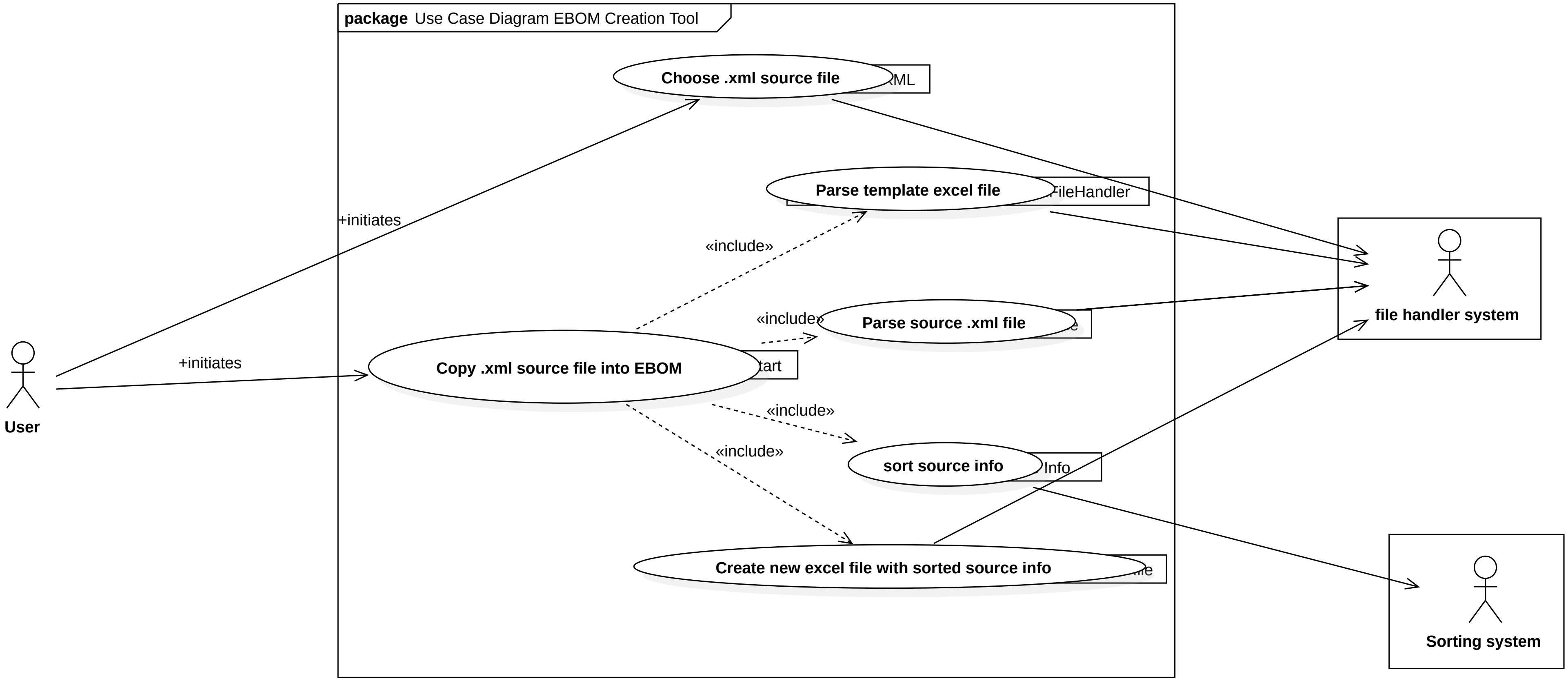
Use Case Diagram EBOM Creation Tool::UseCaseDiagram

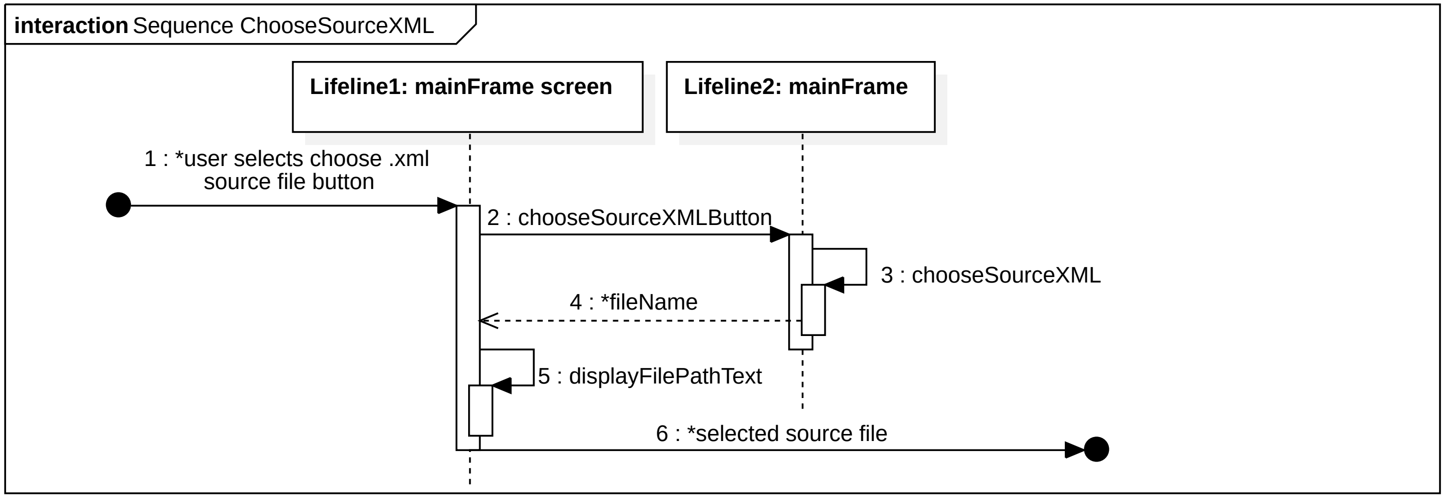


link Class Diagram EBOM Creation Tool

Use Case Diagram EBOM Creation Tool::Choose .xml source file::Interaction1::Sequence ChooseSourceXML

link	UseCaseDiagram

link	Activity ChooseSourceXML


interaction Sequence ChooseSourceXML
Lifeline1: mainFrame screen
Lifeline2: mainFrame
1 : *user selects choose .xml source file button
2 : chooseSourceXMLButton
3 : chooseSourceXML
4 : *fileName
5 : displayFilePathText
6 : *selected source file

