Cue Sheet Project 2.0

Patrick Aung, Kevin Ng, Woody Wu

1.

Project Description

Project Description

Upgrade version 1.0 cuesheet application by adding more features to the graphical user interface and making better design choices.

2.
New Application Features

New Application Features

FANCY DRAG

Improved segment vertex dragging motion on the canvas

REMOVE MULTIPLE SEGMENTS

Remove a segment or segments from the overall route

IMPORT/EXPORT 2 FILE FORMATS

Users can import and export cue sheets with .csv and .txt files

EXPORT IN DIFFERENT FORMAT

Add and remove segments from the overall route

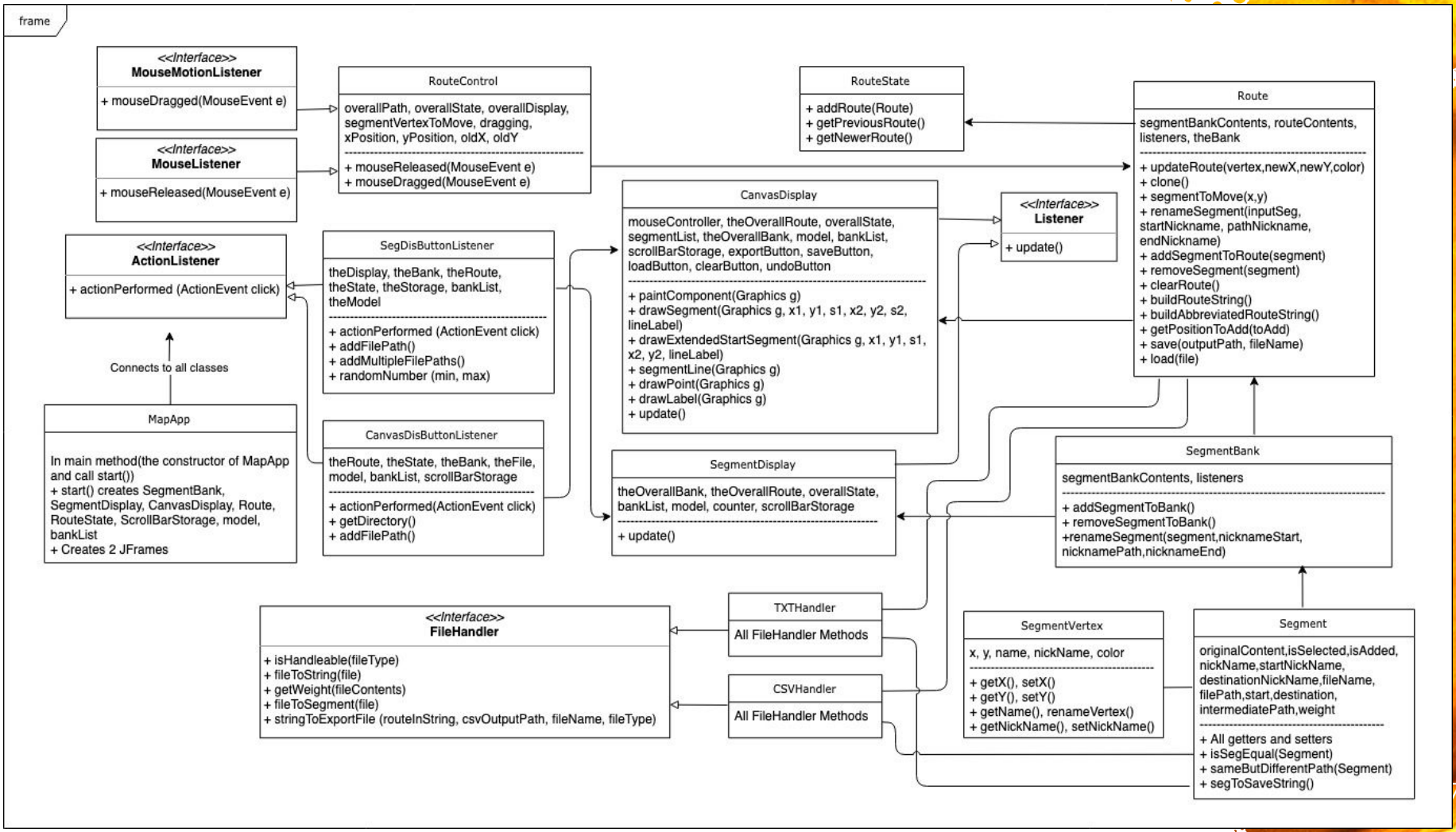
ADD/REMOVE/IMPORT MULTIPLE SEGMENTS

Users can import/add/remove multiple segments at once to the segment bank

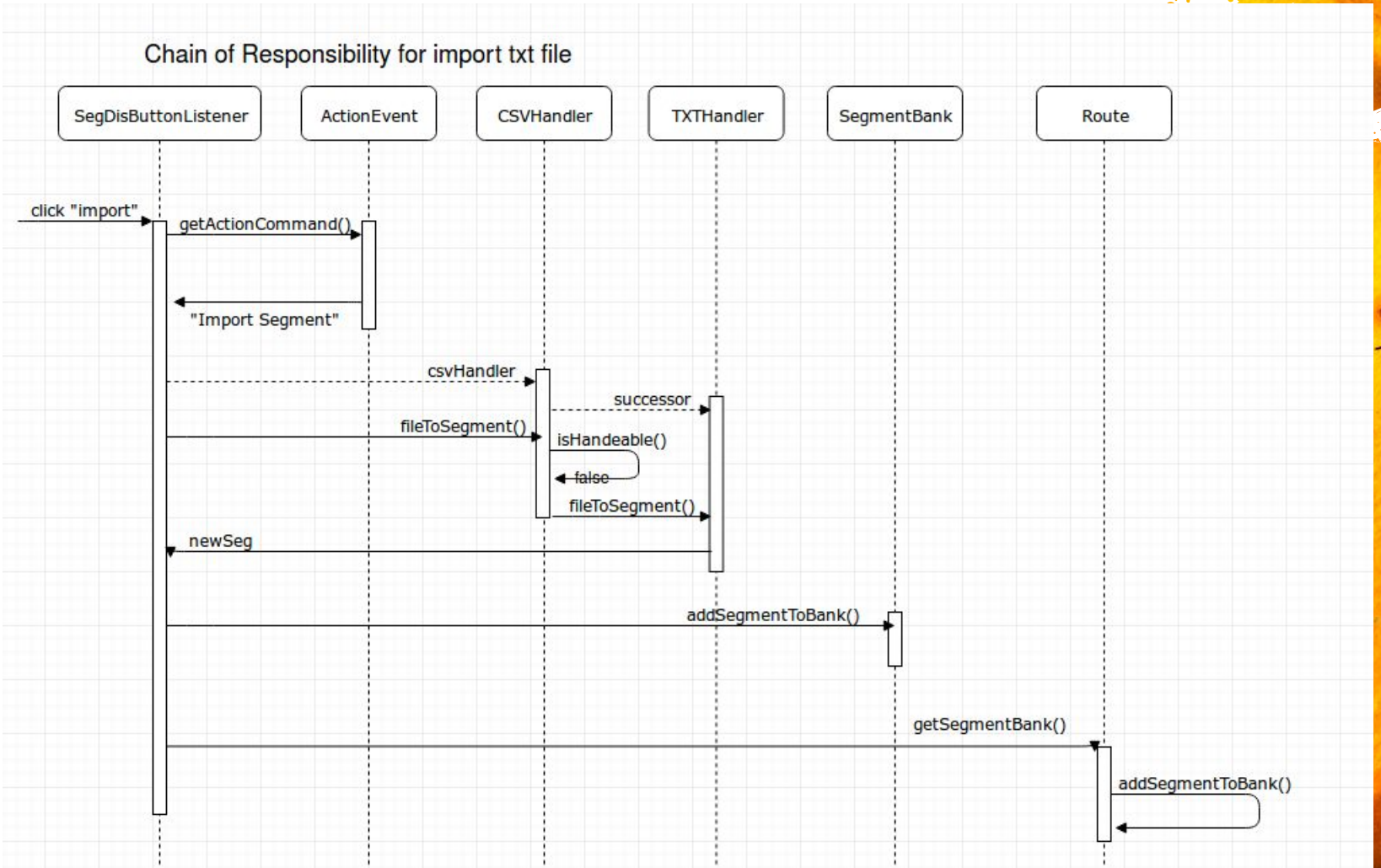
UNDO

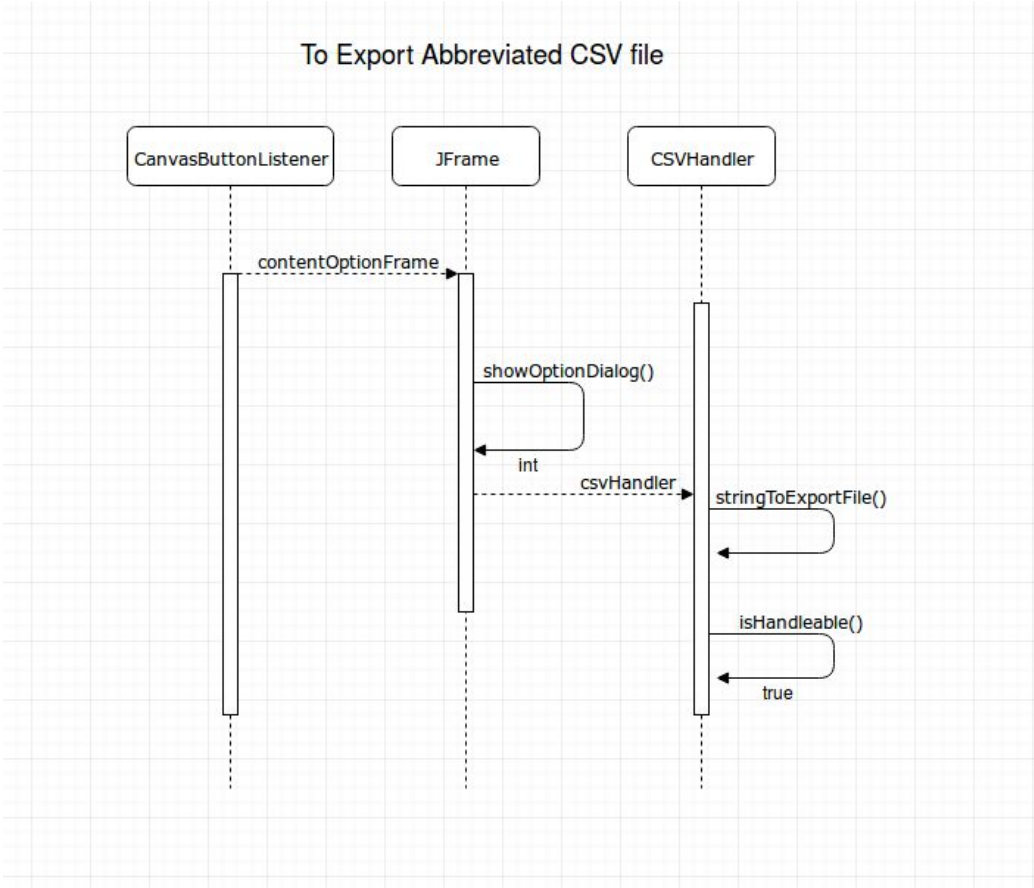
Undo users inputs/modifications with the overall route

