

The Program is the main inpoint of the project and can be regarded as the Client

ObjectUtils
• DescClone(obj:T): T

ApplicationException

Program
Main(args:string[]):void

MyException
• error : string
• MyException()
• MyException(msg:string)
• MyException(msg:string, innerException:Exception)
• GetError() : string

The bridge design pattern

Style
• StyleName : string
• IsShown : bool = false
• Fill : string = "none"
• Stroke : string = "#0000000"
• StrokeLinecap : string = "round"
• StrokeLinejoin : string = "round"
• StrokeMiterlimit : string = "10"
• StrokeWidth : string = "2"
• Path : string
• TransX : int = 0
• TransY : int = 0
• GenSvgCode() : string

StyleB

StyleA

LeftBrowStyleB
• LeftBrowStyleB()

MouthStyleB
• MouthStyleB()

LeftEyeStyleB
• LeftEyeStyleB()

RightBrowStyleB
• RightBrowStyleB()

RightEyeStyleB
• RightEyeStyleB()

RightEyeStyleA
• RightEyeStyleA()

LeftEyeStyleA
• LeftEyeStyleA()

RightBrowStyleA
• RightBrowStyleA()

MouthStyleA
• MouthStyleA()

LeftBrowStyleA
• LeftBrowStyleA()

LeftBrow

RightBrow

LeftEye

RightEye

Mouth

Face

Face()

SetStyleA() : void

SetStyleB() : void

Reset() : void

MoveLeft(value:int) : void

MoveDown(value:int) : void

MoveRight(value:int) : void

RightBrow
• RightBrow()
• <override> SetStyleA() : void
• <override> SetStyleB() : void

Mouth
• Mouth()
• <override> SetStyleA() : void
• <override> SetStyleB() : void

LeftEye
• LeftEye()
• <override> SetStyleA() : void
• <override> SetStyleB() : void

RightEye
• RightEye()
• <override> SetStyleA() : void
• <override> SetStyleB() : void

LeftBrow
• LeftBrow()
• <override> SetStyleA() : void
• <override> SetStyleB() : void

ConcreteMemento
• ConcreteMemento(state:Face)
• GetState() : Face

The ConcreteMemento stores the snapshot of the Originator's state

Memento
• GetState() : Face

The Memento interface provides some methods to get the data of state

The caretaker is responsible for the state management

Caretaker
• Caretaker(originator:Originator)
• Backup() : void
• Undo() : bool
• Redo() : bool

The Originator contains all the methods that may change the State

Originator
• Originator(state:Face)
• Save() : IMemento
• Restore(memento:IMemento) : void
• Restore() : void
• Draw() : void
• GenSvgCode() : string
• Show(cmd:string) : void
• Hide(cmd:string) : void
• Move(cmd:string) : void
• Reset(cmd:string) : void
• SetStyle(cmd:string) : void
• SaveSvgFile(cmd:string) : void