

# Project Ivanhoe

## Design Document

Group 16

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## **4. Graphical User Interface**

### **4.1 Graphical User Interface Overview**

Ivanhoe uses Java Swing to implement the graphical user interface. The main view consists of a frame with a menu bar and a few fields with access to the main functionality of the program.

The tabbed pane to the right provides access to multiple functionalities of the program, including tools for creating, displaying and analyzing the user's finances.

To assist the user in navigating their budgeted posts, a tree structure is shown in the left part of the main frame. The tree will show the user's financial categories and the corresponding posts.

In the “Visningsläge” tab, a table is displayed, showing a simple analysis of a budget.

In the “Lägg till post” tab, the user can add their expenses and incomes to their profile.

In the “Analys” tab, the user can set a number of parameters for “advanced” analysis of their finances.

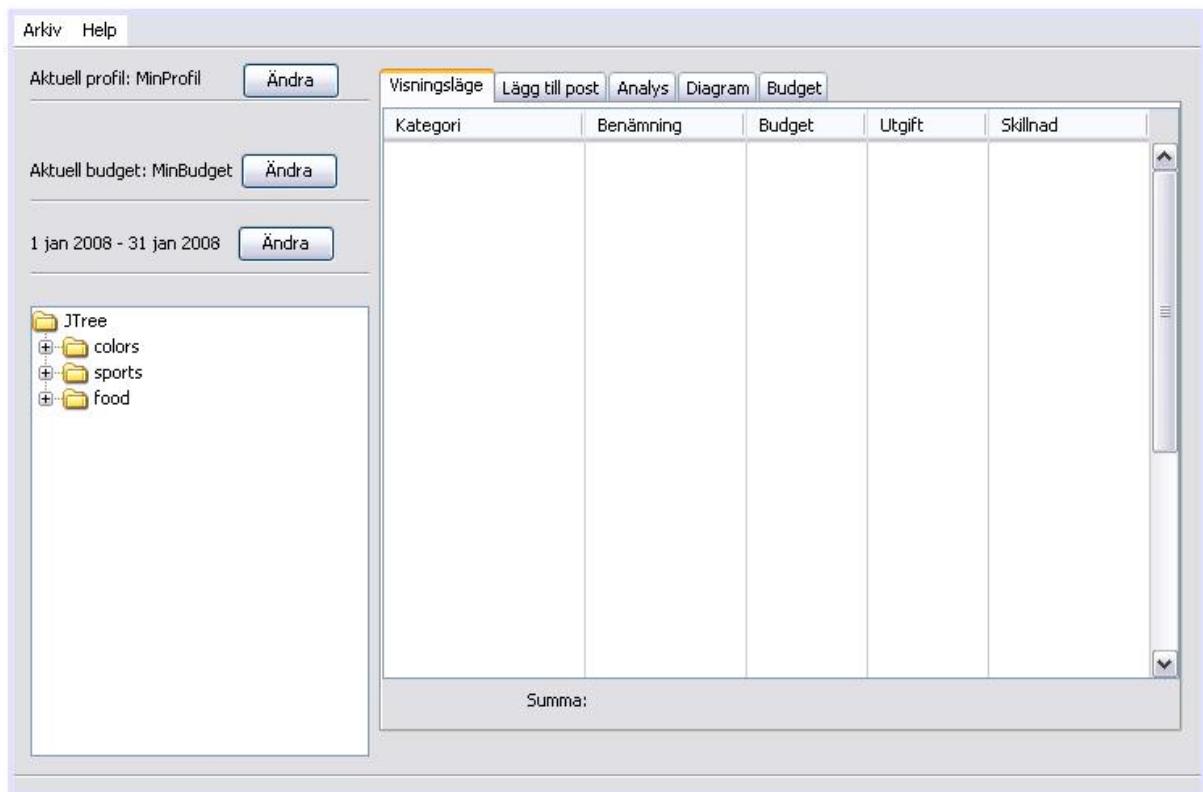
In the “Budget” tab, the user can create, modify and manage their budgets.

The time setting to the left in the main frame will define the time period for display in “Visningsläge”, and decide which categories will be displayed in the tree, depending on when the categories were entered.

## 4.2 Screen shots

JPanel *mainPanel*

title: "Ivanhoe"



is the main view of the program and is called upon system startup.

### Fields:

JMenuBar *menuBar*

JTree *mainTree*

JTabbedPane *mainTabs*

### Controls:

JButton *changeProfileButton* "Ändra" calls *chooseProfileDialog*

JButton *changeBudgetButton* "Ändra" calls *chooseBudgetDialog*

JButton *changeDateButton* "Ändra" calls *chooseDateDialog*

References to Requirements Document: All points.

JPanel *showPanel*  
title: "visningsläge"

Kategori	Benämning	Budget	Utgift	Skillnad

Summa:

is chosen from the *mainPanel*

**Fields:**  
JTable *showTable*

**Controls:**

References to Requirements Document: 4.1.1.6, 4.1.1.7

```
JPanel addPostPanel  
title: "lägg till post"
```

is chosen in the mainPanel.