Text Use Case: choose source .xml file
Primary actor: user
Description:
0.□User has started the program
1.□User selects button to choose source xml
2.□System opens file browser window
3.□User selects source xml
4.□System populates text box with selected file path.

link	Activity chooseSourceXMLButton

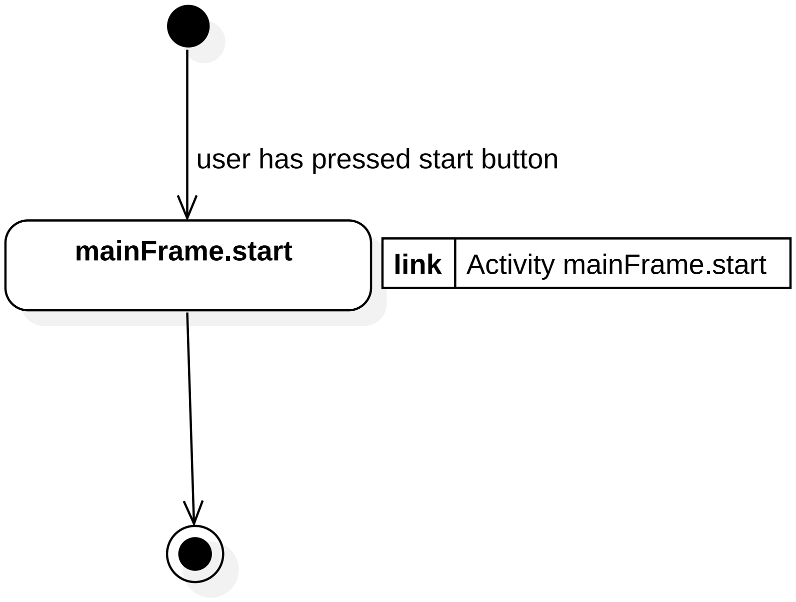
link	Activity chooseSourceXML

link	Activity displayFilePathText

Use Case Diagram EBOM Creation Tool::Copy .xml source file into EBOM::Activity mainFrame.bStart::Activity mainFrameScreen.bStart

link	UseCaseDiagram

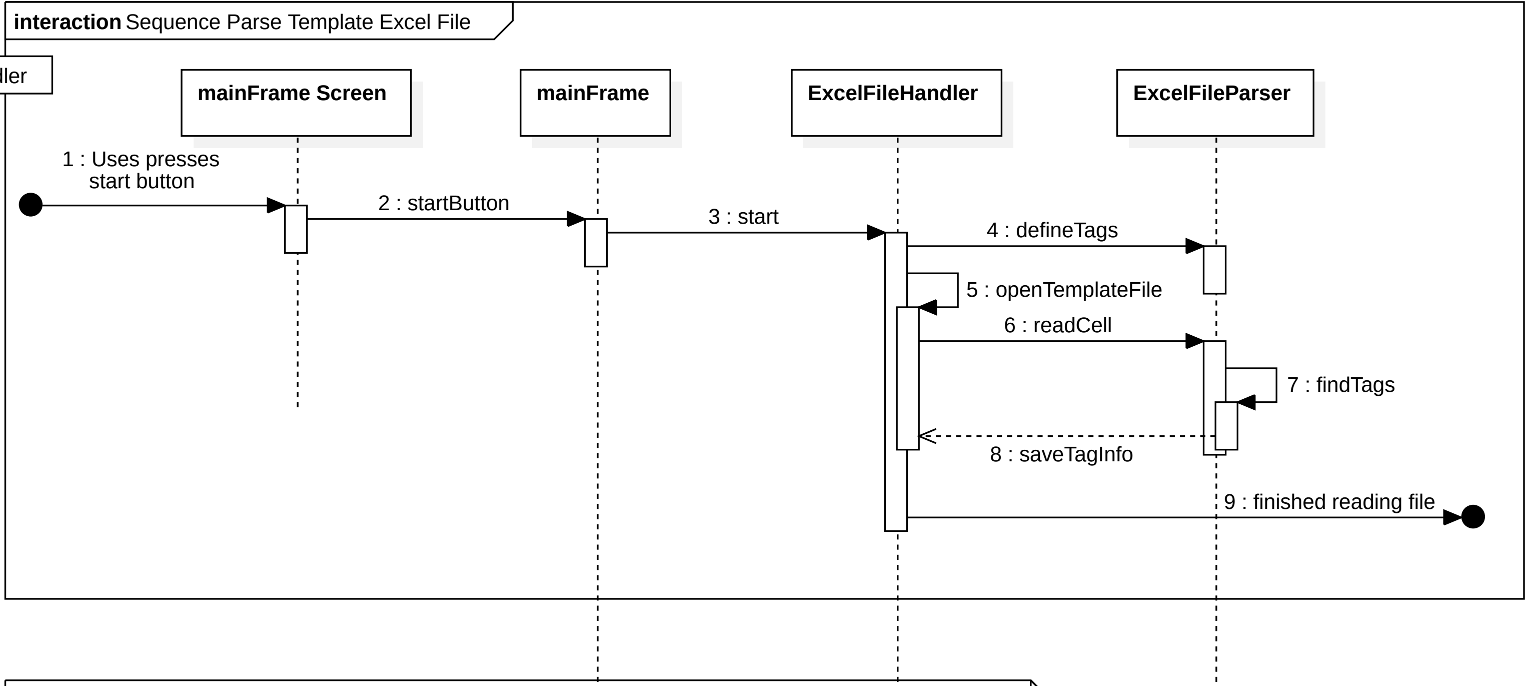
0. User presses start button of mainFrameScreen
1. mainFrameScreen.bStart recieves event and runs



Use Case Diagram EBOM Creation Tool::Parse template excel file::Interaction1::Sequence Parse Template Excel File

link UseCaseDiagram

link Activity excelFileHandler.excelFileHandler



Text Use Case: Parse template excel file
Primary actor: user
Description:
0. User has chosen excel file path.
1. User selects start button
2. System opens excel file.
3. System reads excel cells info one at a time.
4. System looks for specific tags which indicate:
    a. Which data to look for in the xml source file.
        i. First by title block
        ii. Second by header row
    b. How the data is to be sorted in the body of the excel file.
        i. Collect info on which column is to be sorted by priority
            1. Sorting methods to include are ascending, descending,custom character list.
    c. How far to search in the excel file.
5. System looks for certain cell attributes such as color and border if
    necessary.
6. System populates filter settings and sort settings for parsing source xml.

