World Creator

Integrated Development Environment For Writers

Developed by Tilek Sydykov
[GitHub: @TilekSydykov, Repository: @WorldCreator]

ACKNOWLEDGEMENT

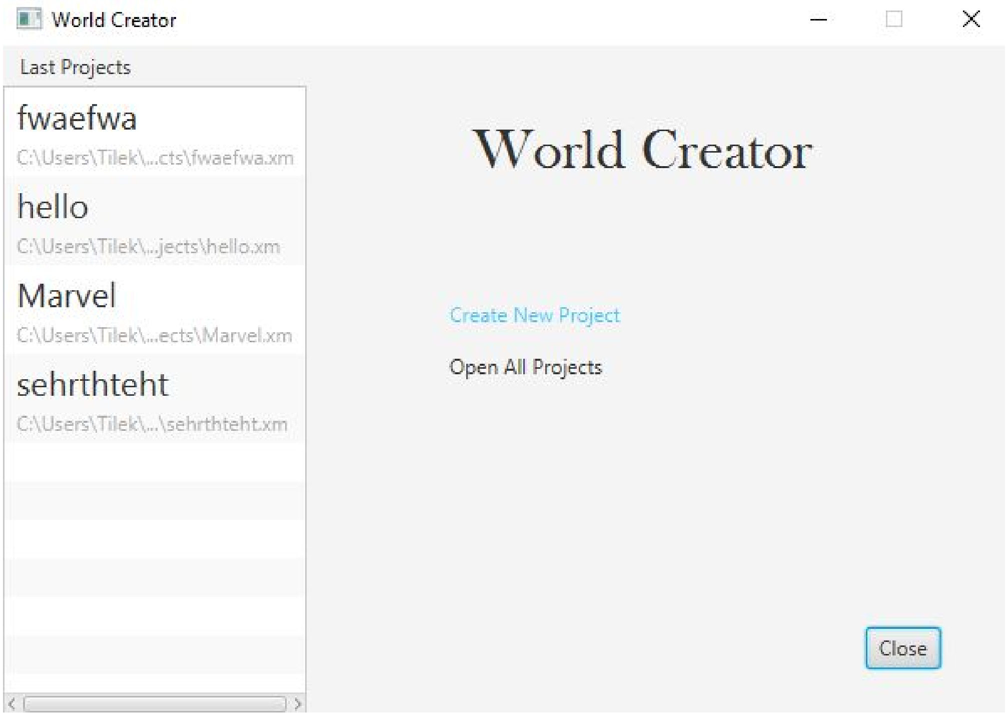
First of all, I would like to thank my lecturer Nurlan Shaidullaev for helping me to acquire some basic knowledge of “Java Programming Language”. At the same time, he gave me the opportunity to learn something new related to our module like constructors, methods, arrays, JFrames etc. Beside from my lecturer, I like to thank my other classmates for helping to understand the assignment related questions more clearly. They gave their best for completing this report on time. I thank them for their efforts.

INTRODUCTION

This assignment based on developing the Integrated Development Environment for writes. World Creator is a special environment with special tools for writing any kind of stories and novels. IDE has a bunch of useful tools like characters list, book timeline, description fields and so on. Idea of this program was borrowed from an IDE for programmers which is very useful during programming process.
World Creator are not making novel for you, it is creating a comfortable environment for working and not allow you to make a silly mistakes.

EXPLANATIONS

When we open a new the program we will see one window where user can choose open of recent projects or create new one. For creating new project user need to click on “Create new project” link .



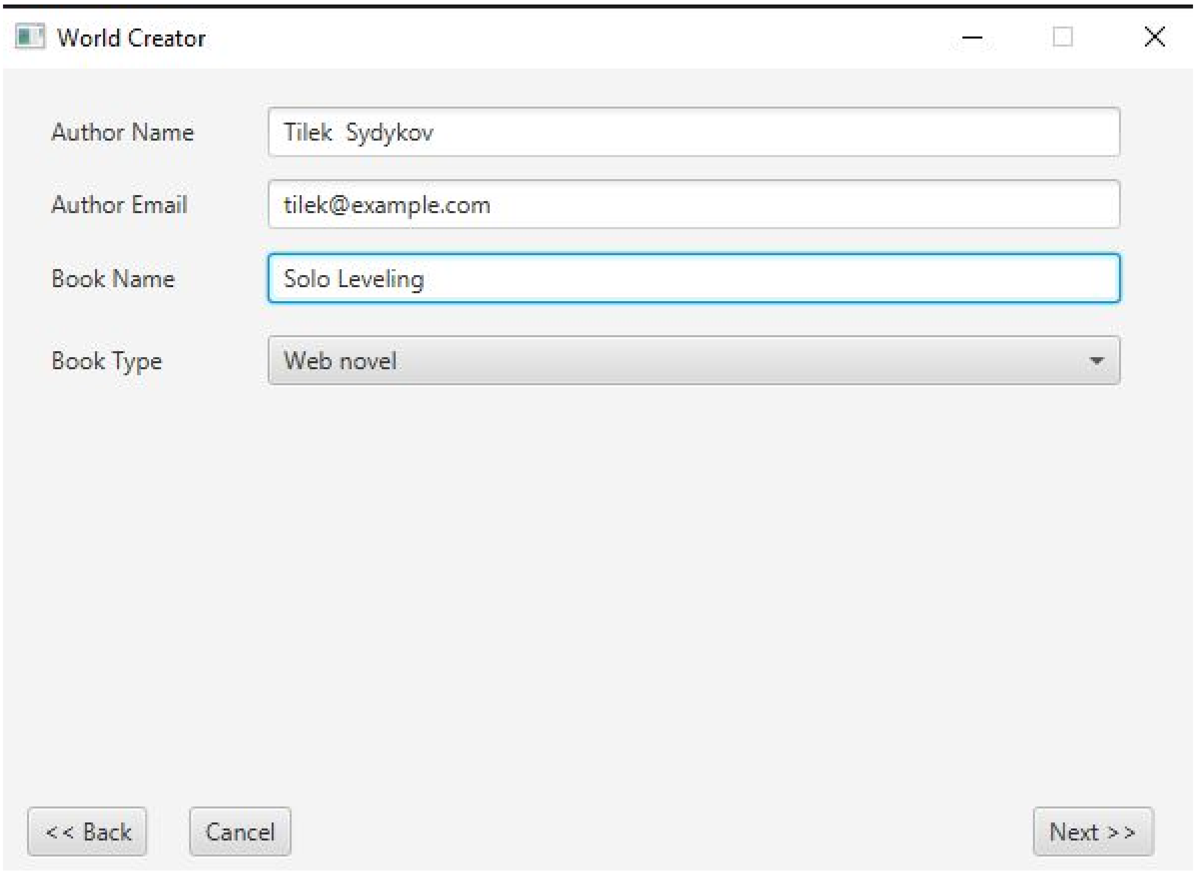
fwaefwa
C:\Users\Tilek\...cts\fwaefwa.xm