## Fields:

JComboBox *name*

### JComboBox *category*

JRadioButton *income*

JRadioButton *expenditure*

*JTable postTable*

## Controls:

JButton  *addButton "lägg till"* calls *addPost()*

JButton *save* "sparar" calls *save()*

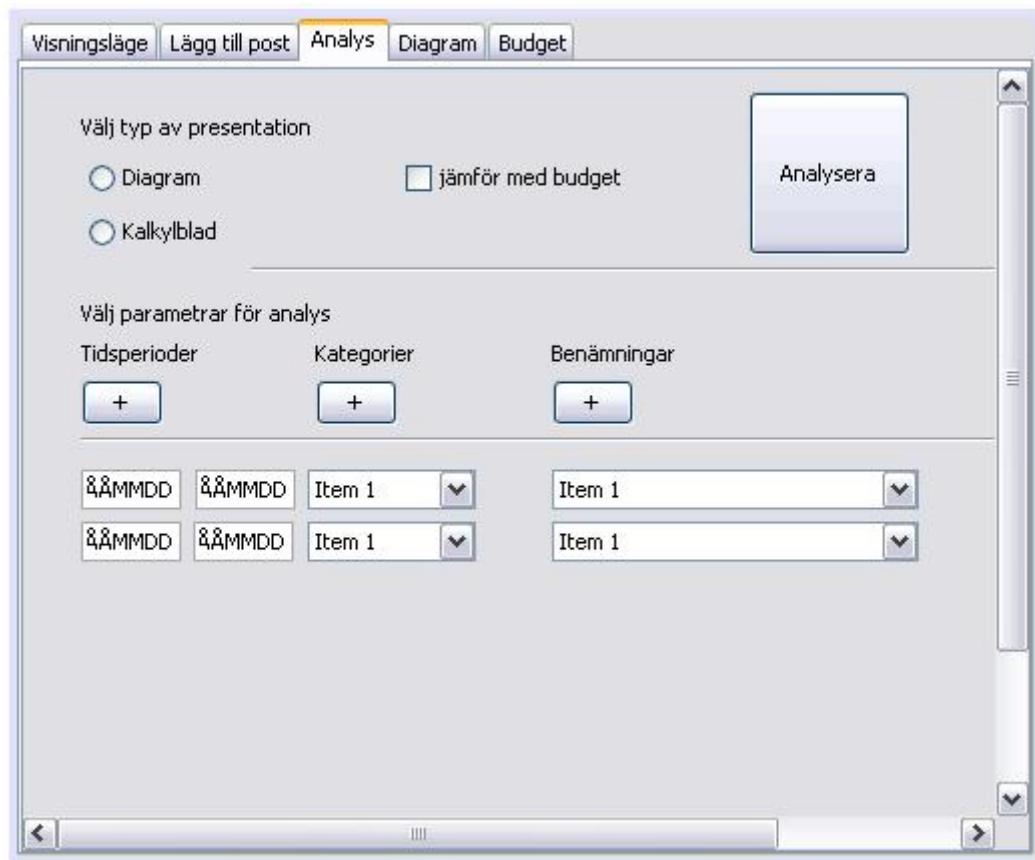
JButton *remote* "ta bort" calls *remove()*

JButton change "ändra" calls *change()*

#### References to Requirements Document: 4.1.1.4, 4.1.1.5

JPanel *analysisPanel*

title: "Analys"



chosen from the 5 different JPanels in the main view

**Fields:**

JTextField *startDate*

JTextField *endDate*

JComboBox *categoryBox*

JComboBox *subCategoryBox*

JRadioButton *diagramButton*

JRadioButton *calculusButton*

JCheckBox *compareCheckbox*

**Controls:**

JButton *analysis* calls *dataAnalysis()*

JButton *timePeriod* calls *addTimePeriod()*

JButton *category* calls *addCategory()*

JButton *subCategory* calls *addSubCategory()*

References to Requirements Document: 4.1.1.7

JPanel *showDiagramPanel*

title: "Diagram"



is chosen in the mainPanel.

**Fields:**

JPanel *diagramPanel*

**Controls:**

References to Requirements Document: 4.1.1.7.1

JPanel *createBudgetPanel*

title: "Redigera"

The screenshot shows a Java Swing application window titled "Redigera". At the top, there is a tab bar with tabs: "Visningsläge", "Lägg till post", "Analys", "Diagram", and "Budget". The "Budget" tab is selected and highlighted with a yellow border. Below the tabs, there is a form area with the following fields:

- "Redigera:" dropdown set to "MinBudget" with a "Ändra" button next to it.
- "Kategori:" dropdown set to "Item 1" with a "nameBox" dropdown next to it.
- "Benämning:" label followed by a text input field containing "Summa".
- "Summa:" label followed by two radio buttons: "Inkomst" (selected) and "Utgift".
- "entrySum" text input field with "kr" suffix.
- "Lägg till" button.

Below the form is a table with three columns: "Kategori", "Benämning", and "Summa". The table has 10 rows, all of which are currently empty.

