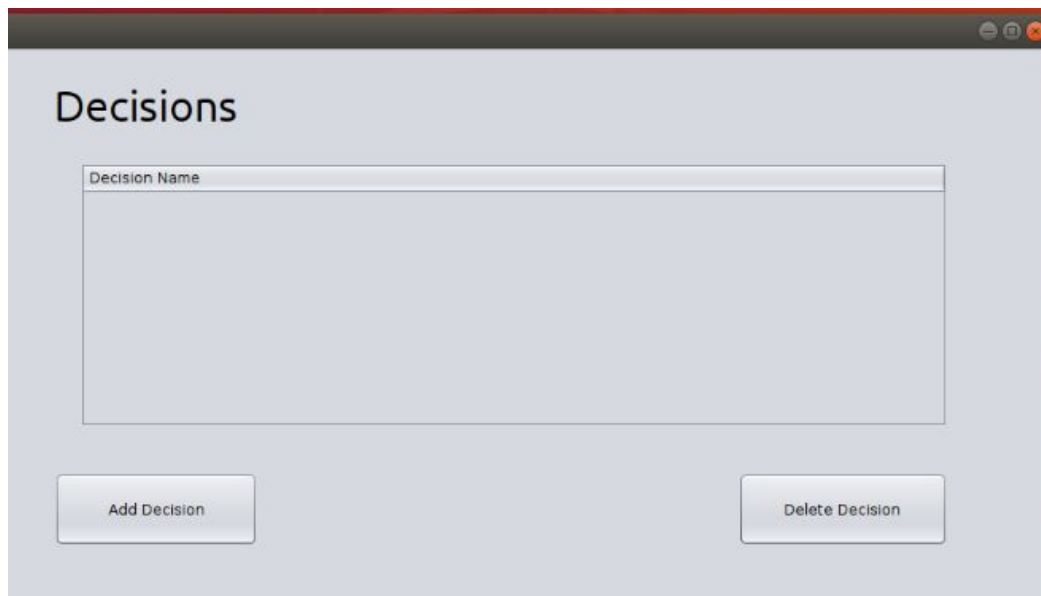


# DATA WAREHOUSING MINOR PROJECT

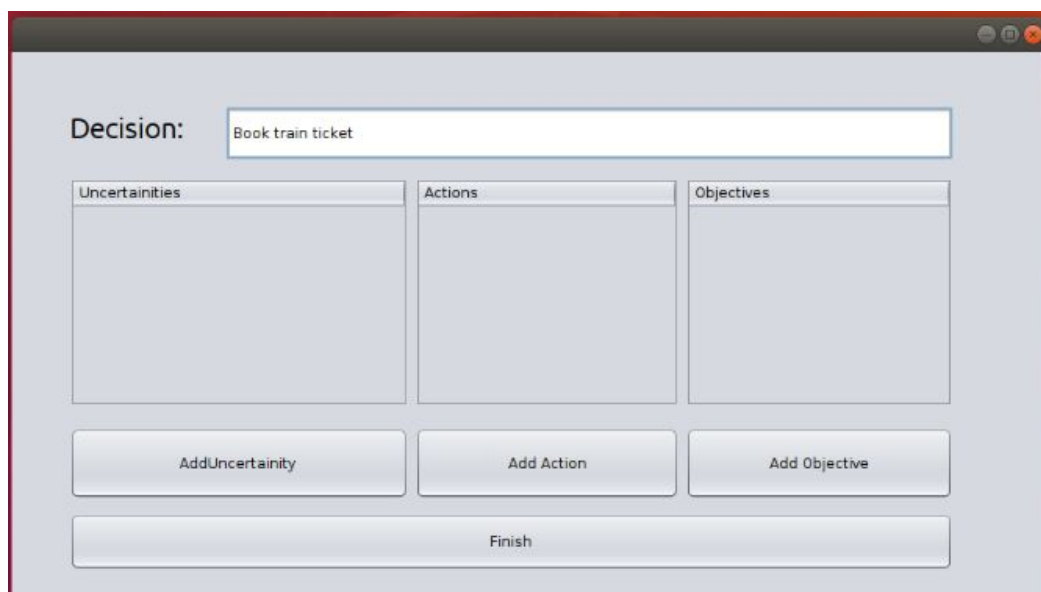
## DECISION: BOOK A TRAIN TICKET

Our team has developed a tool using Java and SQL Server database system to assist in decision making for booking a train ticket. Our tool inputs the Decision our user wants to make along with Uncertainties, Actions, Objectives and the related attributes, entities, Data type, History, etc.