hello
C:\Users\Tilek\...jects\hello.xm

Marvel
C:\Users\Tilek\...ects\Marvel.xm

sehrthteht
C:\Users\Tilek\...\sehrthteht.xm

Step 1. Creating new Project. In this window user can choose Author Name and Email, book name and type. After this action program will create a new xml file with all stuff needed for this project and redirect user to main program where user can create.



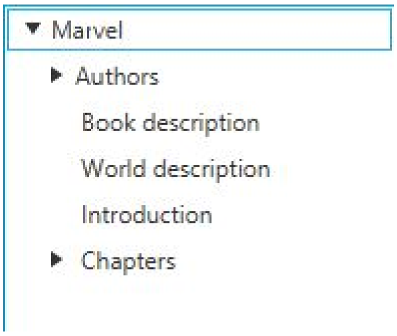
Author Name: Tilek Sydykov

Author Email: tilek@example.com

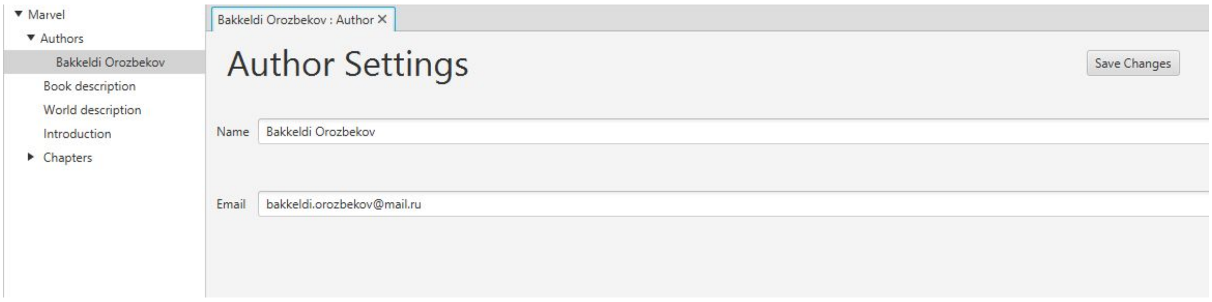
Book Name: Solo Leveling

Book Type: Web novel

In main program window we can see the the main Tree View with project structure. Here user can choose which part of book to edit. Onclick of any tree item new tab will be added to working stage.



Author Editing. If user click to Tree Item of Author in work area will be added a tab with Author settings where user can edit Author information.

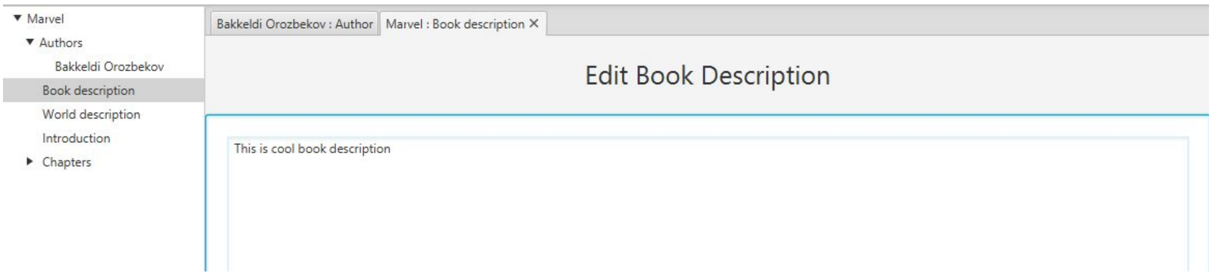


Author Settings

Name: Bakkeldi Orozbekov

Email: bakkeldi.orozbekov@mail.ru

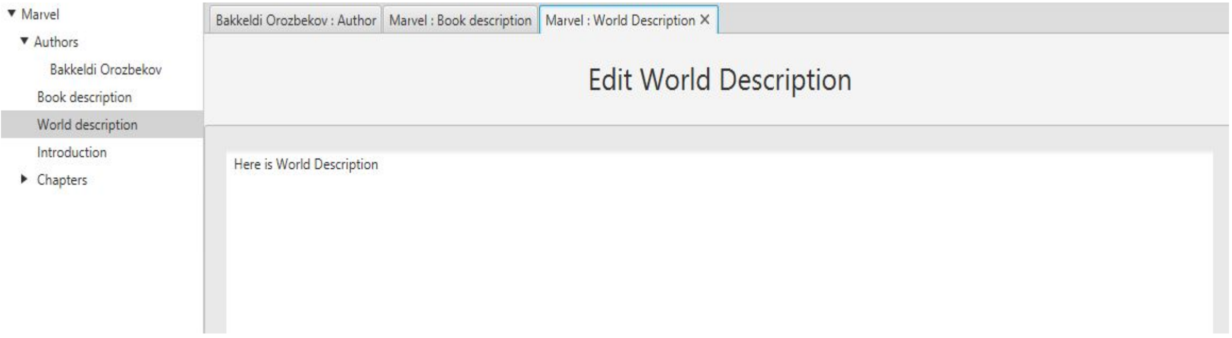
In click on Book Description Item there will be Editable tab of book description.



