TAX INCOME CALCULATOR

OVERALL REPORT

VERSION 1.0

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INTRODUCTION

At this phase of the project, the main objective was refactoring and implementation of tests. Duplicate and unused code removed throughout the project. The extensibility for new filetypes improved. Also, features for better accessibility added to the GUI.

REFACTORED DESIGN

USE CASES

Use case ID	loadTaxpayer
Actors	user
Pre conditions	-
Main flow of events	1. The use case selects the load taxpayer button 2. The system creates a popup window 3. The user selects the _INFO file to load 4. The system loads the taxpayer
Alternative flow 1	Wrong file format, the system warns the user accordingly.
Alternative flow 2	Wrong file type, the system warns the user accordingly.
Post conditions	The system has loaded the taxpayer

Use case ID	selectTaxpayer
Actors	user
Pre conditions	loadTaxpayer
Main flow of events	1. The use case starts when the user selects a taxpayer from the list 2. The system creates a new window with all the information of the taxpayer
Post conditions	The system has created a new window

Use case ID	deleteTaxpayer
Actors	user
Pre conditions	loadTaxpayer
Main flow of events	1. The use case starts when the user selects the delete taxpayer button. 2. The system creates a popup window 3. The user input the taxpayer's id 4. The system deletes the taxpayer from the list
Post conditions	The taxpayer's id has been removed from the list

Use case ID	addReceipt
Actors	user
Pre conditions	selectTaxpayer

Main flow of events	1. The use case starts when the user selects the add receipt button
	2. The system creates a pop window
	3. The user inputs the receipt's information
	4. The system adds the new receipt to the list

Alternative flow 1	If receipt exists, the system warns the user accordingly.

Alternative flow 2	Wrong receipt date, the system warns the user accordingly.

Alternative flow 3	Wrong receipt kind, the system warns the user accordingly.

Post conditions	A new receipt has been created

Use case ID	deleteReceipt
Actors	user
Pre conditions	selectTaxpayer
Main flow of events	1. The use case starts when the user selects the delete receipt button
	2. The system creates a popup window
	3. The user inputs the receipt's id
	4. The system removes the receipt from the list and updates the _LOG files.
Post conditions	The receipt has been removed from the list and the _LOG files

Use case ID	viewReport
Actors	user

Pre conditions	selectTaxpayer
Main flow of events	1. The use case starts when the user selects the view report button 2. The system creates 2 popup windows
Post conditions	The system has created 2 popup windows

| Use case ID	saveData
Actors	user
Pre conditions	selectTaxpayer
Main flow of events	1. The use case starts when the user selects the save data button 2. The system creates a popup window 3. The user chooses the output filetype 4. The system creates the _INFO file
Post conditions	The system has created the _INFO output file

