

Table1 The original class NumberAxis in JFreeChart

Original Class NumberAxis	
Attributes	Methods
DEFAULT_MINIMUM_AXIS_VALUE	getMinimumAxisValue()
DEFAULT_MAXIMUM_AXIS_VALUE	setMinimumAxisValue(Number)
DEFAULT_UPPER_MARGIN	getMaximumAxisValue()
DEFAULT_LOWER_MARGIN	setMaximumAxisValue(Number)
DEFAULT_MINIMUM_AUTO_RANGE	autoRangeIncludesZero()
DEFAULT_TICK_UNIT	setAutoRangeIncludesZero(boolean)
minimumAxisValue	getAutoRangeMinimumSize()
maximumAxisValue	setAutoRangeMinimumSize(Number)
autoRangeIncludesZero	getUpperMargin()
autoRangeMinimumSize	setUpperMargin(double)
upperMargin	getLowerMargin()
lowerMargin	setLowerMargin(double)
tickUnit	getStandardTickUnits()
standardTickUnits	setStandardTickUnits(TickUnits)
	getTickUnit()
	valueToString(Number)
	calculateLowestVisibleTickValue()
	calculateHighestVisibleTickValue()
	calculateVisibleTickCount()
	createStandardTickUnits()

Table2 The new classes extracted by developers

Class Extracted by the Developers - 1	
Attributes	Methods
DEFAULT_UPPER_MARGIN	autoRangeIncludesZero()
DEFAULT_LOWER_MARGIN	setAutoRangeIncludesZero(boolean)
DEFAULT_MINIMUM_AUTO_RANGE	getAutoRangeMinimumSize()
DEFAULT_TICK_UNIT	setAutoRangeMinimumSize(Number)
autoRangeIncludesZero	getUpperMargin()
autoRangeMinimumSize	setUpperMargin(double)
upperMargin	getLowerMargin()
lowerMargin	setLowerMargin(double)
tickUnit	getStandardTickUnits()
standardTickUnits	setStandardTickUnits(TickUnits)
	getTickUnit()
	valueToString(Number)
	calculateLowestVisibleTickValue()
	calculateHighestVisibleTickValue()
	calculateVisibleTickCount()
	createStandardTickUnits()
Class Extracted by the Developers - 2	
Attributes	Methods

DEFAULT_MINIMUM_AXIS_VALUE	getMinimumAxisValue()
DEFAULT_MAXIMUM_AXIS_VALUE	setMinimumAxisValue(Number)
minimumAxisValue	getMaximumAxisValue()
maximumAxisValue	setMaximumAxisValue(Number)

Table3 The new classes extracted by our approach

Class Extracted our approach - 1	
Attributes	Methods
minimumAxisValue	getMinimumAxisValue()
DEFAULT_MAXIMUM_AXIS_VALUE	setMinimumAxisValue(Number)
DEFAULT_TICK_UNIT	getMaximumAxisValue()
maximumAxisValue	setMaximumAxisValue(Number)
Class Extracted our approach - 2	
Attributes	Methods
DEFAULT_UPPER_MARGIN	getLowerMargin()
DEFAULT_LOWER_MARGIN	getAutoRangeMinimumSize()
standardTickUnits	valueToString(Number)
upperMargin	setUpperMargin(double)
DEFAULT_MINIMUM_AXIS_VALUE	autoRangeIncludesZero()
lowerMargin	getUpperMargin()
autoRangeIncludesZero	calculateLowestVisibleTickValue()
autoRangeMinimumSize	setAutoRangeMinimumSize(Number)
DEFAULT_MINIMUM_AUTO_RANGE	setAutoRangeIncludesZero(boolean)
getStandardTickUnits	getTickUnit()
setStandardTickUnits	setLowerMargin(double)
tickUnit	createStandardTickUnits()
	calculateHighestVisibleTickValue()
	calculateVisibleTickCount()

Table 4 The new classes extracted by Bavota's approach[14]

Class Extracted Bavota's approach - 1	
Attributes	Methods
minimumAxisValue	getTickUnit()
standardTickUnits	getMaximumAxisValue()
tickUnit	setAutoRangeMinimumSize(Number)
DEFAULT_MINIMUM_AXIS_VALUE	setMaximumAxisValue(Number)
DEFAULT_MAXIMUM_AXIS_VALUE	setMinimumAxisValue(Number)
maximumAxisValue	valueToString(Number)
	calculateHighestVisibleTickValue()
	calculateVisibleTickCount()
	getMinimumAxisValue()
	setStandardTickUnits(TickUnits)
	getStandardTickUnits()
Class Extracted Bavota's approach - 2	

Attributes	Methods
autoRangeMinimumSize	getUpperMargin()
autoRangeIncludesZero	setUpperMargin(double)
DEFAULT_UPPER_MARGIN	getLowerMargin()
DEFAULT_TICK_UNIT	setLowerMargin(double)
DEFAULT_MINIMUM_AUTO_RANGE	calculateLowestVisibleTickValue()
DEFAULT_LOWER_MARGIN	createStandardTickUnits()
lowerMargin	getAutoRangeMinimumSize()
upperMargin	setAutoRangeIncludesZero(boolean)

Table 5 The new classes extracted by Fokaefs' approach

Class Extracted Fokaefs' approach - 1	
Attributes	Methods
autoRangeMinimumSize	getAutoRangeMinimumSize()
autoRangeIncludesZero	createStandardTickUnits()
DEFAULT_UPPER_MARGIN	calculateVisibleTickCount()
DEFAULT_TICK_UNIT	calculateLowestVisibleTickValue()
DEFAULT_MINIMUM_AXIS_VALUE	calculateHighestVisibleTickValue()
DEFAULT_MINIMUM_AUTO_RANGE	
DEFAULT_MAXIMUM_AXIS_VALUE	
DEFAULT_LOWER_MARGIN	
Class Extracted Fokaefs' approach - 2	
Attributes	Methods
standardTickUnits	getTickUnit()
tickUnit	getUpperMargin()
upperMargin	setAutoRangeIncludesZero(boolean)
lowerMargin	setAutoRangeMinimumSize(Number)
maximumAxisValue	setLowerMargin(double)
minimumAxisValue	getLowerMargin()
	setMaximumAxisValue(Number)
	setMinimumAxisValue(Number)
	getMinimumAxisValue()
	getMaximumAxisValue()
	setUpperMargin(double)
	valueToString(Number)
	setStandardTickUnits(TickUnits)
	getStandardTickUnits()