

EXPENSE CALCULATOR 1.0

Software requirement specification

Version 1.0
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Gen!x
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Revision Log

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5/10/2005	taf25	0.2 (Under review)	Incorporated feedback on functional requirement section
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Document Approvers

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INTRODUCTION

Summary

Managing finances is an important part of the overall well-being of individuals. In cases where a small business is owned, it is often cost prohibitive to purchase a large scale application to use for managing the day to day expenses of the business.

The disadvantages of purchasing these large scale record management applications include:

- High cost
- Hardware requirement/maintenance
- Training on the new/complex software

Expense Calculator (referred to as ExpCalc in this document) seeks to provide a small scale expense management application that can be used to manage expenses for individuals and small business. The above disadvantages are eliminated by the small size and specific focus of the application on expense management.

Purpose of this document

The purpose of this specification document is to formalize project requirements for ExpCalc by documenting and agreeing to the requirements between the business users of the system and the company developing the solution. It communicates the requirements for further system analysis and construction activities.

Intended Audience

The primary audiences of this document are

- Systems analysts and architects who will design and construct the system
- Testing team

Scope of the document

The scope this requirement specification is limited to explaining the requirements necessary for architecting and developing the ExpCalc 1.0 solution as defined in the Statement of Work.

Critical success factors for ExpCalc 1.0

- Timely completion of ExpCalc 1.0

References

- SOW_V1.0.doc (statement of work by Nellie Karsten)

Abbreviations

ExpCalc	Expense Calculator
OS	Operating System
LAN	Local Area Network
SOW	Statement of Work

DESCRIPTION

This use case describes the process to track expenses in the Expense calculator application. The application is designed to allow users track expenses by category and also manage different sets of expenses under different groups known as accounts. The application will support the following functions

Architecture

ExpCalc should follow the 2-tier client-server architecture. In this form the client comprises of both presentation and business logic and is thus referred to as a "thick" client. The server will constitute of the data layer. For version 1.0 the client/server will be collocated in the same machine with the use of a file based database. However, design considerations should be made for future versions that will use a distributed database on a remote server.

Product Features

- Provide a mechanism to manage records of expenses including essential details of the expense such as data and category

- Provide a mechanism to separate expenses that belong to different accounts e.g. Work, Personal, Joint etc

- Provide a mechanism that ensures a summary of expenses collated by category belonging to a specific account.

- Provide a mechanism to provide details about the application.

Operating Environment

OS

The following operating systems will be supported:

- Windows 2000 Professional
- Windows 2000 Advanced Server
- Windows XP 32-bit (Home, Professional & Media Center Edition)
- Windows XP 64-bit (Home, Professional & Media Center Edition)
- Windows 2003 Server
- Windows Vista 32-bit (all versions)
- Windows Vista 64-bit (all versions)

Hardware requirement

The application will be able to run on the following hardware specifications:

Minimum:

- x86 architecture, Single CPU Pentium II or above, 128 MB RAM

Recommended:

- x86 architecture, Single CPU Pentium III or above, 168 MB RAM

Database

The following database(s) will be supported:

MS Access 2000

SYSTEM FEATURES

This document details the functional requirements for ExpCalc organized by system features, the major services provided by the product:

Manage Accounts

Description and Priority

An individual needs to organize different expenses incurred during the month. This user has chosen to separate these expenses based on categories such as work-related, personal and charity related expenses. They need a tool that can manage all these expenses easily. *Priority: 8*

Stimulus/Response Sequences

1. User invokes the appropriate dialog to create an account
2. A name of a non-existing account is included by the user
3. System creates the account and displays the expense entry page with no records
4. User invokes the appropriate dialog to open an account
5. User chooses an existing account from a list of accounts.
6. System opens the account and displays the expense entry page with records available within the account.
7. Use case finishes successfully.

Functional Requirements

1. A mechanism should be provided to list all available accounts to allow easily re-opening an existing accounts
2. Accounts without records should be deleted
3. A mechanism must be available to allow choosing accounts that have been previously created.

Manage Expenses

Description and Priority

A home owner has recognized a need to organize, compute, and categorize various expenses incurred during the month. The owner wants to be able to make adjustments during current and past entries. In addition, they need a tool that can give the sum total of every record inputted into an account that they designated. *Priority: 10*

Stimulus/Response Sequences

1. User begins by creating a new account, or opening an existing account.
2. User enters expense data into the required fields and saves the expense.
3. System validates fields for data format errors and displays messages if any found.
4. All appropriate screen elements are updated to reflect the newly added record.
5. All previous input fields are cleared.
6. User selects the delete function to delete a single entry.

7. User highlights a selection of fields and uses the delete function to delete selected entries.
8. Use case finishes successfully.

Functional Requirements

1. A convenience mechanism should be provided to allow the current date to be entered easily. The use of this feature must be optional.
2. Once an error message is displayed and dismissed, all entries in the form should be preserved.
3. Date entries must be format and a valid date. (i.e. 4/13/2005 or 04/13/2005)
4. The Total field will only show the sum total of all expenses incurred for an individual account.
5. Total field must be shown in \$#,###.00 currency format
6. Input validation should only occur for the date and amount fields.
7. Usability features such as keyboard short-cuts, tabbing through fields, and accept buttons should be employed.
8. All calculations must be accurate.

Application Details

Description and Priority

Information about ExpCalc as well as the system within which ExpCalc is being executed should be readily accessible. *Priority: 3*

Stimulus/Response Sequences

1. User invokes the application and accesses the application details interface.
2. Use case finishes successfully.

Functional Requirements

1. The correct version info should be displayed in the following form.
M.m.b
(M=Major version, m=Minor version, b=build)
The major number=1, minor version=0
2. A mechanism must be available to show the details of the system within which ExpCalc is executing.

View Summary

Description and Priority

After correctly calculating all expense records and accounts an individual identifies a need to have a summary of all past expense records and accounts. This will help the owner see their spending habits and provide a record for bookkeeping and tax purposes. *Priority: 6*

Stimulus/Response Sequences

1. User begins by creating a new account, or opening an existing account.

2. User wishes to view expenses grouped by category and invokes the Summary feature.
3. Summary is displayed grouped by category.
4. Use case finishes successfully.

Functional Requirements

1. Summary records are read-only.
2. All calculations must be accurate.

NON FUNCTIONAL REQUIREMENTS

ExpCalc must be tested for the following non-functional requirements:

Performance

Response time should be less than equal to 5 seconds for any database transaction.
Memory usage for the application must be less than 32MB at all times

Installation

An installer must be created to easily install ExpCalc on the user's system. The installer must be packaged into a single executable unit.

Security

ExpCalc 1.0 does not utilize authentication. Later versions may include this