Use Case Diagram EBOM Creation Tool::Parse template excel file::Activity Parse Template Excel File::Activity excelFileHandler.excelFileHandler

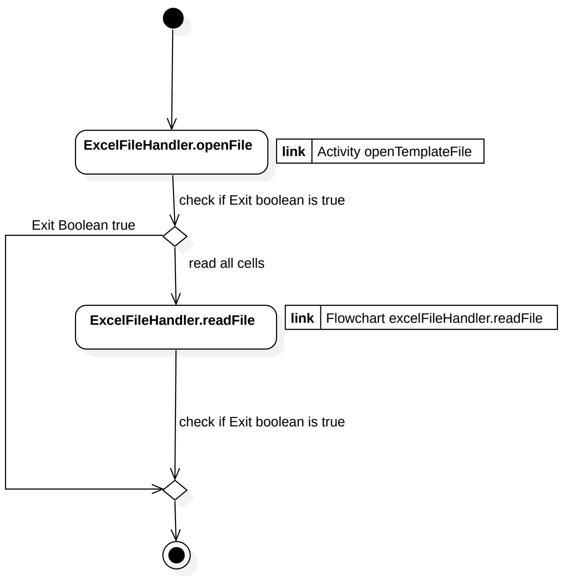
link	UseCaseDiagram

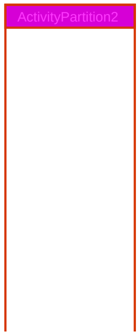
link	Sequence Parse Template Excel File

link	Activity mainFrame.start

excelFileHandler.excelFileHandler

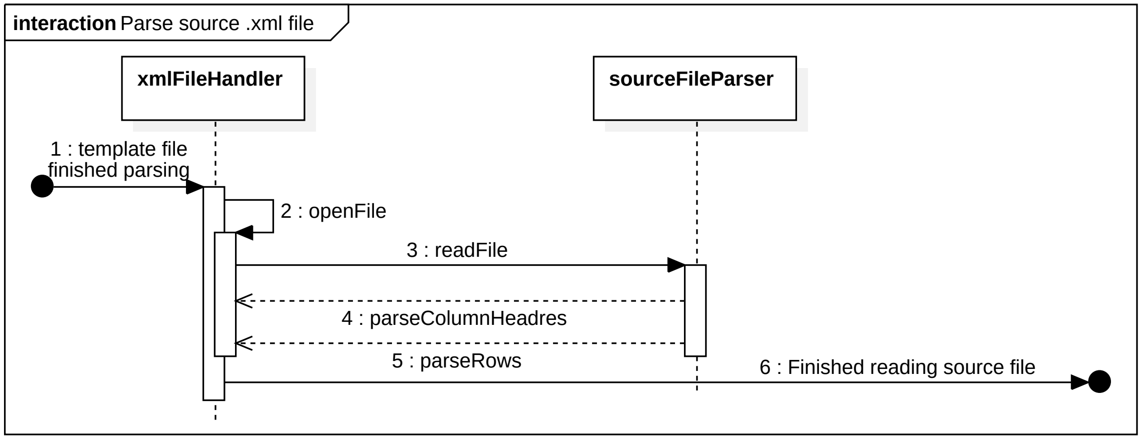
Text Use Case: Parse template excel file
Primary actor: user
Description:
0.□User has chosen excel file path.
1.□User selects start button
2.□System opens excel file.
3.□System reads excel cells info one at a time.
4.□System looks for specific tags which indicate:
    a.□Which data to look for in the xml source file.
        i.□First by title block
        ii.□Second by header row
    b.□How the data is to be sorted in the body of the excel file.
        i.□Collect info on which column is to be sorted by priority
            1.□Sorting methods to include are ascending, descending,custom character list.
    c.□How far to search in the excel file.
5.□System looks for certain cell attributes such as color and border if
    necessary.
6.□System populates filter settings and sort settings for parsing source xml.


ExcelFileHandler.openFile
link
Activity openTemplateFile
check if Exit boolean is true
Exit Boolean true
read all cells
ExcelFileHandler.readFile
link
Flowchart excelFileHandler.readFile
check if Exit boolean is true