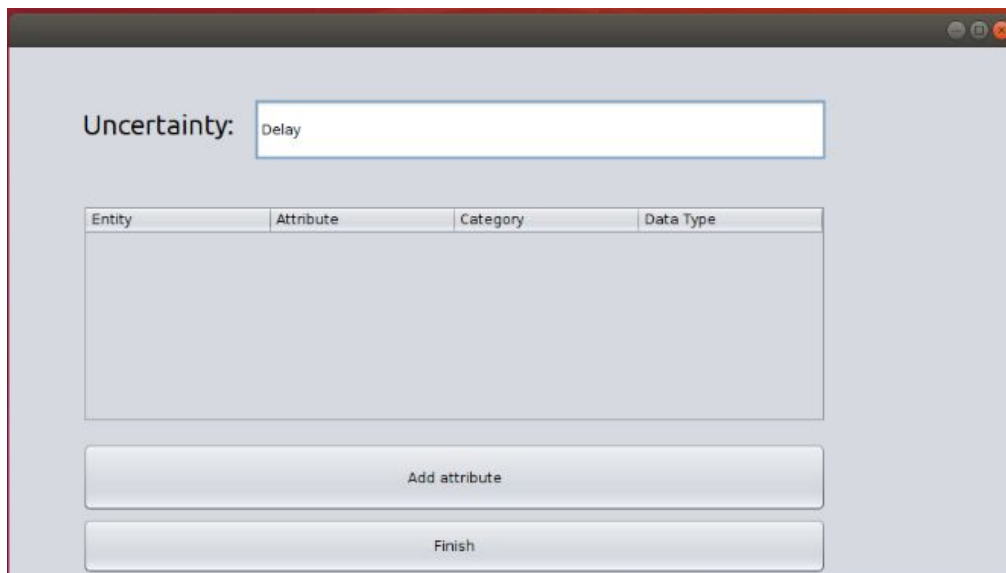
Following are screenshots of our Java GUI application for adding a decision, with explanations.



This window displays the decisions already present in our database system. The “Add Decision” button takes us to the next window.



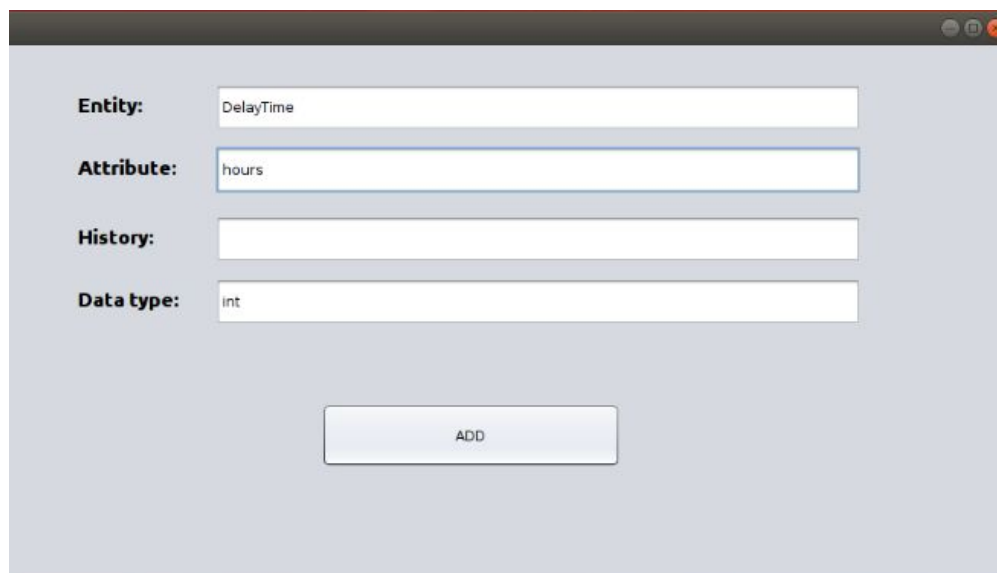
In this window we add the decision we want to take and then uncertainties actions and objectives associated with it. (Our application needs at least 1 uncertainty, action and objective for a decision to be added into the database)



The screenshot shows a software window with a light gray background. At the top, there is a label "Uncertainty:" followed by a text input field containing the word "Delay". Below this is a table with four columns: "Entity", "Attribute", "Category", and "Data Type". The table is currently empty. At the bottom of the window, there are two buttons: "Add attribute" and "Finish".

Entity	Attribute	Category	Data Type
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This is where we add the uncertainty and then click on the “add attribute” button which leads to the next window.



The screenshot shows a software window with a light gray background. It contains four labels with corresponding text input fields: "Entity:" with "DelayTime", "Attribute:" with "hours", "History:" with an empty field, and "Data type:" with "int". At the bottom center of the window is a button labeled "ADD".

