



EasyNet - I

SRS Document

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Disclaimer

This Software Requirements Specification document is a guideline. The document details all the high level requirements. The document should be used as a guideline by the students to design the Solution Architecture for the project. The document also describes the broad scope of the project and high level logical object model. But 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.

EasyNet-I Employee Engagement

Introduction

The purpose of this document is to define scope and requirements of Employee Engagement section of EasyNet, an intranet portal being designed and developed for a newly setup Retail chain.

This document should be used by the development team to architect the solution the project.

Management Summary

As a start-up organization, there was a need to create a central platform to provide employees a single point interface for all communication, processes and applications. EasyNet-I is focussed on involving the employee in multiple ways. Even while being working in stores and having no communication with the other store team, the employees get a chance to express, ask, seek advise on the EasyNet-I platform

The scope of EasyNet-I for employee engagement covers sections on

1. Birthdays and Anniversary
2. Share My Views
3. Online Poll
4. Question & Answer
5. My To Dos

The application shall maintain categories of interest, that a user can subscribe to for getting notification as and when the content in that category appears on EasyNet-I.

The proposed solution will be designed & developed to run on IBM WebSphere Application Server and IBM DB2 Universal Database in a 2-tier architecture.

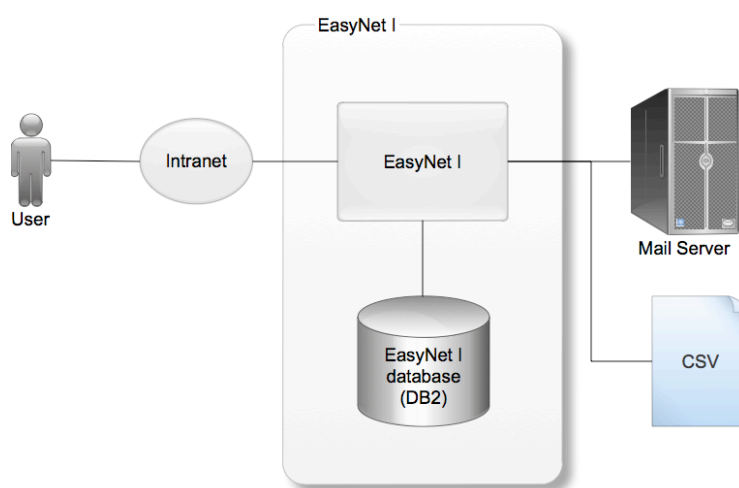
Key Assumptions

1. The developer has familiarized him/her self with corporate intranets. Employee dependency on intranets for information.
2. The user registration for Intranet is assumed. Each employee of Retail outlet shall have the login id and password for the application.
3. The Birthday's and Anniversary feed shall come from a central database of the Retail Chain. The information shall be uploaded as CSV into the system.

High Level Architecture

EasyNet-I high level architecture is illustrated through the context diagram shown below. It will have following categories of users:

1. Retail Staff
2. Content Mediator
3. Administrator



EasyNet-I Context Diagram

EasyNet-I

The EasyNet-I portal is comprised of content getting feed from backend CSVs in for uploading and displaying to the user.

Some of the sections are participative in nature like Share My Views, Online polling, Q&A. A section on Todos for the logged in employee is available. The user can update the status of todos. Only open Todos are displayed in the section.

For some of the sections the content is required to be validated from the content mediator before publishing. Once approved online, the content is visible in the relevant section.

EasyNet-I Database

Database stores information entered in various sections of the EasyNet-I.

CSV	Store, locations, Users, Information Category shall be uploaded with CSV format.
Mail Server	All notifications are routed via this mail server

Functional Requirements

The high level functional requirements for the EasyNet-I are outlined in the Use Case diagram described in this section.