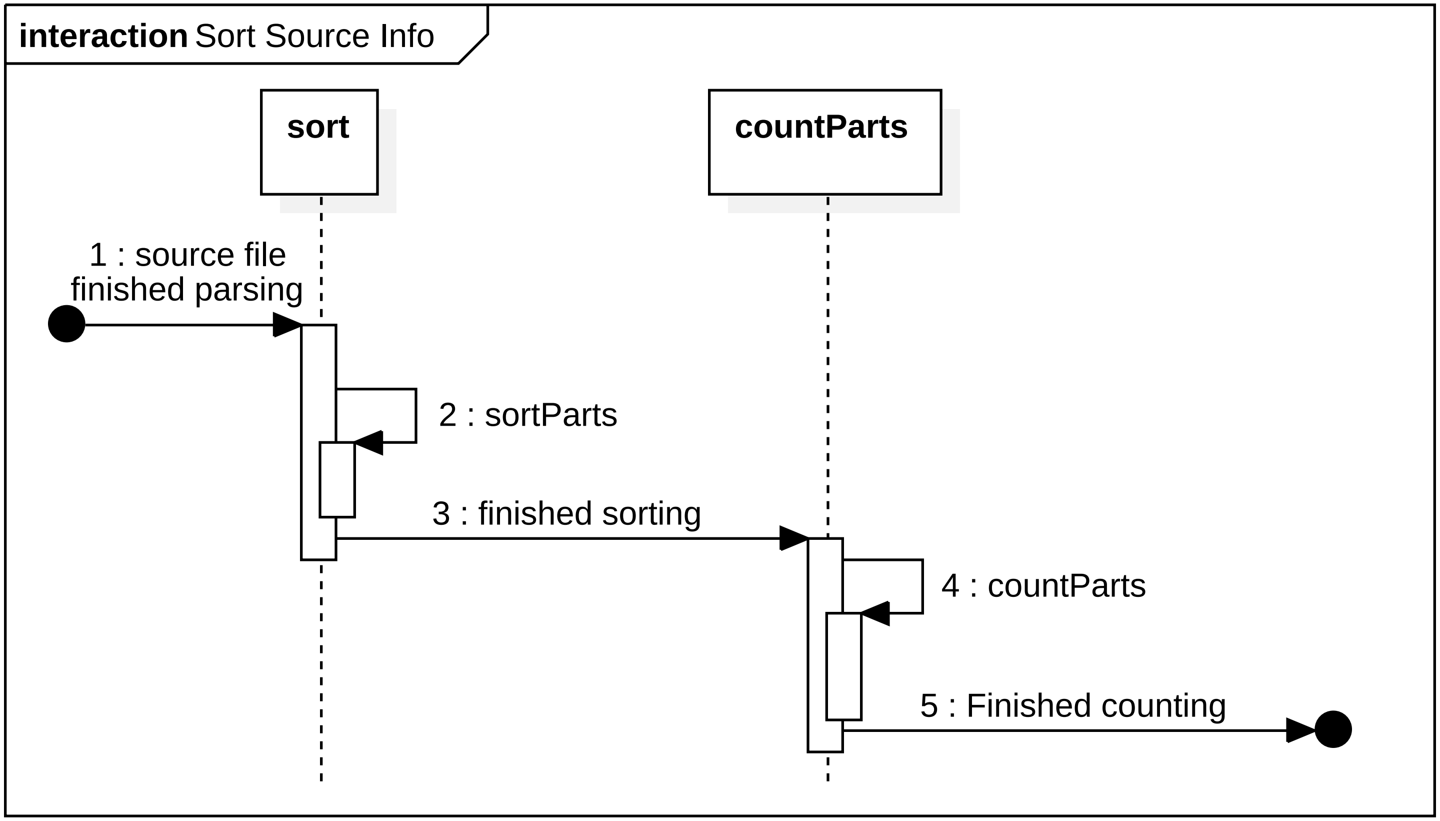
Use Case Diagram EBOM Creation Tool::Parse source .xml file::Interaction1::Parse source .xml file

link	Flowchart XMLfileHandler.XMLfileHandler


interaction Parse source .xml file
xmlFileHandler
sourceFileParser
1 : template file finished parsing
2 : openFile
3 : readFile
4 : parseColumnHeadres
5 : parseRows
6 : Finished reading source file

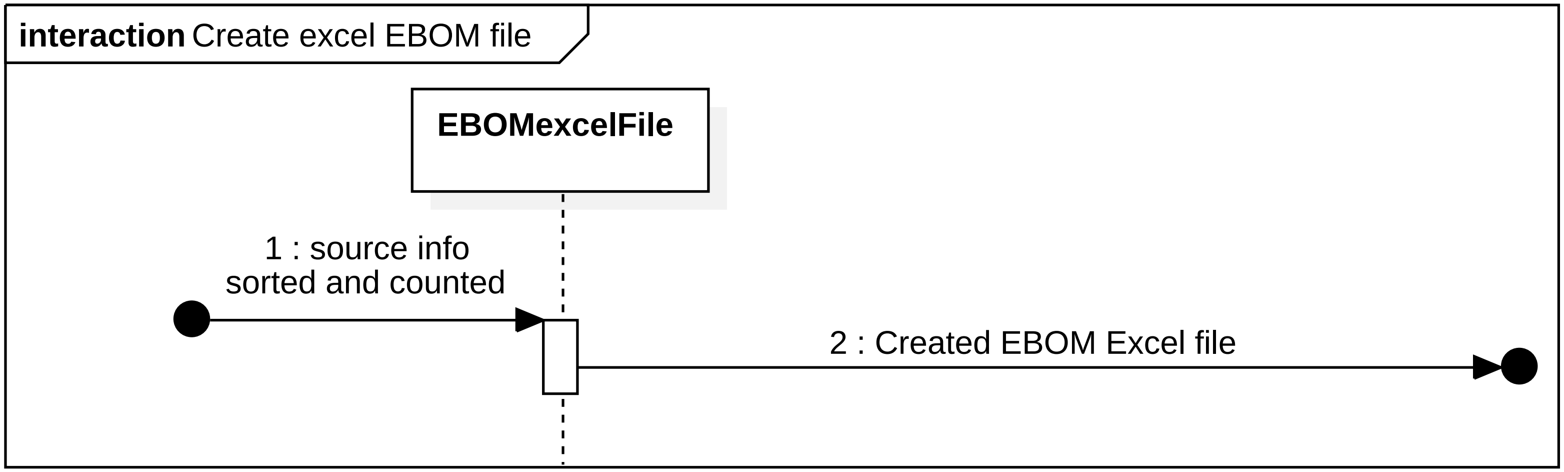
Text Use Case: Parse source xml file
Primary actor: parse template excel file
Description:
0.□User has chosen source file path and the sorting and filter setting have been found.
1.□System opens xml file.
2.□System read xml by tag.
3.□System collects data for the information that the template requires.
  a.□Collect the info for the title block.
4.□System collects info which the header row states will be required in the body of the EBOM excel file.