Edit Book Description

This is cool book description

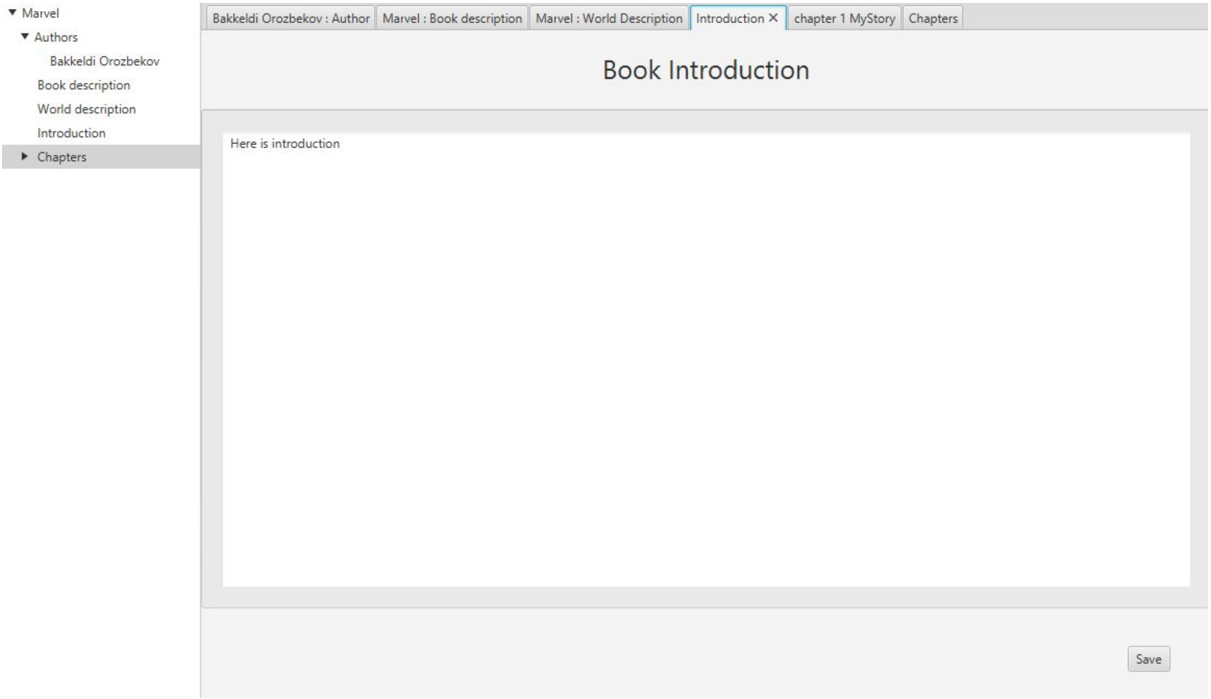
Also in every book we have own world with own laws and description. And it is very important point for every writer. The world should has own laws, animals, natural disasters and so on.



Edit World Description

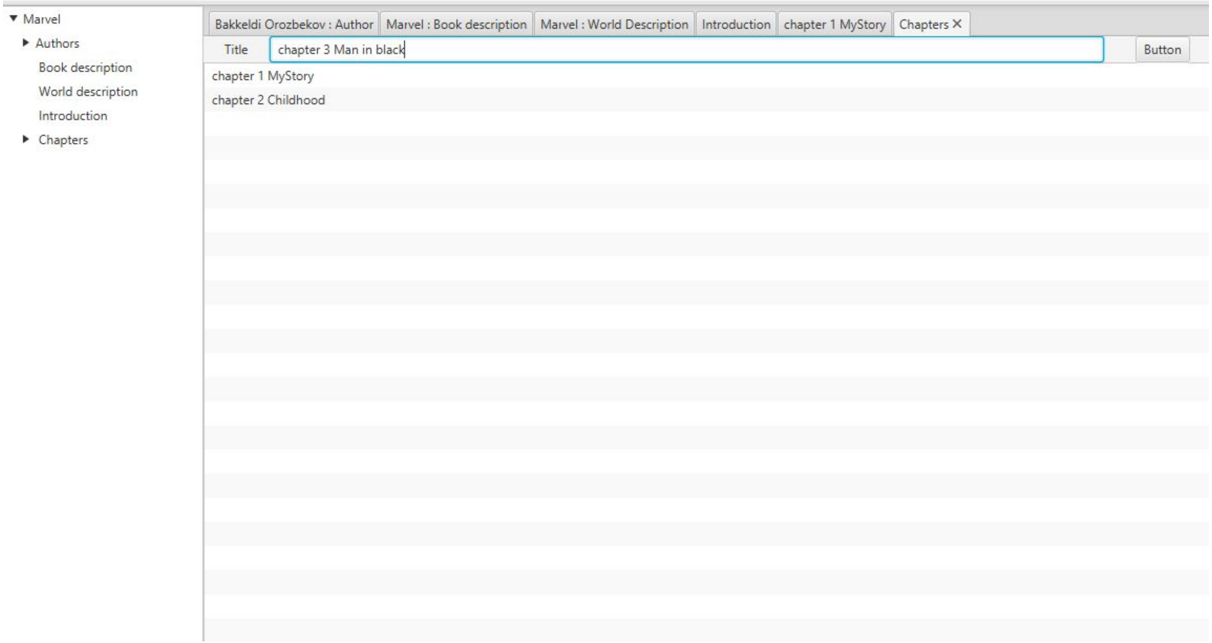
Here is World Description

Introduction to book. Introduction is also very important point of any book where Author need to ask himself “What will be if ... ?”. And if he will ask right question he can easy interested people on his work.



