair-wise comparison process. PDA automatically forms the pairs at the backend, and presents each pair for user’s preference selection.
3. Once the all the pairs are exhausted, PDA automatically computes the score and presents the ranked list. Such a list is automatically saved for later reference.

PDA will maintain a view of all such lists for later reference for each user. Upon login, the user is directed to his/her lists view, where s/he either works on an existing list or create a new list from scratch.

A user-friendly interface needs to be developed to ensure smooth usage of the system.

DEVELOPMENT ENVIRONMENT

TEAM will be developed as a web application using Java/JSP and DB2 database. Eclipse will be used as the IDE for the same. You may consider using a JavaScript framework like Prototype/Scriptaculous /jQuery.