Use Case Diagram EBOM Creation Tool::Parse source .xml file::Interaction1::Sort Source Info



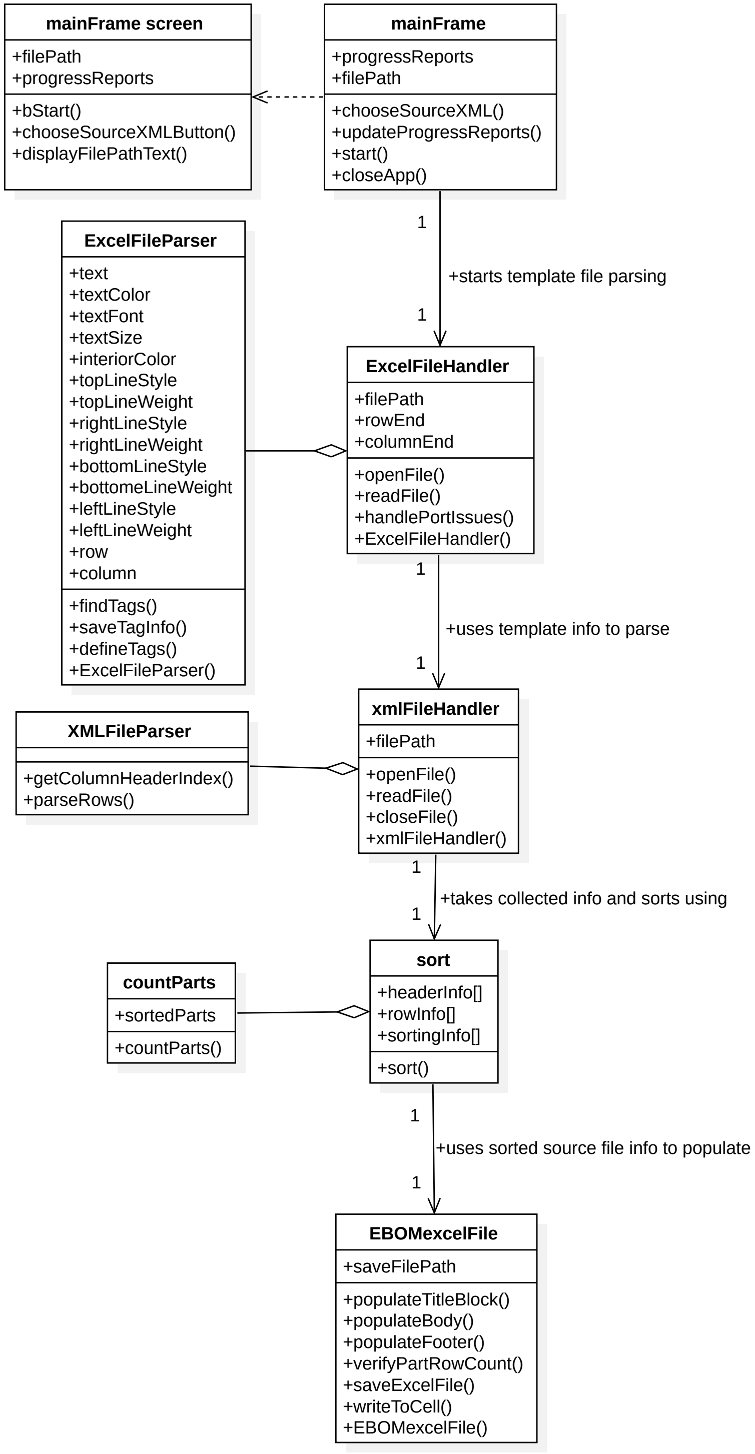
Text Use Case: Sort source file
Primary actor: parse source xml
Description:
0.□The source file information has been collected and the sort settings are found.
1.□System sort collected body information by sort settings
2.□System counts identical parts and updates a column for quantity.
  a.□The top row will contain the quantity, all bottom rows will have empty space in the quantity section.

Use Case Diagram EBOM Creation Tool::Create new excel file with sorted source info::Interaction1::Create excel EBOM file


interaction Create excel EBOM file
EBOMexcelFile
1 : source info sorted and counted
2 : Created EBOM Excel file

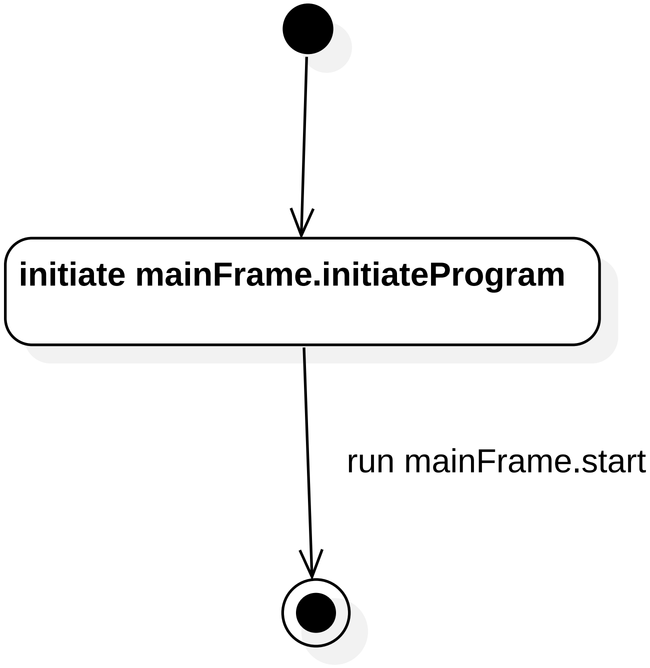
Text Use Case: Create excel EBOM file
Primary actor: Sort source file
Description:
0.□The source xml info is sorted and ready for input into an excel file
1.□System copy’s source template and give it the file name of the source xml.
2.□System replaces all header tags with the require information in the title block.
3.□System removes unnecessary tags in the header row and the elsewhere.
4.□System modifies all body cells with necessary color pattern.
5.□System populates body rows with sorted list of components from source xml.
6.□Verify the amount of rows created matches amount of components found in the source xml
7.□System creates floating note with specific color and text recorded from source template and places it at the end of the body.
8.□Resize all columns.