Here is introduction

Chapters. There user can manage chapters and create new one.

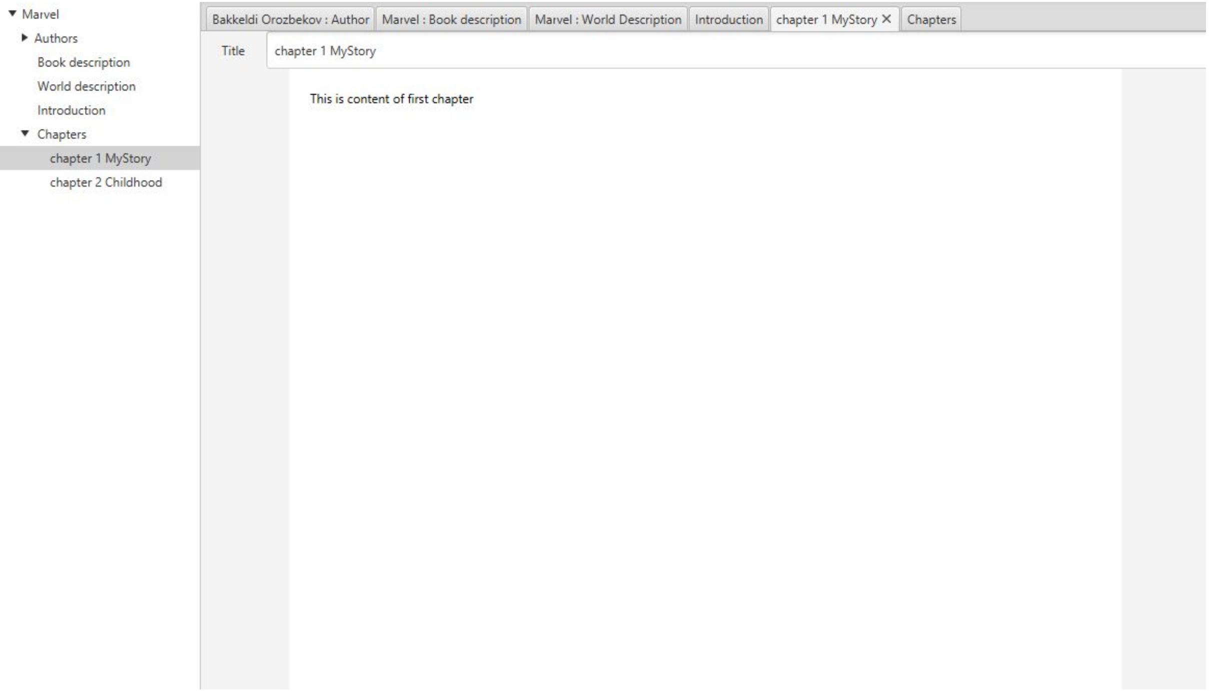


Title: chapter 3 Man in black

chapter 1 MyStory

chapter 2 Childhood

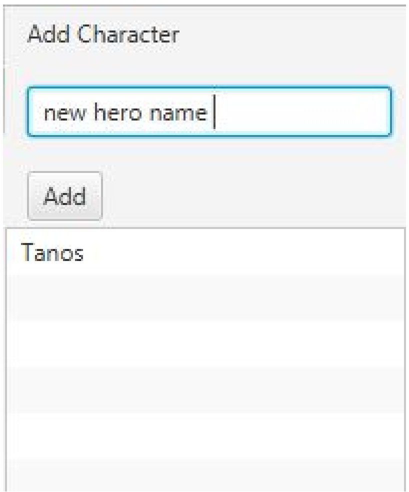
If user click to chapter name in menu of chapters. He get access to edit tab of chapter.



Title: chapter 1 MyStory

This is content of first chapter

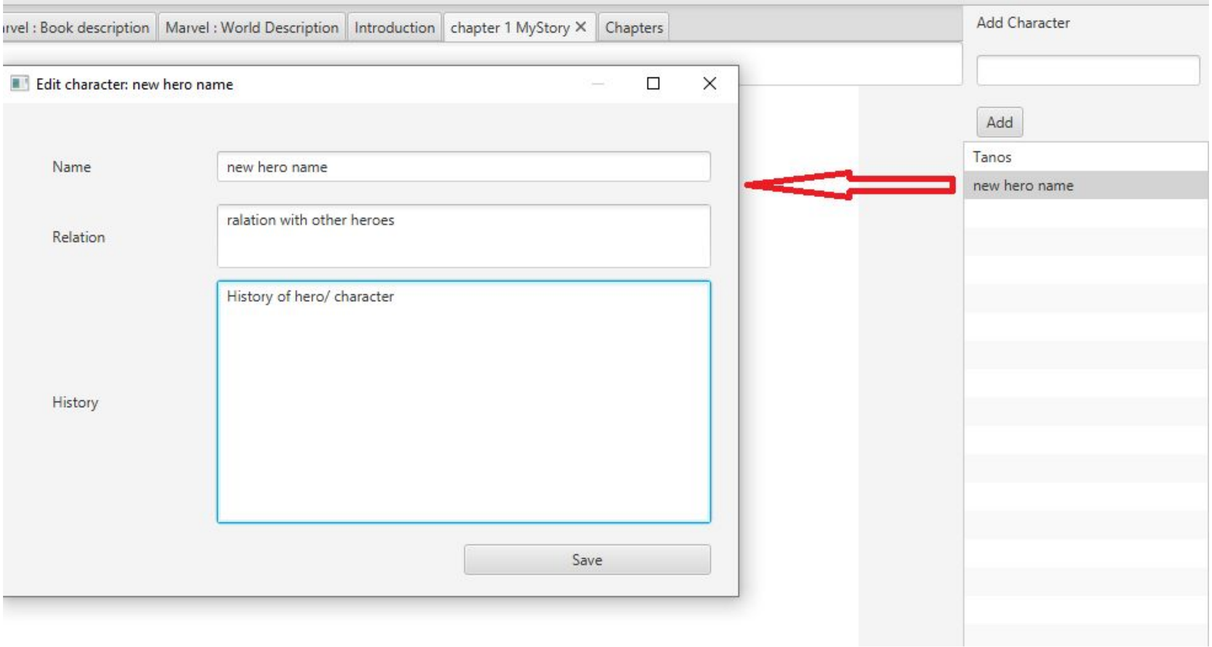
In right corner of Programs window is form for adding new character. Type name of character in text Area and click “add” to add new character to list.