Here we add the Entity, Attribute, History and Data Type of the uncertainty. Once done, click “Add” Button which will led to the next screen.

Uncertainty: Delay

Entity	Attribute	Category	Data Type
DelayTime	hours		int

Add attribute

Finish

We see now that an Uncertainty is added in the database. Click “Finish” button after all the certainties are added.

Action:  Go

Entity	Attribute	Category	Data Type
--------	-----------	----------	-----------

Add attribute

Finish

Same process goes for adding Actions.

Action:

PayForTicket

Entity	Attribute	Category	Data Type
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Add attribute

Finish

Action:

PayForTicket

Entity	Attribute	Category	Data Type
Ticket	price		int

Add attribute

Finish

Decision:

Book train ticket

Uncertainties	Actions	Objectives
Delay	PayForTicket	

AddUncertainty

Add Action

Add Objective

Finish

Objective:

Go

**Imperative:** ☐ Maximize ☐ Minimize

Entity	Attribute	Category	Data Type
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Add attribute

Finish

Same process goes for adding Objectives.

Objective:

**Imperative:** ☒ Maximize ☐ Minimize

Entity	Attribute	Category	Data Type
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Add attribute

Finish

Entity:

Pasthistory

Attribute:

accidents

History:

yearly

Data type:

int

ADD

Objective:

Safety

Imperative:

☒ Maximize ☐ Minimize

Entity	Attribute	Category	Data Type
Pasthistory	accidents	yearly	int

Add attribute

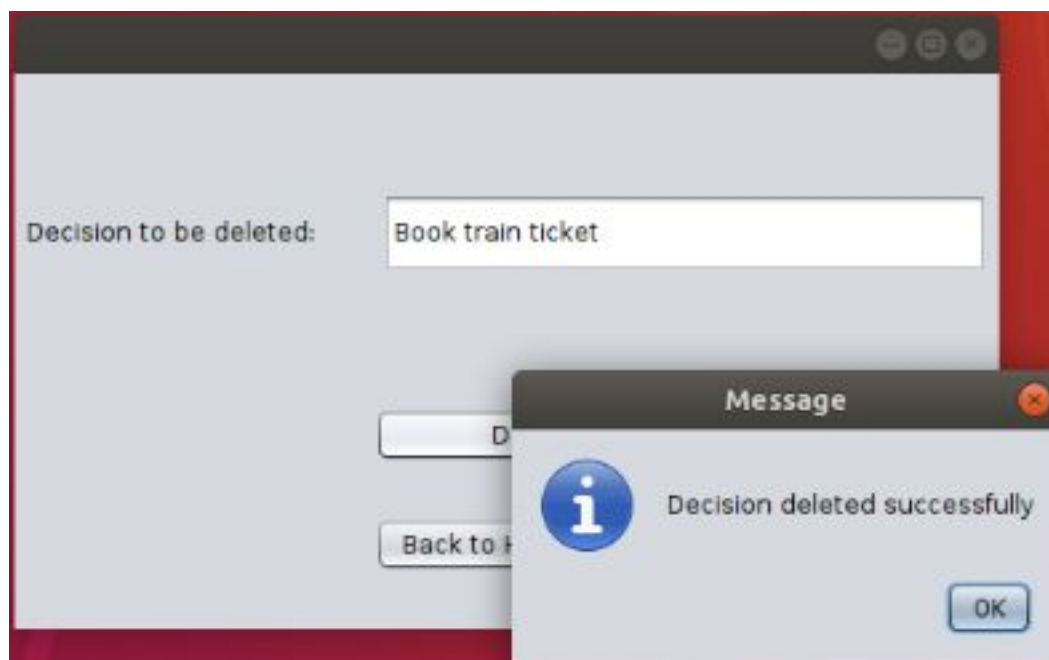
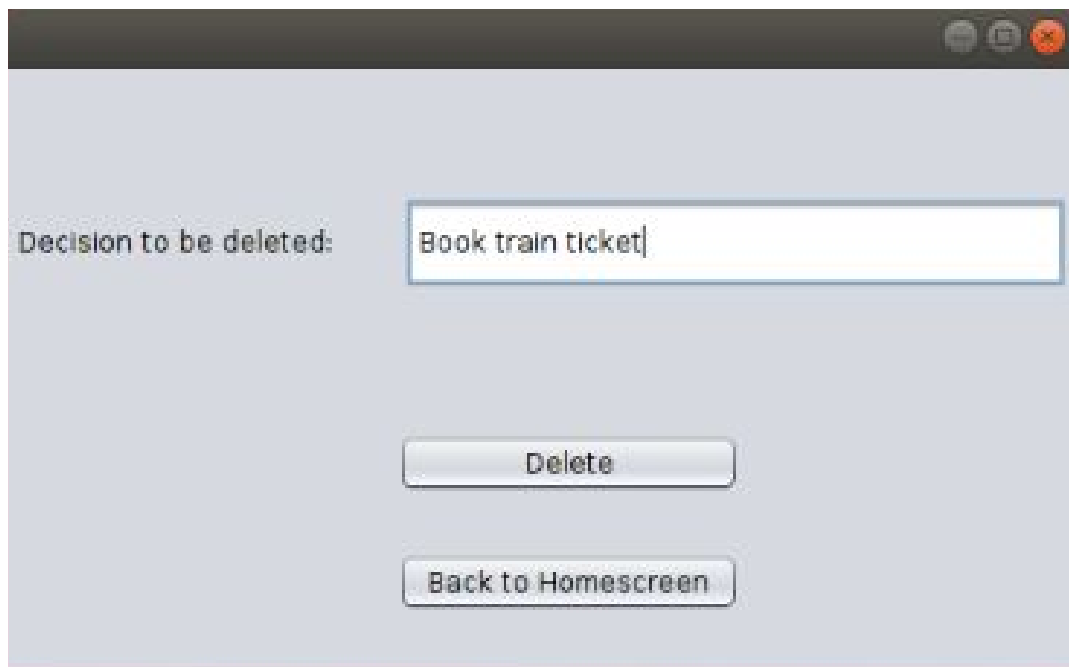
Finish