Class Diagram EBOM Creation Tool::Class Diagram EBOM Creation Tool



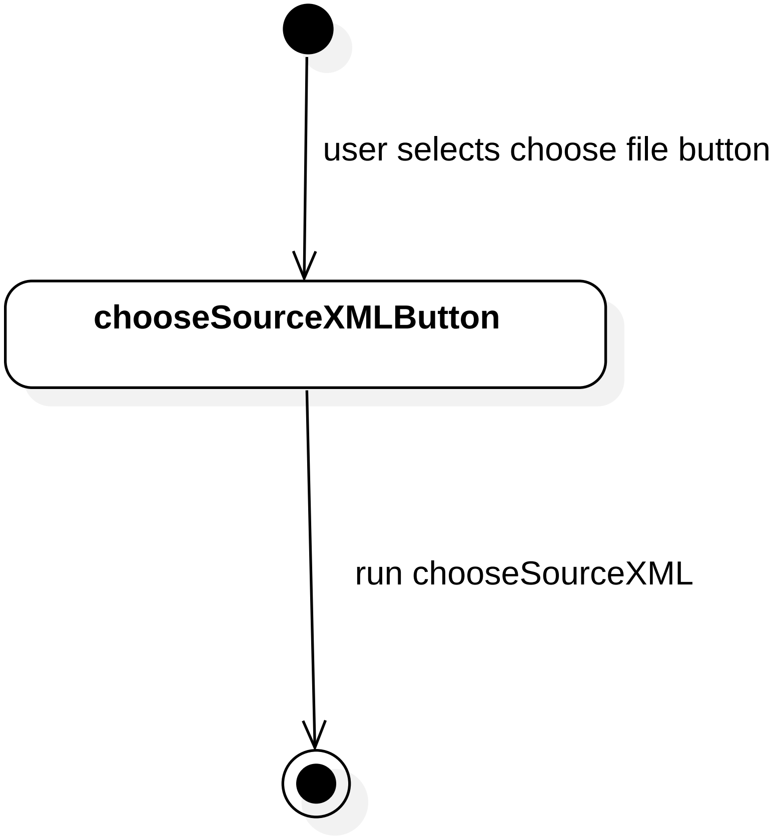
Class Diagram EBOM Creation Tool::mainFrame screen::bStart::Activity mainFrameScreen.bStart::Activity mainFrameScreen.bStart

link	Activity excelFileHandler.excelFileHandler



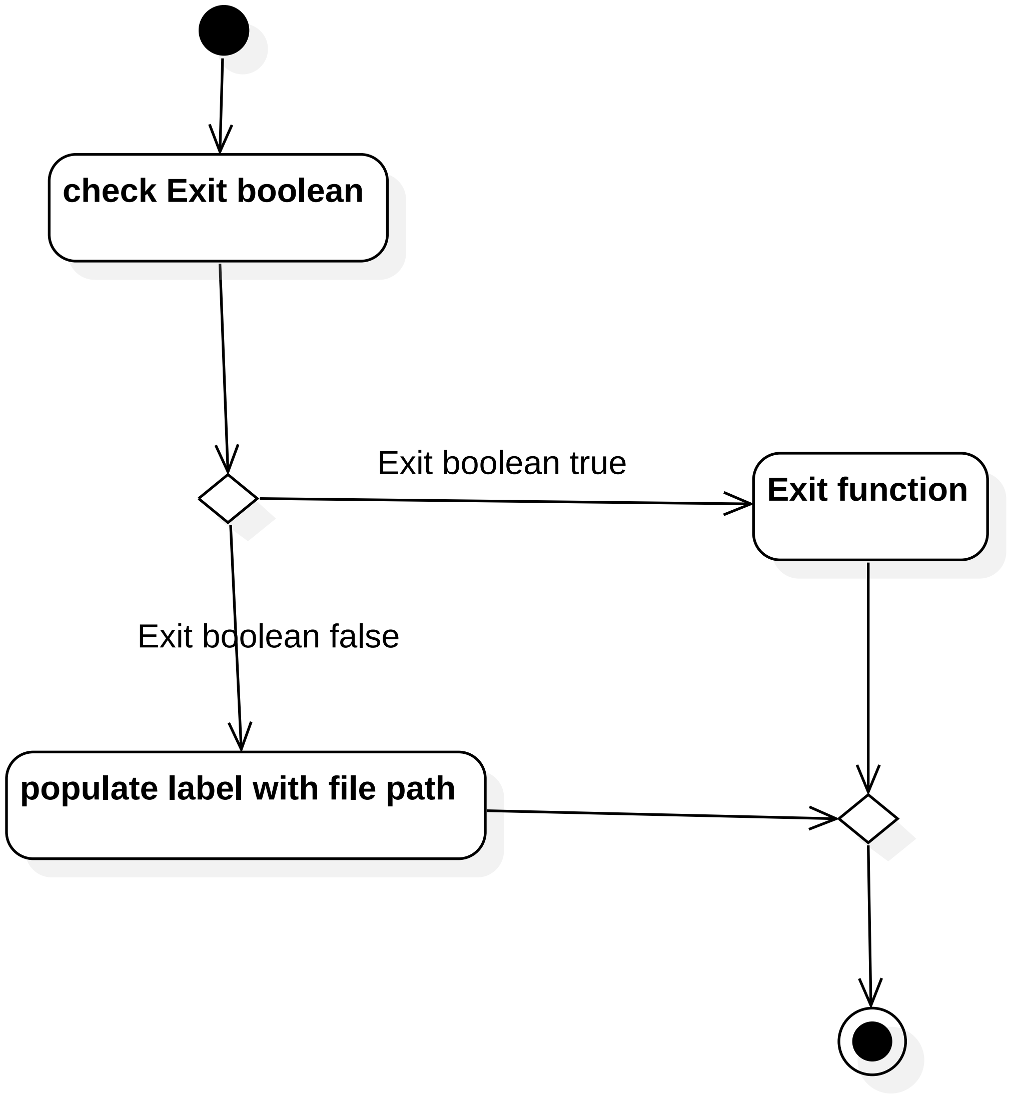
Class Diagram EBOM Creation Tool::mainFrame screen::chooseSourceXMLButton::chooseSourceXMLButton::Activity chooseSourceXMLButton