new hero name

Tanos

Click on character name will open new window for editing characters history, relation and name.



Edit character: new hero name

Name: new hero name

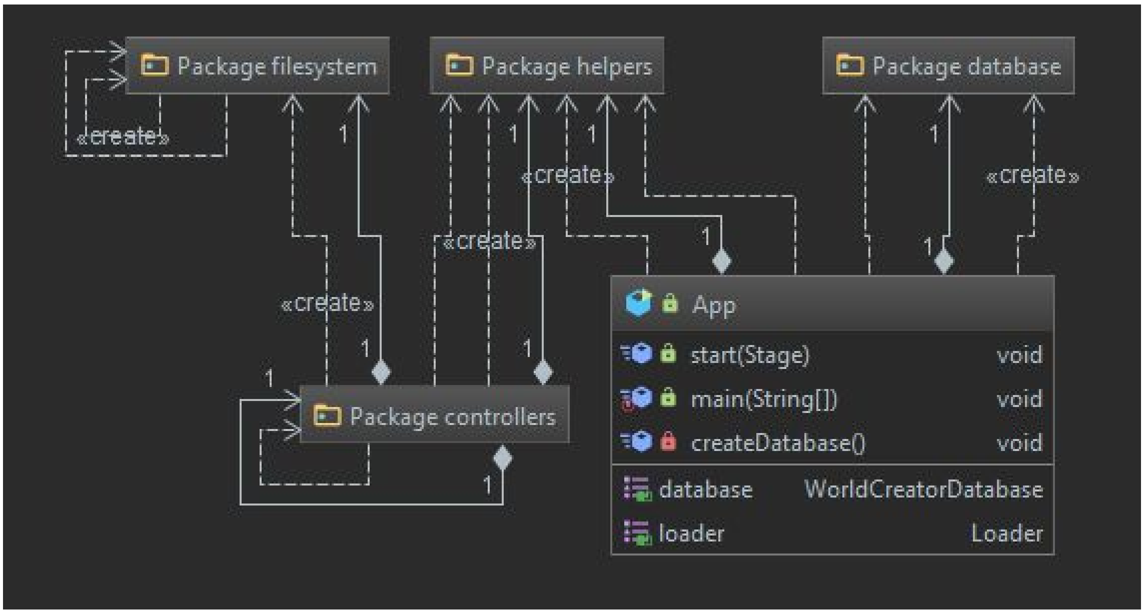
Relation: ralation with other heroes

History: History of hero/ character

CODE EXPLANATION

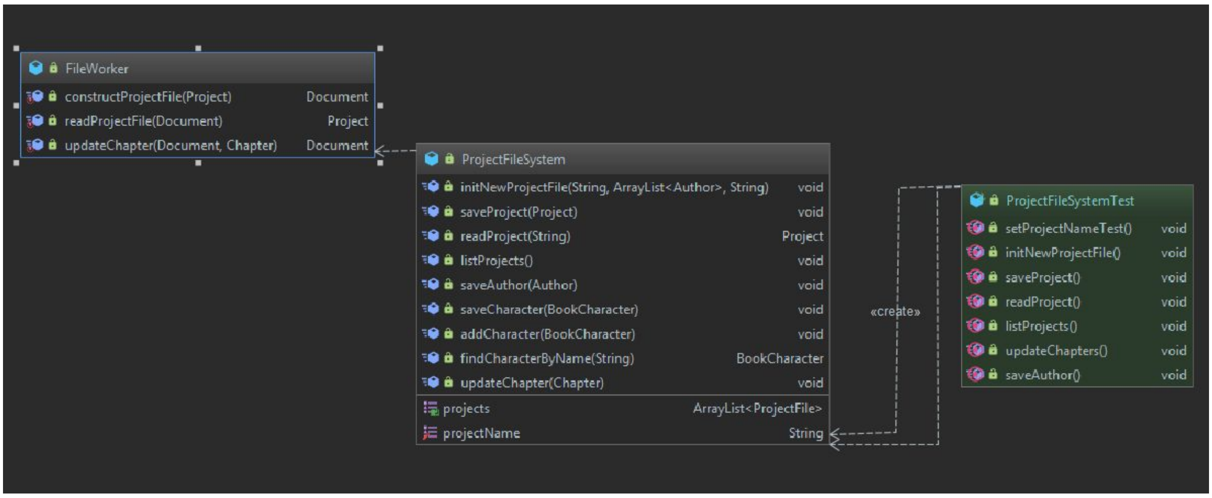
Architecture:

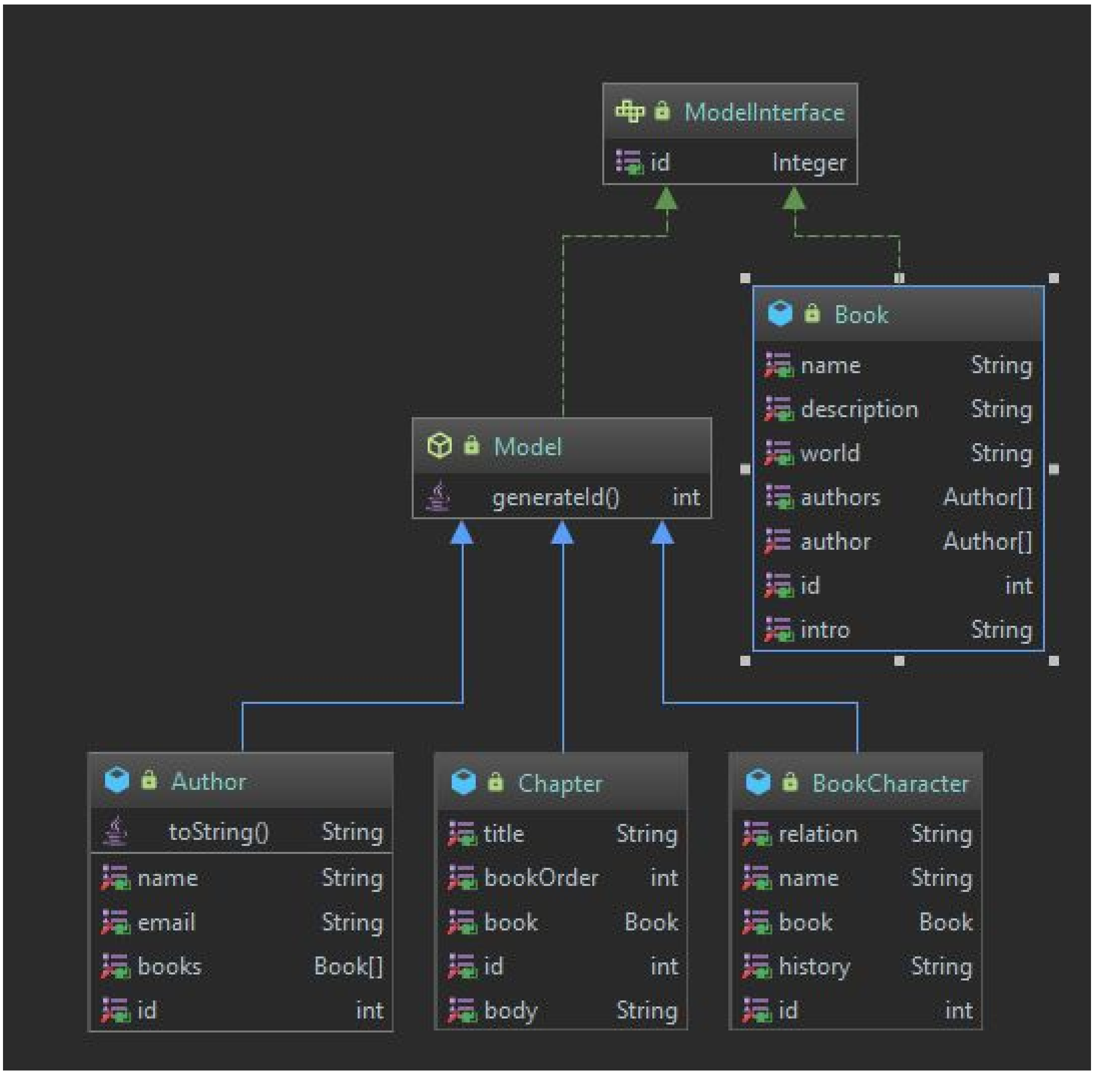
All code in program is separated in four packages and resources files. Below we will see all packages in detail.

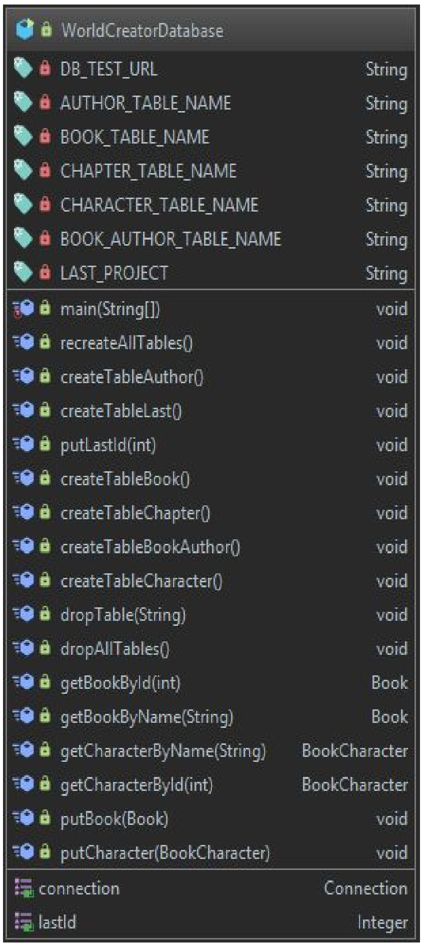


FileSystem:

All code related to fileSystem of Operating system located in FileSystem package. This package contains classes for creating xml files from user data and user data from **xml** file. Also these classes are responsible for managing directories.