The screenshot shows a web application window with a title bar. The main content area is titled "Decision:" and contains a text input field with the value "Book train ticket". Below this, there are three columns: "Uncertainties", "Actions", and "Objectives". The "Uncertainties" column contains a list with "Delay". The "Actions" column contains a list with "PayForTicket". The "Objectives" column contains a list with "maximize Safety". Below these columns are three buttons: "AddUncertainty", "Add Action", and "Add Objective". At the bottom of the form is a large "Finish" button.

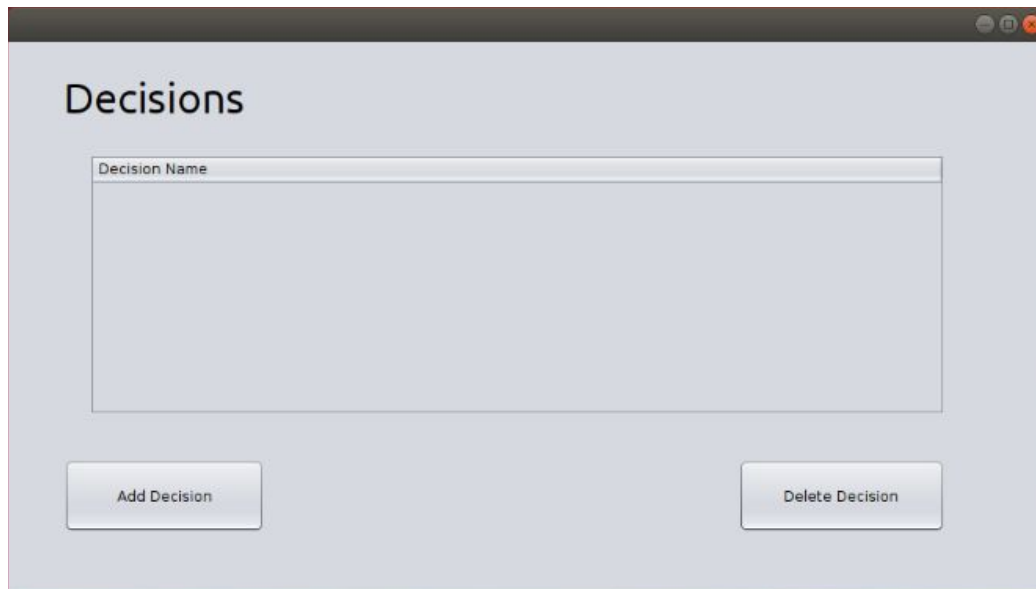
Now, after adding at least one uncertainty, Action and Objective, click “Finish” button.

The screenshot shows a web application window titled "Decisions". It contains a table with one row: "Decision Name" and "Book train ticket". Below the table are two buttons: "Add Decision" and "Delete Decision".

Now we see that a decision is added to our Database. You can also delete any decision at any given point of time by clicking the “Delete Decision” Button.







We now see that our selected decision is deleted.

We have stored data elicitation model for our decision using the following tables:

Uncertainty(Decision, Uncertainty, Entity, Attribute, History, Data Type)

Action(Decision, Action, Entity, Attribute, History, Data Type)

Objective(Decision, Imperative, Objective, Entity, Attribute, History, Data Type)

#### **Team Members**

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