link	Activity ChooseSourceXML



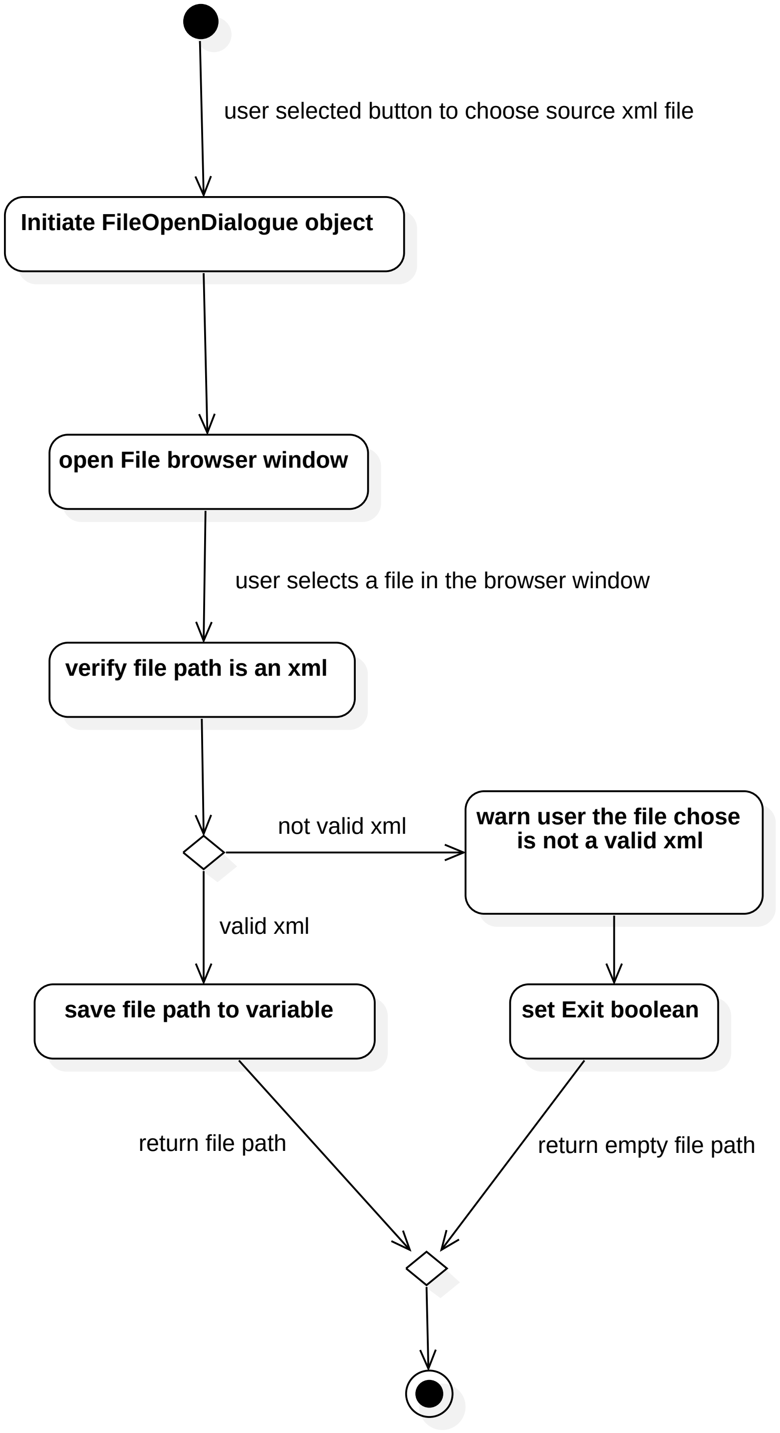
Class Diagram EBOM Creation Tool::mainFrame screen::displayFilePathText::Activity1::Activity displayFilePathText

link	Activity ChooseSourceXML



Class Diagram EBOM Creation Tool::mainFrame::chooseSourceXML::chooseSourceXML::Activity chooseSourceXML