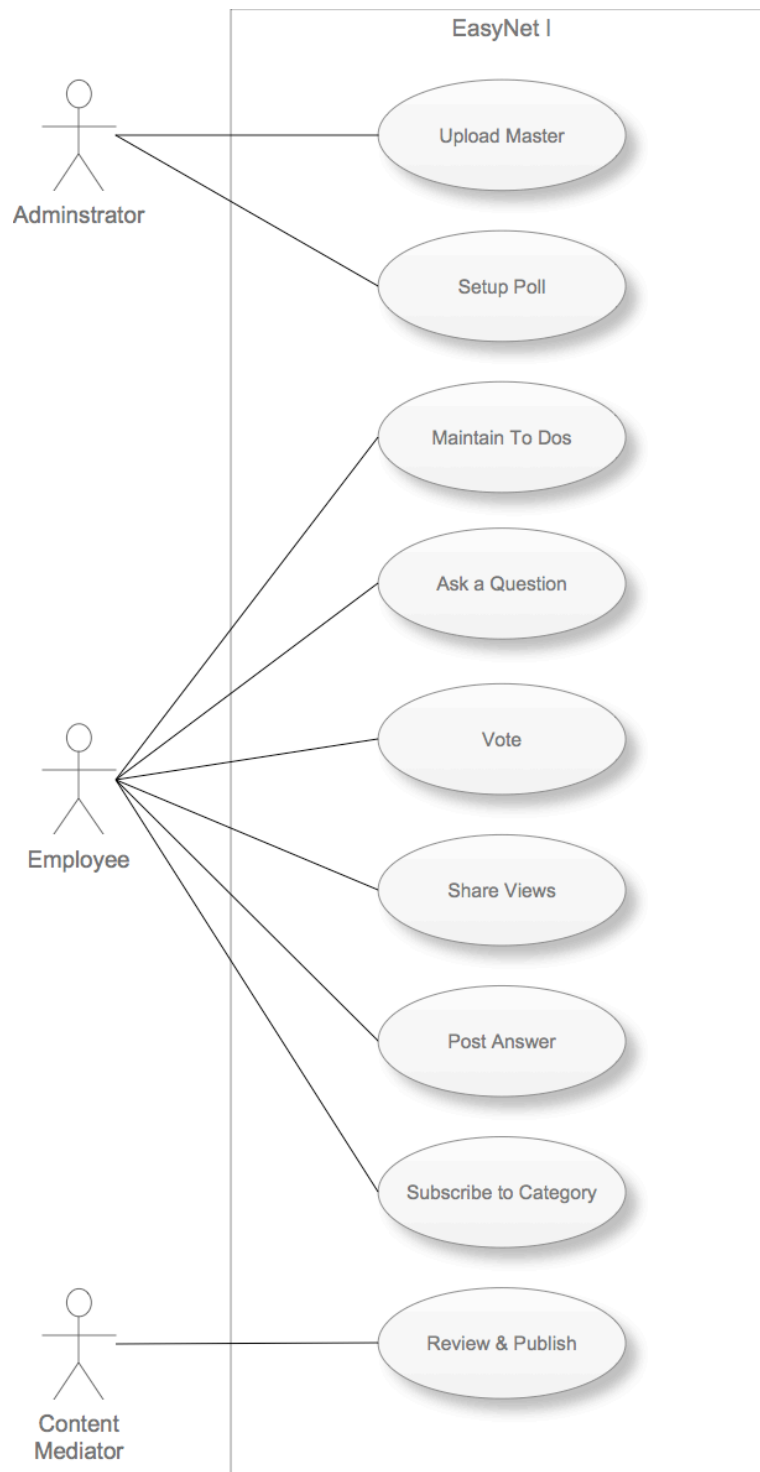
EasyNet-I will provide a secure user-id/password based secured login mechanism to access its services. The details of this are not outlined here. The development team is expected to create these keeping in mind the general practices followed by the web applications. Login will be a prerequisite to use EasyNet-I. Internal users will be provided user id/password pair by the Administrator

Once user logs in, s/he can view Home page of EasyNet-I with various sections

1. Today's Birthdays
2. Anniversaries this week
3. Today's Poll
4. Question Today
5. Views Galore
6. To be done

Use Case Diagrams

The following figure illustrates the Use Case diagram for the system. The MiS use cases are not detailed here.

