

Project Ivanhoe

Design Document

Group 16

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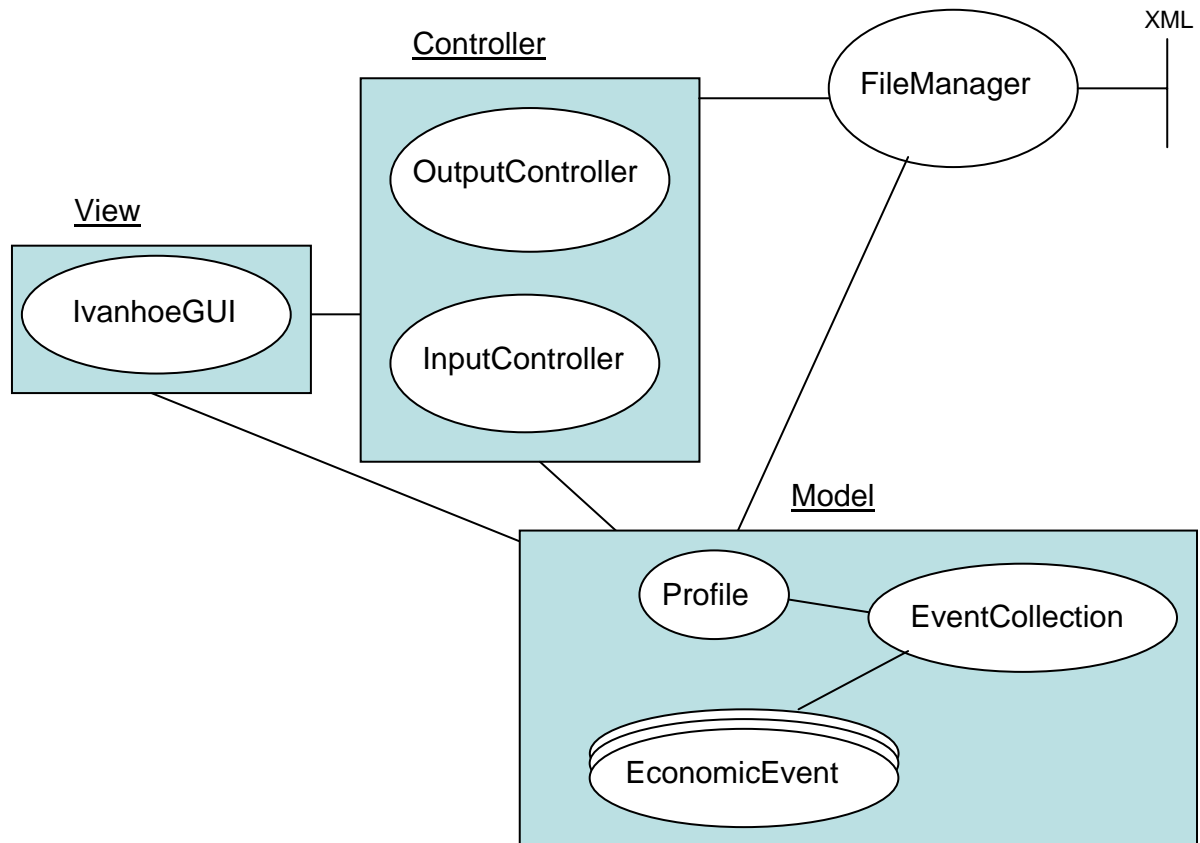
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2.2 Overall Architecture Description

The Ivanhoe system is a Model-View-Controller system. The Model consists of a Profile, an EventCollection and EconomicEvents. The Controller consists of an OutputController and an InputController. The View consists of an IvanhoeGUI as pictured below.



The user interacts with the IvanhoeGUI, which shows the graphical user interface. The IvanhoeGUI shows the information stored in the profile such as the registered expenses and incomes. It also communicates with the Controller when a new Profile, EventCollection or EconomicEvent should be created or modified.

The Controller communicates with the FileManager when information should be saved or retrieved. It also performs calculations and other activities needed when creating or modifying any part of the Model. The OutputController handles the creation of spreadsheets and graphs shown by the IvanhoeGUI while the InputController controls the modification and creation.

The FileManager reads and writes XML-files stored on the computer. There is a link between the model and the FileManager to handle save status of the profile.

2.3 Detailed Architecture

The detailed architecture of the Ivanhoe system is illustrated with Class Responsibility Collaborator cards (CRC cards) and examples of sequence diagrams using the Unified Modelling Language (UML). For further examples and more detailed diagrams, see section 4 and 5.

2.3.1 CRC cards

Class IvanhoeGUI

Responsibilities

Keep track of the displayed processes.
Display all the appropriate objects in a profile.
Allow the user to request an action to be performed.
Display the result of a user request after performed.

Collaborators

Profile
InputController
OutputController

Class OutputController

Responsibilities

Allow the user to create a graphical presentation.
Allow the user to create a spreadsheet presentation.
Choose the appropriate profile upon user request.

Collaborators

Profile
Profile
Profile

Class InputController

Responsibilities

Allow the user to create a new profile.
Allow the user to create a new budget.
Allow the user to add a new entry in a profile.
Allow the user to save data.

Collaborators

Profile
Profile
Profile
FileManager

Class Profile

Responsibilities

Create a new object given a profile name.
Keep track of all the budgets and entries belonging to a user.

Update the stored information in a profile.

Collaborators

EventCollection,
EconomicEvent.
EconomicEvent

Class EconomicEvent

Responsibilities

Create a new object given an event type and its attributes.

Collaborators

Class EventCollection

Responsibilities

Create a new object given a name.
Keep track of a collection of EconomicEvent objects.

Collaborators

EconomicEvent

Class FileManager

Responsibilities

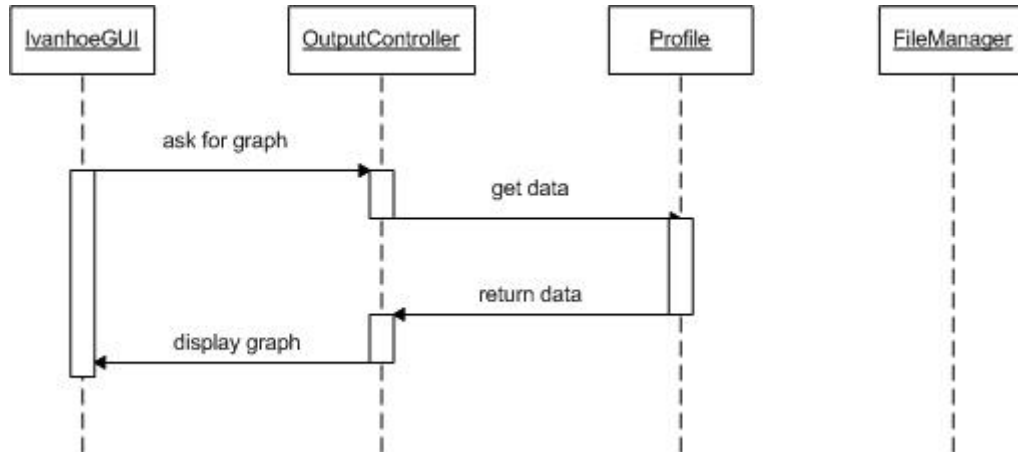
Read a stored profile from a file, given its filename.
Save a profile to a file, given its filename.

Collaborators

Profile
Profile

2.3.2 Sequence diagrams.

Sequence diagram 1 – Create graph from existing information in profile



Sequence diagram 2 – Create new profile