FileWorker
constructProjectFile(Project) Document
readProjectFile(Document) Project
updateChapter(Document, Chapter) Document
ProjectFileSystem
initNewProjectFile(String, ArrayList<Author>, String) void
saveProject(Project) void
readProject(String) Project
listProjects() void
saveAuthor(Author) void
saveCharacter(BookCharacter) void
addCharacter(BookCharacter) void
findCharacterByName(String) BookCharacter
updateChapter(Chapter) void
projects ArrayList<ProjectFile>
projectName String
«create»
ProjectFileSystemTest
setProjectNameTest() void
initNewProjectFile() void
saveProject() void
readProject() void
listProjects() void
updateChapters() void
saveAuthor() void





WorldCreatorDatabase	
DB_TEST_URL	String
AUTHOR_TABLE_NAME	String
BOOK_TABLE_NAME	String
CHAPTER_TABLE_NAME	String
CHARACTER_TABLE_NAME	String
BOOK_AUTHOR_TABLE_NAME	String
LAST_PROJECT	String
main(String[])	void
recreateAllTables()	void
createTableAuthor()	void
createTableLast()	void
putLastId(int)	void
createTableBook()	void
createTableChapter()	void
createTableBookAuthor()	void
createTableCharacter()	void
dropTable(String)	void
dropAllTables()	void
getBookById(int)	Book
getBookByName(String)	Book
getCharacterByName(String)	BookCharacter
getCharacterById(int)	BookCharacter
putBook(Book)	void
putCharacter(BookCharacter)	void
connection	Connection
lastId	Integer

DataBase:

This package contains DataBase Driver and Models for database. Driver class contains static String variables which are responsible for working with database and also contains methods to get connection to database and retrieve information from db.

I used here SQLite database. And JDBC driver for SQL databases.

All constants which needed for database are holded in Final String. Template SQL queries creates in every method where they are needed.

Controllers:

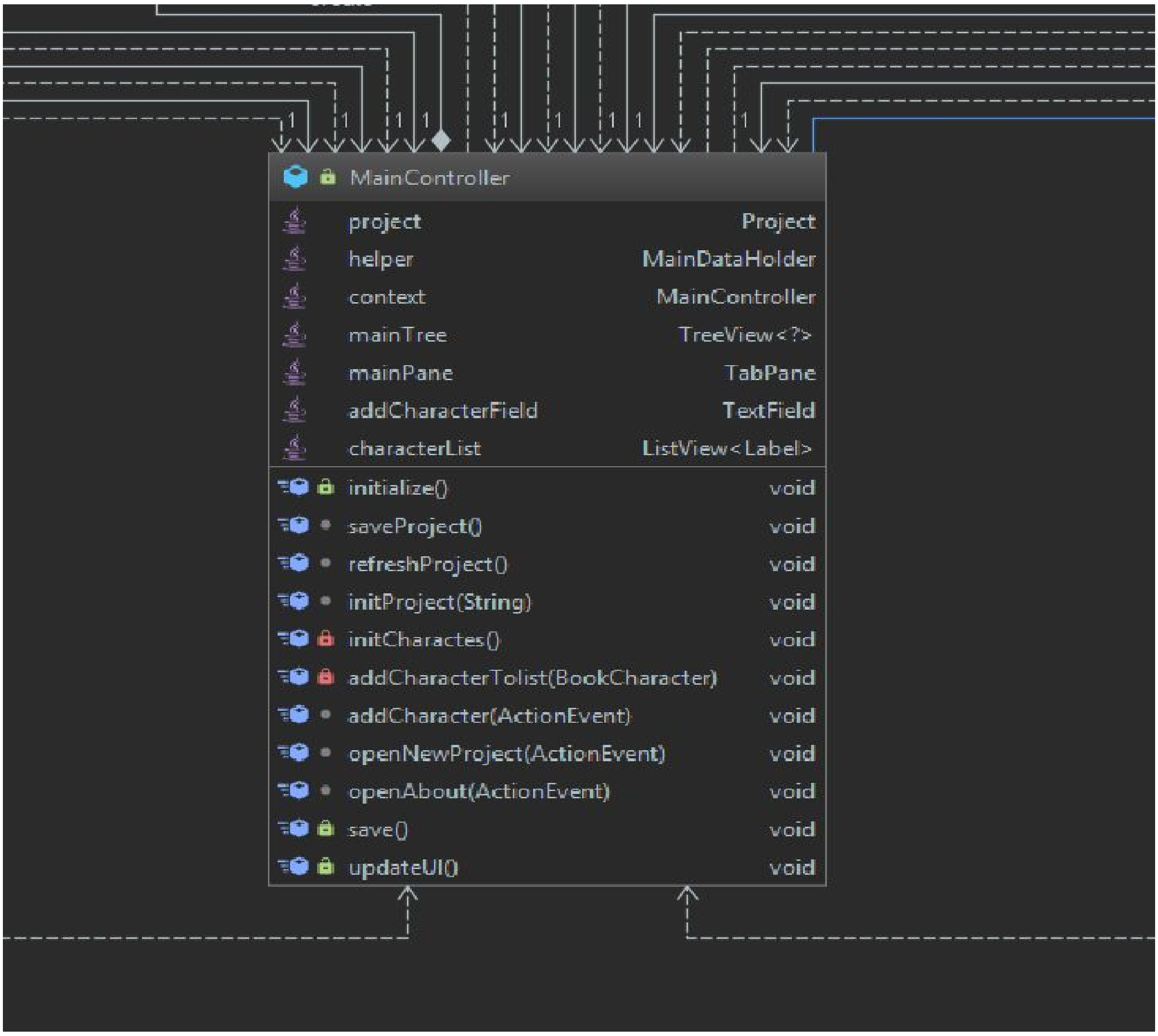
In this package located all controllers for User interface and most of logic of application.

