Class Diagram3 (C:\Users\Andrés\Desktop\Universidad\ Iceis\)

suicide_overview

src

view

SimulatorWindow
-mc : MasterClass
-components : IContainer
-label1 : Label
-label2 : Label
-year : TextBox
-femaleRB : RadioButton
-maleRB : RadioButton
-label3 : Label
-label4 : Label
-runSimulation : Button
-countries : ComboBox
-generation : ComboBox
+SimulatorWindow()
-executeSimulation()
-SimulatorWindow_Load()
-InitializeComponent()
#Dispose()

RecordsViewer
-masterClass : MasterClass
-components : IContainer
-label1 : Label
-dataGridView1 : DataGridView
-CountryText : TextBox
-label2 : Label
-yearText : TextBox
-generationText : ComboBox
-button1 : Button
-button2 : Button
-label4 : Label
-label5 : Label
-label6 : Label
-label7 : Label
-femaleButton : CheckBox
-maleButton : CheckBox
-Column1 : DataGridViewTextBoxColumn
-Column2 : DataGridViewTextBoxColumn
-Column3 : DataGridViewTextBoxColumn
-Column4 : DataGridViewTextBoxColumn
-Column5 : DataGridViewTextBoxColumn
-Column6 : DataGridViewTextBoxColumn
-Column7 : DataGridViewTextBoxColumn
-Column8 : DataGridViewTextBoxColumn
-Column9 : DataGridViewTextBoxColumn
+RecordsViewer()
+loadDataTable()
-applyFilters()
-ResetDataSet()
-InitializeComponent()
#Dispose()

Graphs
-mc : MasterClass
-components : IContainer
-label1 : Label
-graphViewer : Panel
-graphic1 : Button
-graphic2 : Button
-graphic3 : Button
-graphic4 : Button
-graphic5 : Button
+Graphs()
-Button1_Click()
-graphic2_Click()
-graphic3_Click()
-graphic4_Click()
-graphic5_Click()
-InitializeComponent()
#Dispose()

GraphicPie1
-mc : MasterClass
-components : IContainer
-chart1 : Chart
-label2 : Label
-viewGraphic : Button
-country1 : TextBox
-country2 : TextBox
-country3 : TextBox
-clearBtn : Button
+GraphicPie1()
-viewGraphic_Click()
-clearBtn_Click()
-InitializeComponent()
#Dispose()

GraphicDonnut1
-mc : MasterClass
-components : IContainer
-label1 : Label
-country : TextBox
-label2 : Label
-label3 : Label
-label4 : Label
-label5 : Label
-year3 : TextBox
-year2 : TextBox
-year1 : TextBox
-chart1 : Chart
-viewGraphic : Button
-clearBtn : Button
+GraphicDonnut1()
-viewGraphic_Click()
-clearBtn_Click()
-InitializeComponent()
#Dispose()

GraphicBar3
-mc : MasterClass
-components : IContainer
-label1 : Label
-country : TextBox
-chart1 : Chart
-viewGraphic : Button
-clearBtn : Button
+GraphicBar3()
-viewGraphic_Click()
-clearBtn_Click()
-InitializeComponent()
#Dispose()

GraphicBar2
-mc : MasterClass
-components : IContainer
-country1 : TextBox
-country2 : TextBox
-country3 : TextBox
-label1 : Label
-viewGraphic : Button
-chart1 : Chart
-clearBtn : Button
+GraphicBar2()
-viewGraphic_Click()
-clearBtn_Click()
-InitializeComponent()
#Dispose()

GraphicBar1
-mc : MasterClass
-components : IContainer
-chart1 : Chart
+GraphicBar1()
-graphicBar_Load()
-InitializeComponent()
#Dispose()

Program
-Main()

<<use>>

MainWindow
-mc : MasterClass
-components : IContainer
-panel1 : Panel
-mainPane : Panel
-label1 : Label
-label2 : Label
-viewColumnsReports : Button
-linkLabel1 : LinkLabel
-label3 : Label
-titleBar : Panel
-closeButton : PictureBox
-minimizedButton : PictureBox
-panel3 : Panel
-panel5 : Panel
-riskSimulator : Button
-panel4 : Panel
-viewGraphs : Button
-label4 : Label
+MainWindow()
-LinkLabel1_LinkClicked()
-viewColumnsReports_LinkClicked()
-viewGraphicalReport()
-MainWindow_Load()
-InitializeComponent()
#Dispose()
-[ReleaseCapture()]
-[SendMessage()]
-CloseButton_Click()
-MinimizedButton_Click()
-ViewColumnsReports_Click()
-ViewGraphs_Click()
-RiskSimulator_Click()
-TitleBar_MouseDown()

model

MasterClass
+countries : Dictionary<string, List<Record>>
-p : string
-sex : string
+GENERATIONS : string
+RISKLEVELS : string
+treesByCountry : Dictionary<string, Tree>
+MasterClass()
+getAllCountries()
+AllRecords()
+RecordsByCountry()
+RecordsByCountry()
+RecordsByGeneration()
+RecordsByGeneration()
+RecordsByGeneration()
+RecordsByGeneration()
+RecordsByGeneration()
+DeathsCountByGender()
+DeathsCountByGender()
+DeathsCountByGender()
+DeathsCountByGender()
+DeathsCountByGeneration()
+DeathsCountByGeneration()
+DeathsCountByCountry()
+DeathsCountByCountry()
-RecordsByCountry()
+simulateSuicideRisk()

<<use>>

Loader
+LoadData()
-LoadData()

DecisionTreeClassifier

Decision
+variableName : string
+typeVariable : int
+value : object
+Decision()
+toString()

Node
+isLeaf : bool
+Decision : Decision
+trueNode : Node
+falseNode : Node
+variables : Dictionary<string, int>
+targetVariableName : string
+targetValues : HashSet<string>
+Probabilities : Dictionary<string, double>
+Node()
+training()
+printTree()
+Classifier()
-calculateGini()
-generateDecisions()

0..*

Tree
-values : List<Dictionary<string, Object>>
-root : Node
-variables : Dictionary<string, int>
-targetVariableName : string
+Tree()
+training()
+Classifier()
-printTree()

0..*

Record
+Year : int
+Sex : string
+AgeLower : int
+AgeUpper : int
+Suicide_no : int
+Population : int
+Ratio : double
+Generation : string
+ToAdd : bool
+Risk : string
+Record()
+getData()