ARCHITECTURE
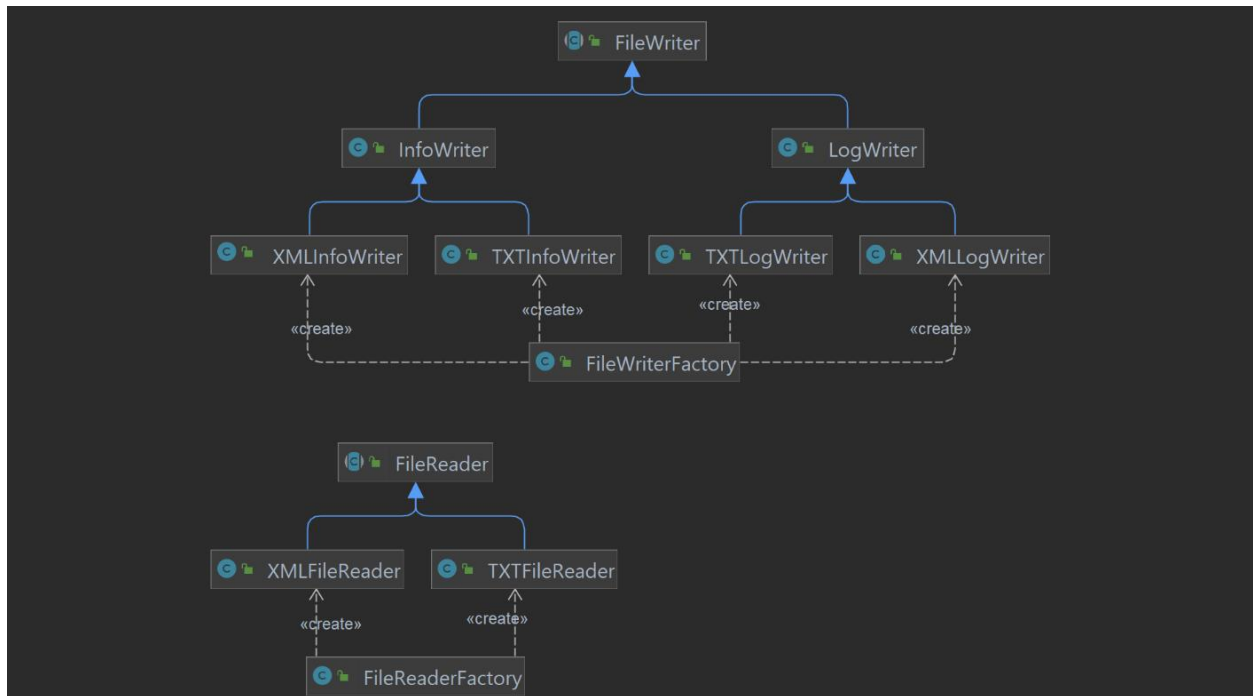
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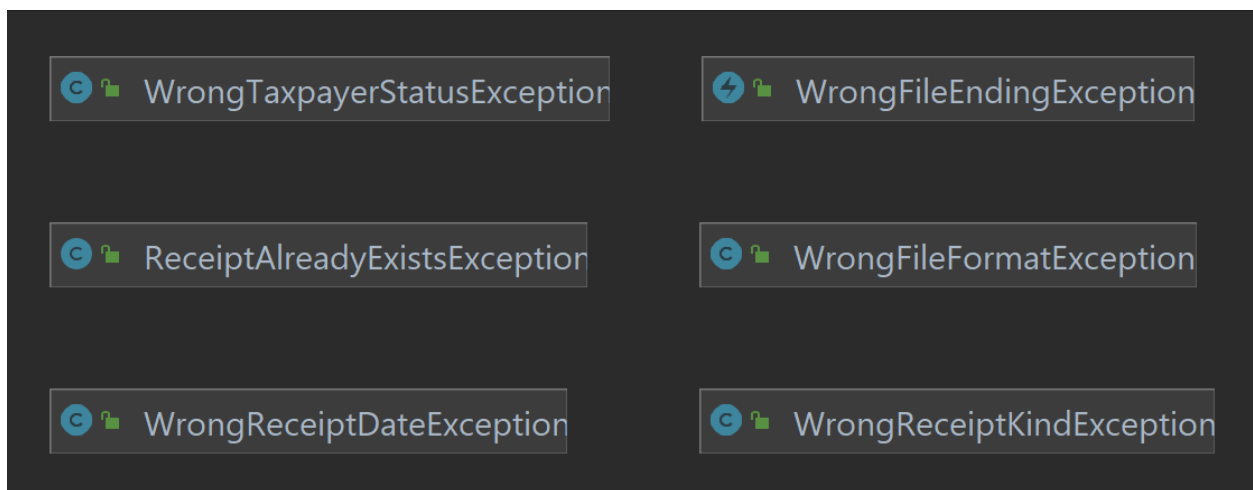
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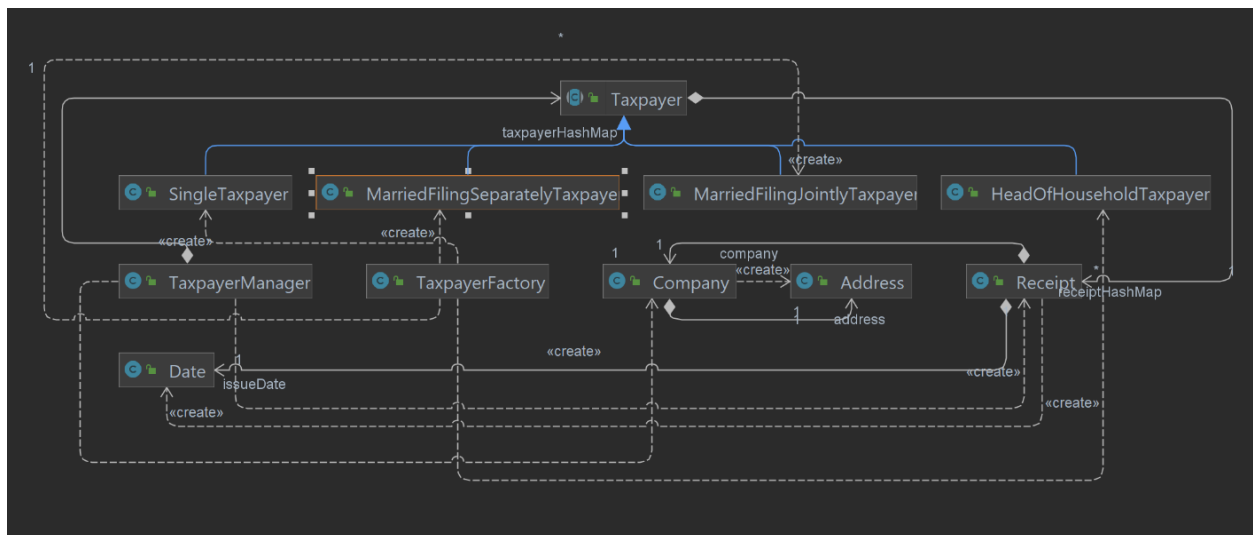
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Incometaxcalculator.gui
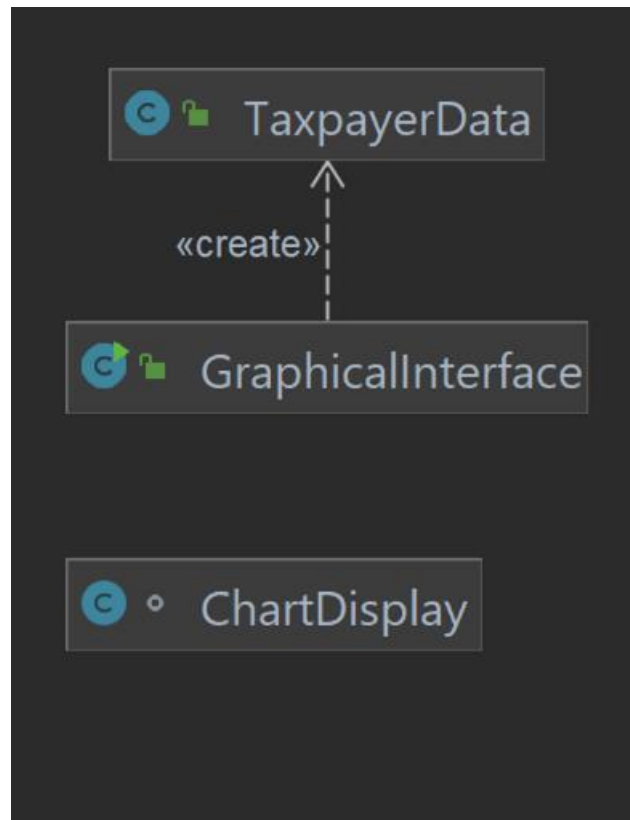
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Class Name:GraphicalInterface	
Responsibilities	**Collaborations**
▪ This class is responsible for creating the main window. ▪ This class list inside the window the taxpayers.	▪ TaxpayerManager loads and deletes taxpayer from the system. ▪ TaxpayerData creates a new window with the taxpayer's data.