*Use Case Diagram*

Use Cases

Upload Masters

Use Case Element	Description
Number	UC.01
Application	<p>Masters in the application are uploaded as CSV files.</p> <p>The Retail chain has centralized system for master record maintenance, some of the masters used in the EasyNet-I receive CSV feed from the centralized system.</p> <p>Store Master contains Store id, Store Location</p> <p>Birthdays Master contains Employee id, Employee Name, Date of Birth, Store id</p> <p>Anniversary Master contains Employee id, Employee Name, Anniversary Date, Store id</p> <p>Categories Master contain Category id, Category Name (Information categorization is important for search or accessing data related to the category)</p>
Use Case Name	Upload Masters
Primary Actor	Administrator
Secondary Actor	None
Pre-condition	None
Trigger	User clicks on the Master Upload on the landing page.
Basic Flow	<p>System prompts for the file name to be uploaded. Standard file upload dialog is presented to select a file from the local system.</p> <ul style="list-style-type: none"> The selected file data is uploaded in the related masters; if an existing record is encountered, the old details are replaced with the new details.
Alternate Flow	<ul style="list-style-type: none"> In event of incorrect CSV format, system gives an error and NO data is uploaded. Operation is cancelled
Output	System displays the number of records uploaded. It also highlights the number of records updated (i.e. already existing ones being replaced)

Setup Poll

Use Case Element	Description
Number	UC.02
Application	Poll Question is posted on a regular basis. The Administrator keeps receiving content for posting as a poll question.
Use Case Name	Setup Poll
Primary Actor	Administrator
Secondary Actor	None
Pre-condition	None
Trigger	User clicks on the Setup Poll on the Admin menu of EasyNet-I landing page.

Use Case Element	Description
Basic Flow	<ul style="list-style-type: none"> • The system displays the current poll question and the Votes received (Yes / No) • The current question is archived, the results also get archived and are displayed as previous poll Results • The new question is posted and the date for poll question to be displayed id also entered. • The system displays all the previous questions on the archive link. • The record is saved for poll, it will be displayed by system on the date for poll question is reached. In case its today's date, then as soon as the question is saved, the Poll question appears in the Today's Poll section
Alternate Flow	<ul style="list-style-type: none"> • None
Output	<ul style="list-style-type: none"> • None

Maintain To Dos'

Use Case Element	Description
Number	UC.03
Application	<p>To dos are maintained by an employee for self, it requires basic operations viz. add, edit, delete and view..</p> <ul style="list-style-type: none"> • Following information is stored in a Todo list <ul style="list-style-type: none"> • Employee Id • Store id • Task • Priority (Low, Medium, High)
Use Case Name	Maintain To Dos
Primary Actor	Employee
Secondary Actor	None
Pre-condition	None
Trigger	User clicks on the Maintain on the ToDo Section of EasyNet-I landing page.

Use Case Element	Description
Basic Flow	<ul style="list-style-type: none"> System displays a list of Todos for the logged in user and displays links to <i>add</i>, <i>edit</i> and <i>delete</i>. <ol style="list-style-type: none"> In case add, a new row is presented. The entry is saved on clicking the save button provided form clears all the data validations (if any). The list view is updated accordingly. In case of edit, Selected record is opened for editing. The edited record is updated on clicking the update button, provided form clears all the data validations (if any). In case of delete, from the list view user selects the check box(s) against each record. Selected records are deleted up on clicking the delete button. However, user is presented a confirmation dialog before deleting the records.
Alternate Flow	<ul style="list-style-type: none"> In event of any error, it is clearly displayed and user is asked to reenter data or perform operation again.
Output	An updated To do list is displayed in the My Todos' section.