3.
Class Diagram


frame
<<Interface>>
MouseMotionListener
+ mouseDragged(MouseEvent e)
<<Interface>>
MouseListener
+ mouseReleased(MouseEvent e)
RouteControl
overallPath, overallState, overallDisplay, segmentVertexToMove, dragging, xPosition, yPosition, oldX, oldY
+ mouseReleased(MouseEvent e)
+ mouseDragged(MouseEvent e)
RouteState
+ addRoute(Route)
+ getPreviousRoute()
+ getNewerRoute()
Route
segmentBankContents, routeContents, listeners, theBank
+ updateRoute(vertex,newX,newY,color)
+ clone()
+ segmentToMove(x,y)
+ renameSegment(inputSeg, startNickname, pathNickname, endNickname)
+ addSegmentToRoute(segment)
+ removeSegment(segment)
+ clearRoute()
+ buildRouteString()
+ buildAbbreviatedRouteString()
+ getPositionToAdd(toAdd)
+ save(outputPath, fileName)
+ load(file)
CanvasDisplay
mouseController, theOverallRoute, overallState, segmentList, theOverallBank, model, bankList, scrollBarStorage, exportButton, saveButton, loadButton, clearButton, undoButton
+ paintComponent(Graphics g)
+ drawSegment(Graphics g, x1, y1, s1, x2, y2, s2, lineLabel)
+ drawExtendedStartSegment(Graphics g, x1, y1, s1, x2, y2, lineLabel)
+ segmentLine(Graphics g)
+ drawPoint(Graphics g)
+ drawLabel(Graphics g)
+ update()
<<Interface>>
Listener
+ update()
<<Interface>>
ActionListener
+ actionPerformed (ActionEvent click)
SegDisButtonListener
theDisplay, theBank, theRoute, theState, theStorage, bankList, theModel
+ actionPerformed (ActionEvent click)
+ addFilePath()
+ addMultipleFilePaths()
+ randomNumber (min, max)
Connects to all classes
MapApp
In main method(the constructor of MapApp and call start())
+ start() creates SegmentBank, SegmentDisplay, CanvasDisplay, Route, RouteState, ScrollBarStorage, model, bankList
+ Creates 2 JFrames
CanvasDisButtonListener
theRoute, theState, theBank, theFile, model, bankList, scrollBarStorage
+ actionPerformed(ActionEvent click)
+ getDirectory()
+ addFilePath()
SegmentDisplay
theOverallBank, theOverallRoute, overallState, bankList, model, counter, scrollBarStorage
+ update()
SegmentBank
segmentBankContents, listeners
+ addSegmentToBank()
+ removeSegmentToBank()
+renameSegment(segment,nicknameStart, nicknamePath,nicknameEnd)
<<Interface>>
FileHandler
+ isHandleable(fileType)
+ fileToString(file)
+ getWeight(fileContents)
+ fileToSegment(file)
+ stringToExportFile (routeInString, csvOutputPath, fileName, fileType)
TXTHandler
All FileHandler Methods
CSVHandler
All FileHandler Methods
SegmentVertex
x, y, name, nickName, color
+ getX(), setX()
+ getY(), setY()
+ getName(), renameVertex()
+ getNickName(), setNickName()
Segment
originalContent,isSelected,isAdded, nickName,startNickName, destinationNickName,fileName, filePath,start,destination, intermediatePath,weight
+ All getters and setters
+ isSegEqual(Segment)
+ sameButDifferentPath(Segment)
+ segToSaveString()

4.
Interaction Diagram


Chain of Responsibility for import txt file
SegDisButtonListener
ActionEvent
CSVHandler
TXTHandler
SegmentBank
Route
click "import"
getActionCommand()
"Import Segment"
csvHandler
successor
fileToSegment()
isHandeable()
false
fileToSegment()
newSeg
addSegmentToBank()
getSegmentBank()
addSegmentToBank()


To Export Abbreviated CSV file
CanvasButtonListener
JFrame
CSVHandler
contentOptionFrame
showOptionDialog()
int
csvHandler
stringToExportFile()
isHandleable()
true

5.
Testing

Testing

SegmentTest

- testSegmentGetters
- testSegmentSetters
- testSameButDifferentPath
- testCloneMethod

RouteTest

- testAddSegmentInRoute
- testRemoveSegment
- testGetPositionToAdd
- testClearRoute
- testBuildRouteString

6.

Lessons Learned

Lessons Learned

- × Get the correct version of the java compiler.
- × Undo/Redo was not as simple as anticipated
- × Effective use of git (i.e. merge conflicts)
- × Swing was still an ouch...

7.
Version 3.0 Features

Version 3.0 Features

Redo

Ability to redo all the actions toward the overall route.

Set Theme

Ability to set different themes for the canvas and the segment bank display

Editable Route Segment Contents

Fancier GUI by allowing users to edit the content of each segment of the overall route on the canvas.

On-the-canvas rename

Make GUI fancier by allowing users to rename start/end/intermediate parts of the route on the canvas.

Thanks!

Any questions?

You can find us at:
aungp@union.edu
ngk@union.edu
wud2@union.edu