▪ This class create the Load Taxpayer button. ▪ This class create the Delete Taxpayer button.	

Class Name:TaxpayerData	
Responsibilities	**Collaborations**
▪ This class is responsible for creating a window with a taxpayer's data.	▪ ChartDisplay creates 2 new windows for the taxpayer's report.

Class Name:ChartDisplay	
Responsibilities	**Collaborations**
▪ This class is responsible for creating a window with a bar chart. ▪ This class is responsible for creating a window with a pie chart.	▪ JFree.chart ▪ JFree.data ▪ JFree.ui

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Class Name:TaxpayerManager	
Responsibilities	**Collaborations**
- This class saves the taxpayers being loaded. - This class creates/removes a taxpayer - This class creates/deletes a new receipt - This class updates info files - This class creates log files	- FileReaderFactory creates instances of FileReader class - FileWriterFactory creates instances of FileWriter class

Class Name:TaxpayerFactory	
Responsibilities	**Collaborations**
This class creates Taxpayer subclasses	- MarriedFilingJointly class is a Taxpayer sublass - MarriedFilingSeparately class is a Taxpayer subclass - Single class is a Taxpayer subclass - HeadofHousehold is a Taxpayer

	subclass

Class Name:Taxpayer	
Responsibilities	**Collaborations**
▪ This class saves the taxpayer's data. ▪ This class adds/removes a receipt of the taxpayer. ▪ This class calculates the basic tax of the taxpayer ▪ This class calculates the total amount receipts. ▪ This class calculates the tax of the total amount of receipts.	▪ Receipt for saving the taxpayer's receipts.

Class Name:Address	
Responsibilities	**Collaborations**
▪ This class saves the address of the receipt's company.	

Class Name:Company	
Responsibilities	**Collaborations**
▪ This class saves the information of the receipt's company	▪ Address saves the company's address

Class Name:Date	
Responsibilities	**Collaborations**
▪ This class saves the receipt's date.	

Class Name:Receipt	
Responsibilities	**Collaborations**
▪ This class saves the receipt's information.	▪ Date saves the receipt's date. ▪ Company saves the receipt's company

Class Name:HeadOfHouseholdTaxpayer	
Responsibilities	**Collaborations**
▪ This class saves the case of head of	

household tax limits.	

Class Name:MarriedFillingJointlyTaxpayer	
Responsibilities	**Collaborations**
▪ This class saves the case of married filing jointly tax limits.	

Class Name:MarriedFillingSeparatelyTaxpayer	
Responsibilities	**Collaborations**
▪ This class saves the case of married filing separately tax limits.	

Class Name:Single	
Responsibilities	**Collaborations**
▪ This class saves the case of single tax limits.	

Class Name:FileReader

Responsibilities	Collaborations
▪ This class reads information and log files and saves them.	

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Class Name:FileReaderFactory	
Responsibilities	**Collaborations**
▪ This class creates FileReader subclasses.	

Class Name:XMLFileReader	
Responsibilities	**Collaborations**
▪ This class reads XML information and log files.	

Class Name:TXTFileReader	
Responsibilities	**Collaborations**
▪ This class reads TXT information and	

log files.	

Class Name:FileWriter	
Responsibilities	**Collaborations**
▪ This class writes information and log files.	

Class Name:InfoWriter	
Responsibilities	**Collaborations**
▪ This class writes information files.	

Class Name:LogWriter	
Responsibilities	**Collaborations**
▪ This class writes log files.	

Class Name:TXTInfoWriter	
Responsibilities	**Collaborations**

▪ This class writes TXT information files.	

Class Name:TXTLogWriter	
Responsibilities	**Collaborations**
▪ This class writes TXT log files.	

Class Name:XMLInfoWriter	
Responsibilities	**Collaborations**
▪ This class writes XML information files.	

Class Name:XMLLogWriter	
Responsibilities	**Collaborations**
▪ This class writes XML log files.	

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Class Name:ReceiptAlreadyExistsException

Responsibilities	Collaborations
▪ This class saves the id of the receipt already exists case exception.	

Class Name:WrongFileEndingException	
Responsibilities	**Collaborations**
▪ This class saves the id of the wrong file ending case exception.	

Class Name:WrongFileFormatException	
Responsibilities	**Collaborations**
▪ This class saves the id of the wrong file format case exception.	

Class Name:WrongReceiptDateException	
Responsibilities	**Collaborations**
▪ This class saves the id of the wrong receipt date case exception.	

Class Name:WrongReceiptKindException	
Responsibilities	**Collaborations**
▪ This class saves the id of the wrong receipt kind case exception.	

Class Name:WrongFileFormatException	
Responsibilities	**Collaborations**
▪ This class saves the id of the wrong file format case exception.	