Ask a Question

Use Case Element	Description
Number	UC.04
Application	The employees of Retail chain are free to ask their questions on EasyNet-I.
Use Case Name	Ask a Question
Primary Actor	Employee
Secondary Actor	None
Pre-condition	None
Trigger	User clicks on the Ask on the Q&A section of EasyNet-I landing page.
Basic Flow	<ul style="list-style-type: none"> The new question is posted and category is selected from the pick list generated from Category master. Post question link will save the entry and publish it on the EasyNet-I section of Q&A with the Employee Name and Store Name. The users who have subscribed to the Category selected on this form are notified by email.
Alternate Flow	<ul style="list-style-type: none"> Cancel abandons the operation, no database.
Output	<ul style="list-style-type: none"> Email notification to subscribers of the category.

Vote

Use Case Element	Description
Number	UC.05
Application	Poll questions are posted to seek opinion of the staff across the country. Its important for the organization to receive response on the poll.
Use Case Name	Vote

Use Case Element	Description
Primary Actor	Employee
Secondary Actor	None
Pre-condition	Authorized user of the system
Trigger	User clicks access Poll Section of EasyNet-I landing page.
Basic Flow	<ul style="list-style-type: none"> • Poll Question is displayed. • User selects yes or no from the options listed. • The system updates the poll score for the answered option i.e. either Yes will become yes+1 or No will become No+1. • Response is updated immediately.
Alternate Flow	<ul style="list-style-type: none"> • None
Output	<ul style="list-style-type: none"> • Updated Poll Response on the Screen.

Share Views

Use Case Element	Description
Number	UC.06
Application	Company fosters the culture of employees coming forward and sharing their experiences good or bad in the store, What efforts or what change do they bring to make smoother experience to customer.
Use Case Name	Share Views
Primary Actor	Employee
Secondary Actor	None
Pre-condition	None
Trigger	User clicks on the Share on the Views Galore section of EasyNet-I landing page.
Basic Flow	<ul style="list-style-type: none"> • The new entry for the view to be shared is posted and category is selected from the pick list generated from Category master. • Post View link will save the entry and publish it on the EasyNet-I section of Views Galore with the Employee Name and Store Name. • The users who have subscribed to the Category selected on this form are notified by email.
Alternate Flow	<ul style="list-style-type: none"> • Cancel abandons the operation, no database impact
Output	<ul style="list-style-type: none"> • Email notification to subscribers of the category

Post Answer

Use Case Element	Description
Number	UC.07
Application	Company fosters the culture of employees coming forward and sharing their experiences good or bad in the store, What efforts or what change do they bring to make smoother experience to customer.
Use Case Name	Share Views
Primary Actor	Employee
Secondary Actor	None

Use Case Element	Description
Pre-condition	None
Trigger	User clicks on the Share on the Views Galore section of EasyNet-I landing page.
Basic Flow	<ul style="list-style-type: none"> The new entry for the view to be shared is posted and category is selected from the pick list generated from Category master. Post View link will save the entry, it will move to pending for review queue..
Alternate Flow	<ul style="list-style-type: none"> Cancel abandons the operation, no database impact.
Output	<ul style="list-style-type: none"> None

Subscribe to Category

Use Case Element	Description
Number	UC.08
Application	<p>With Busy schedules of the employees its difficult to keep track of every thing that gets posted on EasyNet-I.</p> <p>The subscription model serves as a notifier to check out the content for a particular category(s) the employee might be interested in following.</p>
Use Case Name	Subscribe to Category
Primary Actor	Employee
Secondary Actor	None
Pre-condition	None
Trigger	User clicks on the Subscribe link on the Share Views section of EasyNet-I landing page.
Basic Flow	<ul style="list-style-type: none"> The system displays list of categories. The user checks the entries of interest All Checked entires are saved with user profile for sending notifications
Alternate Flow	<ul style="list-style-type: none"> None
Output	<ul style="list-style-type: none"> None

Review and Publish

Use Case Element	Description
Number	UC.09
Application	The content posted by users is validated before publishing to avoid any adverse reactions within the user community
Use Case Name	Review Content and Publish
Primary Actor	Content Mediator
Secondary Actor	None
Pre-condition	None
Trigger	User clicks on the Review link on the Content Admin landing page.