All controllers extends **ControllerBase**. Controller base has Method **alert()** which is shows user a message.

MainController class has access to all controllers and all classes are have access to main class.

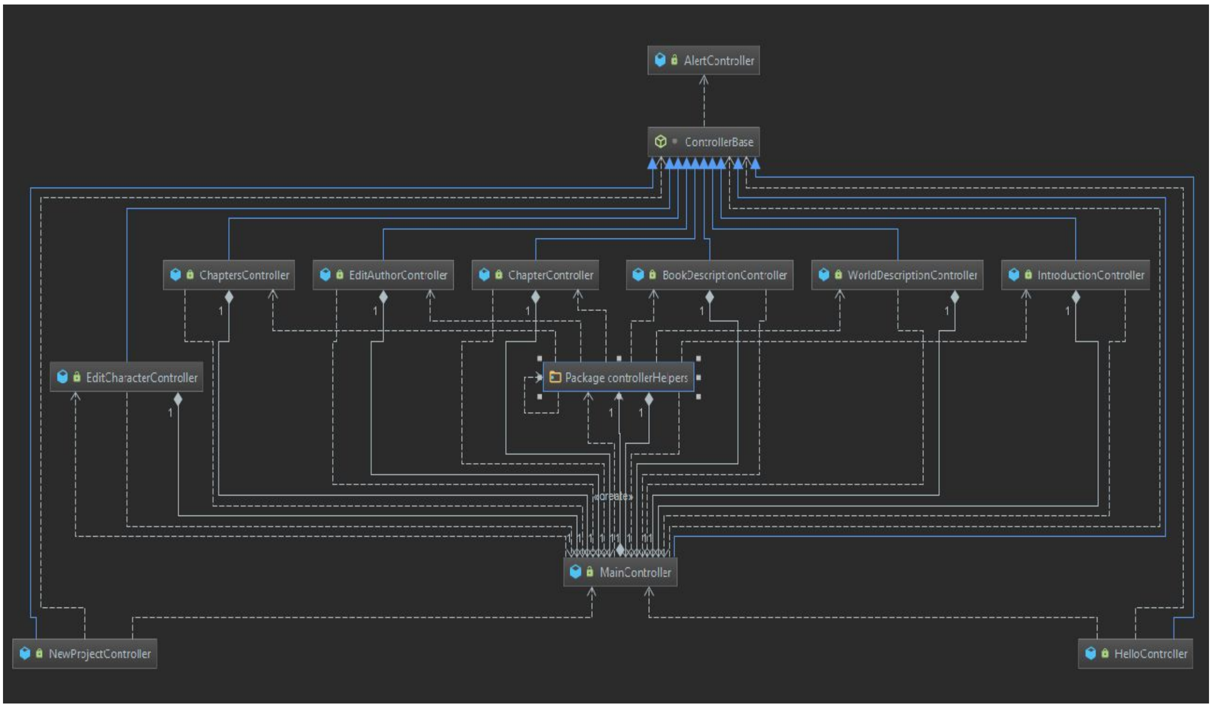
MainController contains all project models and instances of file system and database.

HelloController decides open **mainScene** or **NewProjectScene** related on users choose**.**



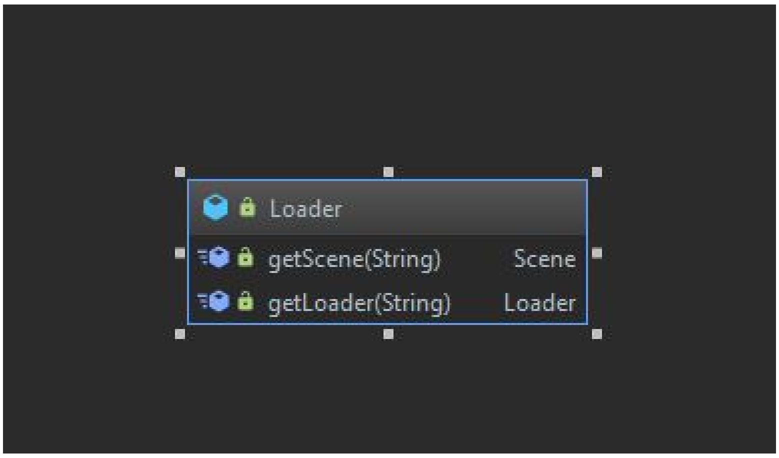
MainController

project	Project
helper	MainDataHolder
context	MainController
mainTree	TreeView<?>
mainPane	TabPane
addCharacterField	TextField
characterList	ListView<Label>
initialize()	void
saveProject()	void
refreshProject()	void
initProject(String)	void
initCharactes()	void
addCharacterTolist(BookCharacter)	void
addCharacter(ActionEvent)	void
openNewProject(ActionEvent)	void
openAbout(ActionEvent)	void
save()	void
updateUI()	void



Helpers:

Helpers package contains Helpers. Helpers is classed for specific algorithms and functions for this project.
Helper **Loader** is responsible for managing all scenes. Method **getScene()** takes name of the scene and returns **Scene** loaded from resources.
Method **getLoader()** takes name of the scene and returns **FXMLLoader** with a controller to make a link between loader and controller of the class.



ASSUMPTION

I tried to make this program more user friendly and comfortable, but I have many features which will be added in future versions:
TIMELINE. In future versions the author will be able to make a timeline with characters “Fate Lines”. It will help author do not get mess up with dozens of characters.
CHARACTER HIGHLIGHTING AND SUGGESTION. While editing author will be able to choose which place this action happened and can easily get suggestions on his work. Also program will be able to check a grammar of author.

REFERENCE

The text editor for JavaFx https://github.com/FXMisc/RichTextFX

JavaFx https://openjfx.io/

Gradle Build Tool https://gradle.org/