

Project Ivanhoe

Group 16

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Project overview document – Project Ivanhoe

In today's environment, there are many different ways to spend money. You can order via the Internet and receive an invoice, pay cash, debit your personal account or use a credit card. This makes it hard for ordinary people to keep track of their expenses and many struggle with debts that never get paid. In order to cope with unexpected outlays as well as saving for planned activities such as the family's vacation, it is essential to have a good overview of one's economy.

Project Ivanhoe is a software project for developing a Home Finance System (HFS) that lets the users input their daily expenses and expenditures. This in turn lets the users get a practical overview of his or her economical situation to make financial decisions. The users of the system are people with a home computer and a need for monitoring their personal finances. He/she is a person with income and expenses, who wants to be able to manage the money spent and earned in a more effective way. The system is designed for everyday use as well as special occasions.

The problems the system will solve for the user is to stop overspending, monitor where the money goes, summarise what the user's expenses are per week, month or year. The user will be able to compare the budget with the actual cash outflow. It will help the user calculate the amount to be saved in order to fulfil a financial goal as well as provide information about expenses divided into categories such as car expenses, groceries and entertainment. In order to provide the user with an overview of the economic situation, the system creates a graphical presentation that will help the user understand how different purchases affect the overall economy and provide support for economic decision making.

The system is designed for managing home economic situations and the proposed user is a male or female with an economy affecting one or several persons in the household. It is not designed for company use or advanced calculations. The system will be easy to use and manageable by people with a basic understanding of computers. Previous experience with financial management or economics is not needed. After initial configuration of the system, the user can choose to use the system to just input a new bill or expense, or to create a whole monthly budget.

The system's primary use is based on follow-ups and requires continuous update of information by the user. Except for budgeting, the system is designed to provide information about previous events and facilitate calculations regarding savings and future expenses. The usability of the system increases with the usage frequency, as more data is available for analysis.

User specification

Age: 18+

Gender: neutral

Computer knowledge required: basic

Financial knowledge required: none

Usage frequency: at least once per month is recommended.

Main uses of the system

- To create budgets
- To monitor income and expenses.
- To provide a graphical overview of the personal or family economy.
- To compare expenses with the budget.
- To monitor expenses, such as bills, with a reminder function

Use case - student

Ivan is a second year student at KTH. He has just finished his lunch of noodles. He goes to his computer and boots it up. He then starts up the HFS and selects his financial profile. All his previous and future budgeted expenses are then displayed for the selected time-period. He starts to input his latest expenditures into the system: a mobile phone bill, his food and his student literature. The phone bill is categorized as reoccurring monthly expenses, the food as household expenses while the student literature is categorized as education expenses. The program then calculates the remaining funds at his disposal at the end of the month, given his current expenditures and income. Comparing the remaining funds with this months spending plan, he draws the conclusion that he can't afford the Friday night party.

Use-case - family

Ingrid is the mother of the Ivarsson family. It is the end of the month, she and her husband has just received this month's salary statement. She starts up the HFS and chooses the family's profile from the menu. She now clicks "create new budget" to make up a budget for the following month. In the "new bill" box she enters all known current expenditures and bills. In the "income" box she enters hers and her husband's salaries. She clicks "create budget" and the program automatically distributes the income to the different expense items and the budget is created.

The family has decided to go on a vacation and estimates this expense to SEK20000. Ingrid generates a few diagrams in the program to get an overview of where the family can save some money for the vacation.

Context of use

The HFS will be used exclusively at the user's personal home computer for monitoring personal or family finances. It is a tool for managing changes in the user's economy and should not be used for corporate finance or on a public computer.

The HFS will store all information on the computer and there will be no interaction with other services or systems. In order to use the system on a different computer, the information will need to be copied or re-entered. The system cannot manage the same profile on more than one computer since the program is not designed to synchronise with other systems and the information is stored on the computer only.

<u>Topic</u>	<u>In</u>	<u>Out</u>
Both PC and MAC compatible	X	
Compare different periods	X	
Create budget	X	
Create to-do list	X	
Divide expenses into categories	X	
Due date reminder	X	
Encryptions of saved data		X
Graphical interface	X	
Graphical presentation	X	
Info saved as XML	X	
Info saved in Database		X
Interactions with other systems		X
Interactive help-functions		X
Password -secure		X
Pay bills		X
Profiles	X	
Schedule		X
Separates expenses from cash outflow	X	
Source of information other than user		X
Store personal information		X
Time-line function	X	

Factors to be taken into account when designing and building the system.

- The system will be used on a personal computer and all information will be stored on the computer decrypted.
- People are forgetful. To help them remember to pay bills in time and execute other planned financial activities; there will need to be a reminder function.
- People may have little or no experience of computers and managing finances. There will need to be a help-file but the user will need to have basic computer-knowledge.
- People are impatient. Input of data should be easy and straightforward.
- Since the user should not be required to have a DBMS, XML will be used for storing information.
- There may be several users of the system and it is therefore necessary to use profiles.
- Different users may have different goals with using the systems.
- The user may have little experience with graphical data. There is a need for information and explicit explanations.

Technologies and Risks

We will use XML to store information on the user's computer and the programming language used is Java. The risks associated with these are our limited knowledge of primarily XML but also programming in general. We will need to do research on XML in order to obtain knowledge required in the project. Our experiences in programming graphical user interfaces are also limited. We will use Java Swing in the graphical programming and this will also require us to do research. The main risk associated with our lack of experience in programming is failure to comply with the set time constraint.