Project Report

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INTRODUCTION

I worked on these 5 files:

- **Main.java**
- **Main_VC.java**
- **Main_Model.java**
- **Main_View.css**
- **EditorView.fxml**

MAIN.JAVA

It is a driver class for the project. It has 2 functions:

- **main(String[] args)**
    - Launches the program.
- **start(Stage stage)**
    - Loads the FXML file;
    - Sets the main view controller;
    - Sets new scene (loads the content of the FXML to this scene);
    - Sets window's resizability to false;
    - Shows the main view stage.

MAIN_VC.JAVA

This is the view controller of the main scene. It connects **EditorView.fxml** to the **Main_Model.java** . This class implements the **Initializable** class. There are 3 variables:

- **model**
    - It is a **private** variable;
    - Its data type is **Main_Model**;
    - Basically connects this class to **Main_Model** class.
- **listView**
    - It is a **private** variable;
    - Its data type is **ListView<String>**;
    - It is connected to the **EditorView.fxml** via @FXML.
- **textArea**
    - It is a **private** variable;

- o Its data type is **TextArea**;
- o It is connected to the **EditorView.fxml** via @FXML.

This class has 3 functions:

- **Main_VC(Main_Model model)**
  - o It's a **public** function;
  - o It is a constructor;
  - o Sets a value the model.
- **onCellClicked()**
  - o It's a **public** function;
  - o Its output is **void**;
  - o It is connected to the **EditorView.fxml** via @FXML;
  - o It is called when a cell of the **listView** is clicked via mouse;
  - o It gets text from the selected cell of the **listView**. If it is a ". ", the last character (which is " ") is erased from the **textArea**. Sets the text of the **textArea** to the selected word from the **listView**. Adds an " " to the end. Then updates the **listView**.
- **initialize(URL url, ResourceBundle rb)**
  - o It's a **public** function;
  - o Its output is **void**;
  - o Is called when the scene is loaded;
  - o Adds an event listener to the **textArea,** so when the space key is pressed the **listView** is updated.

MAIN_MODEL.JAVA

This class has one variable:

- **hmm**
  - o It is a **private** variable;
  - o Its data type is **MarkovModel**;
  - o Its initial value is a new instance of **MarkovModel** class.

This class has 3 functions:

- **loadData(TextArea textArea, ListView listView)**
  - o It's a **public** function;
  - o Its output is void;
  - o It gets the string value of the **textArea**. makes it lowercase. Gets an array of 2 strings using **getLastTwo** function. Gets an **arrayList** of predicted words using **hmm's nextWord** function. Clears the **listView**. Gets top five predictions using **getFive** function and adds them to the **listView**.
- **getLastTwo(String input)**
  - o It's a **public** function;

- o   Its output is an **array of strings**;
- o   Returns an array of the last to words of a given string.
- **getFive(List<String> list)**
    - o   It's a **public** function;
    - o   Its output is a **list of strings**;
    - o   It returns a list of first 5 elements of the given list.

MAINVIEW.CSS

It is a stylesheet for the FXML file. It helps to modify the attributes of some elements that are not modifiable within *"Scene Builder"*. I used 3 main colors (lightest to darkest): **#E6F0D9 , #7A817B , #151721**. And the font is **"Exo"**.

EDITORVIEW.FXML

It is a view file for the main scene that is created in **Gluon's "Scene Builder".** Our scene has a **TextArea** and a **ListView**. Also, on top there is a **HBox** with a **Label** inside.

REFERENCES

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