Use Case Element	Description
Basic Flow	<ul style="list-style-type: none">• Category wise content is reviewed• All the entries for review are displayed, user selects one at time in a category, reviews and publishes it.• The option to discard is used if content is not fit for publishing. All okayed content are visible immediately on the Intranet site.
Alternate Flow	<ul style="list-style-type: none">• None
Output	<ul style="list-style-type: none">• None

Logical Object Model

The EasyNet I module has a very simple set of objects like Users, Information Category, Content Type(Interactive or Informative). It is recommended that the developer of this project, during the analysis phase, creates the logical object model for rendering information on EasyNet-I.

During the technical design it will be transformed into a physical model covering all system entities. Such a diagram will include their relationship and its cardinality.

Database Design Guidelines

This involves the transformation of the use cases, state diagrams, and logical object model into detailed and optimized physical database table designs.

Typically persistent classes will map to table(s) with their attributes as columns of the table. In some cases a high level object may map in to a master-child table. Invoice is one such example where it maps in to "invoice_header" and "invoice_line_item" table.

Associations between two persistent objects are realized as foreign keys to the associated objects. A foreign key is a column in one table that contains the primary key value of the associated object.

Similarly, a standard technique in relational modeling is to use an intersection entity to represent many-to-many associations. Following is a broad checklist for physical database design:

1. Database must be properly normalized except those instances where de-normalization help improves performance. This option must be used with special care.
2. All persistent classes that use the database for persistency must map to database structures.
3. Many-to-many relationships must have an intersecting table.
4. Primary keys should be defined for each table, unless there is a performance reason not to define a primary key.
5. Indexes should be defined to optimize access.
6. Data and referential integrity constraints should be defined.

Testing Approach

Quality of the software can be achieved with basic hygiene and consistency followed during design and development of User Interface(UI), Navigation, Validations as per the business process requirement.

To ensure the project delivers acceptable quality to the customer, its important to create a checklist of the conventions to be followed across. Common checks as below are for your reference during design and development:

Common Checks	Validation Type
Page Title is valid for the feature being provided on the page	UI
Order of the Data Entry Fields is logical as per the functionality being provided by the feature	UI
Order of the Display only Fields makes viewing and understanding easy for the user	UI
Spellings and Correctness of Label for the Data Entry and Display fields	UI
The labels are not wrapping onto another row thereby adding a blank row on the page	UI
The fields with drop down are displayed in single row instead of drop down coming on the next row	UI
Data Entry field basic validations are working i.e Text field /Numbers / Dates allow data for their type only	Functional
The dates are following a standard format dd/mm/yy on all forms	UI
The color scheme of all forms i.e headers labels , alerts, entry fields are uniform throughout the application	UI
The action buttons for a New Data Entry Form are uniform for all forms that is allowing data entry	UI
The action buttons are performing the desired action e.g. "submit" is creating a new record if there are no errors and recording all the input fields, whereas 'cancel' is not creating a new record in the database	Functional
The links provided on the forms are opening correctly.	Functional
The data feed mechanism for Read and Write files is generating a log with count of entries.	Navigation

Suggested Technical Reading

The project is aimed at making the student understand concepts of Design and Development using IBM Rational tools, Web Sphere Application Server and DB2 Database. The following reading reference is easy to understand and should be read to get a clear understanding of capabilities of the tools and how you would leverage them to execute a project.

Technical Reference	URL to access
RAD - Tackling challenges of software development with Rational Application Developer for WebSphere Software	http://www.ibm.com/developerworks/rational/library/08/0926_ackerman-mahate/index.html
IBM Education Assistant - Rational Application Developer 7.5	http://publib.boulder.ibm.com/infocenter/ieduasst/rtnv1r0/index.jsp?topic=/com.ibm.iea.rad_v7/rad/rad75.html
RSA-Overview of Rational Software Architect for WebSphere Software Version 7.5	http://www.ibm.com/developerworks/rational/library/08/0926_arnold/index.html
Using the new features of UML Modeler in IBM Rational Software Architect Version 7.5	http://www.ibm.com/developerworks/rational/library/08/0926_diu/index.html
Rational Technical Library	http://www.ibm.com/developerworks/rational/library/