At the bottom of the panel are three buttons: "Ta bort", "Ändra", and "Spara".

is chosen in the mainPanel.

#### Fields:

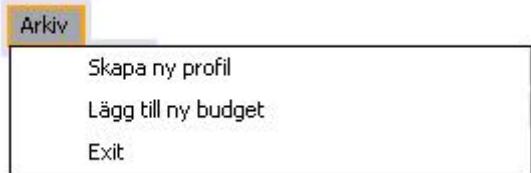
JTextField *entrySum* "Summa"  
JCombobox *categoryBox* "Kategori"  
JCombobox *nameBox* "Benämning"  
JTable *entryTable*  
RadioButton *incomeRadioButton* "Inkomst"  
RadioButton *expenseRadioButton* "Utgift"

#### Controls:

JButton *changeButton* calls *chooseBudgetDialog()*  
JButton *saveButton* calls *saveBudget()*  
JButton *removeButton* "Ta bort" calls *removeEntry()*  
JButton *editButton* "Ändra" calls *updateEntry()*

References to Requirements Document: 4.1.1.2, 4.1.1.3, 4.1.1.5, 6.1.1.2, 6.1.1.3, 6.1.1.5

```
JMenu fileMenu  
title: "Arkiv"
```



is chosen from the *menuBar*

**Fields:**

```
JMenu fileMenu "Arkiv"
```

**Controls:**

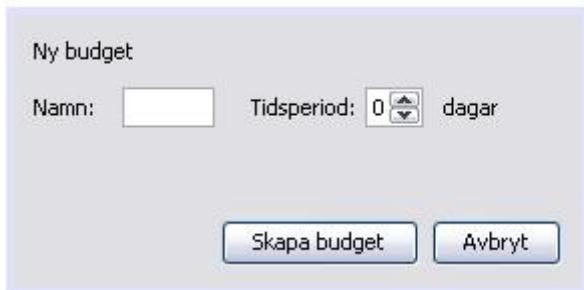
JMenuItem *createNewProfile* "skapa ny profil" calls *createNewProfileDialog()*

JMenuItem *addNewBudget* "lägg till ny budget" calls *addNewBudget()*

JMenuItem *exit* "exit" calls the *exit()*, quits the application

References to Requirements Document: 4.1.1.1, 4.1.1.2

JDialog *createNewBudgetDialog*  
title: "skapa ny budget"



is chosen from the *mainPanel*

**Fields:**

JTextField *budgetName*  
JSpinner *daySpinner*

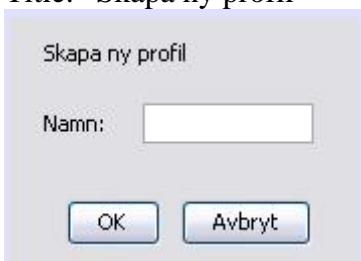
**Controls:**

JButton *createBudget* "skapa budget" calls *createBudget()*  
JButton *cancel* "avbryt" quits the dialog

References to Requirements Document: 4.1.1.2

JDialog *createProfileDialog*

Title: "Skapa ny profil"



Is called from *createNewProfile*

**Fields:**

JTextField *profileNameField*

**Controls:**

JButton *okButton* "OK" calls *createProfile()* and closes the dialog.

JButton *cancelButton* "Avbryt" closes the dialog.

Reference to Requirements Document: 4.1.1.1

JDialog *chooseBudgetDialog*  
title: "Välj budget"



is chosen from the *menuBar*, and *changeBudgetButton*

**Fields:**

JList *budgetList*

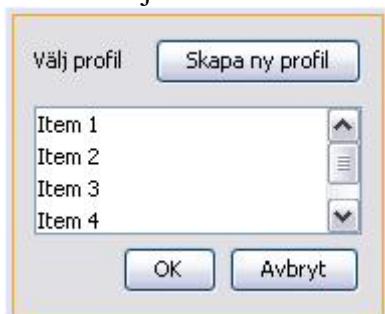
**Controls:**

JButton *newBudgetButton* "Skapa ny budget" calls *createNewBudgetDialog()*  
JButton *okButton* "OK" calls *createBudgetPanel()*  
JButton *cancelButton* "Avbryt" exits dialog

References to Requirements Document: 4.1.1.2, 4.1.1.3

JDialog *chooseProfileDialog*

Title: “Välj Profil”



is called from *createNewProfileButton*.

**Fields:**

JList *profileList*

**Controls:**

JButton *createProfile* “Skapa ny profil” calls JDialog *createProfileDialog*

JButton *okButton* “OK” calls *createNewProfile()*

JButton *cancelButton* “Avbryt” closes the dialog

Reference to Requirements Document: 4.1.1.1

JDialog *chooseDateDialog*  
title: "Välj tidsperiod för visning"



is called from JPanel "visningsläge" button "ändra"

**Fields:**

JTextField *startDate*

JTextField *endDate*

**Controls:**

JButton *okButton* "OK" calls `changeTimePeriod()`

JButton *cancelButton* "Avbryt" quits the dialog

References to Requirements Document: 4.1.1.6, 4.1.1.7