link Activity ChooseSourceXML

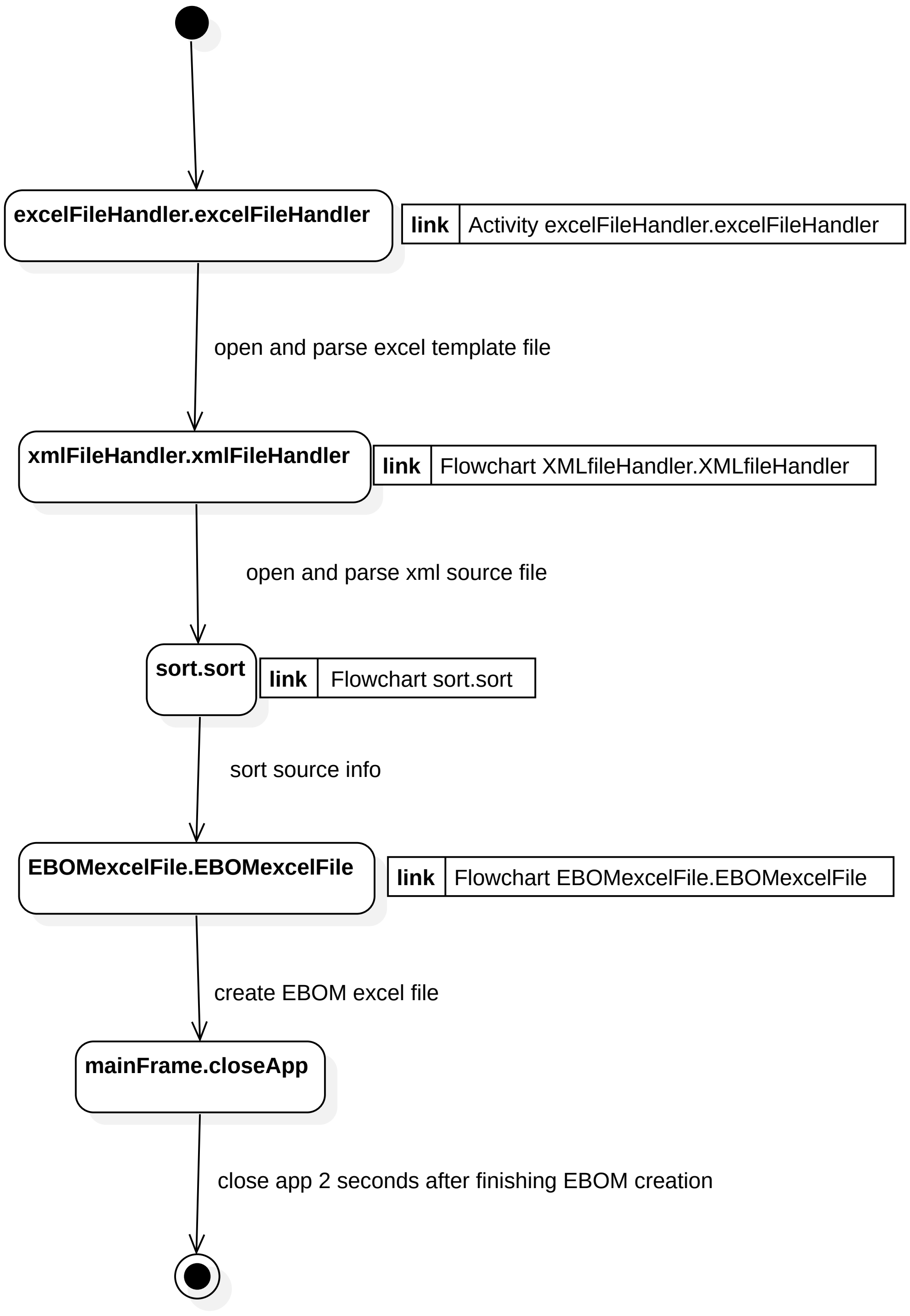


user selected button to choose source xml file
Initiate FileOpenDialogue object
open File browser window
user selects a file in the browser window
verify file path is an xml
not valid xml
warn user the file chose is not a valid xml
valid xml
save file path to variable
set Exit boolean
return file path
return empty file path

Class Diagram EBOM Creation Tool::mainFrame::start::Activity mainFrame.start::Activity mainFrame.start

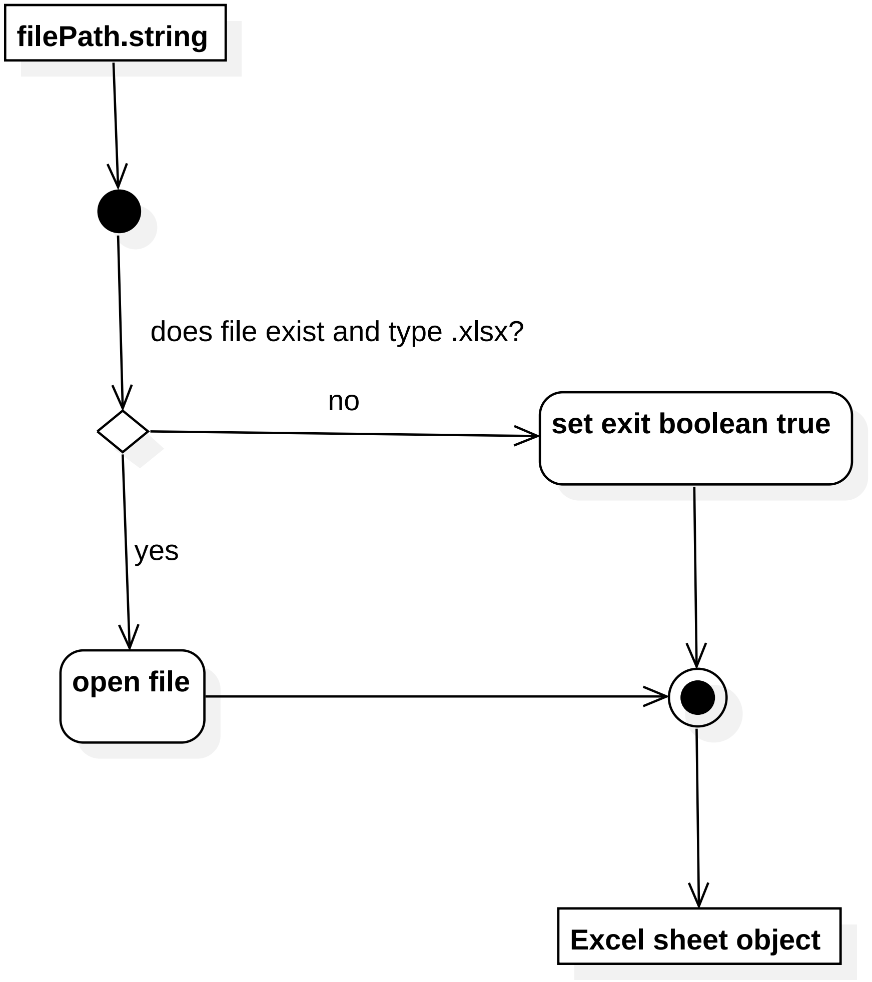
link	Activity mainFrameScreen.bStart

0.user has pressed start button in mainFrameScreen
1. mainframe.start runs 4 use cases.
    a. parse template excel file
    b. parse source xml file
    c. sort source info
    d. create new excel file with sorted source info.
2. closes program automatically after 2 seconds


excelFileHandler.excelFileHandler
link
Activity excelFileHandler.excelFileHandler
open and parse excel template file
xmlFileHandler.xmlFileHandler
link
Flowchart XMLfileHandler.XMLfileHandler
open and parse xml source file
sort.sort
link
Flowchart sort.sort
sort source info
EBOMexcelFile.EBOMexcelFile
link
Flowchart EBOMexcelFile.EBOMexcelFile
create EBOM excel file
mainFrame.closeApp
close app 2 seconds after finishing EBOM creation

Class Diagram EBOM Creation Tool::ExcelFileHandler::openFile::Activity openTemplateFile::Activity openTemplateFile

link	Activity excelFileHandler.excelFileHandler

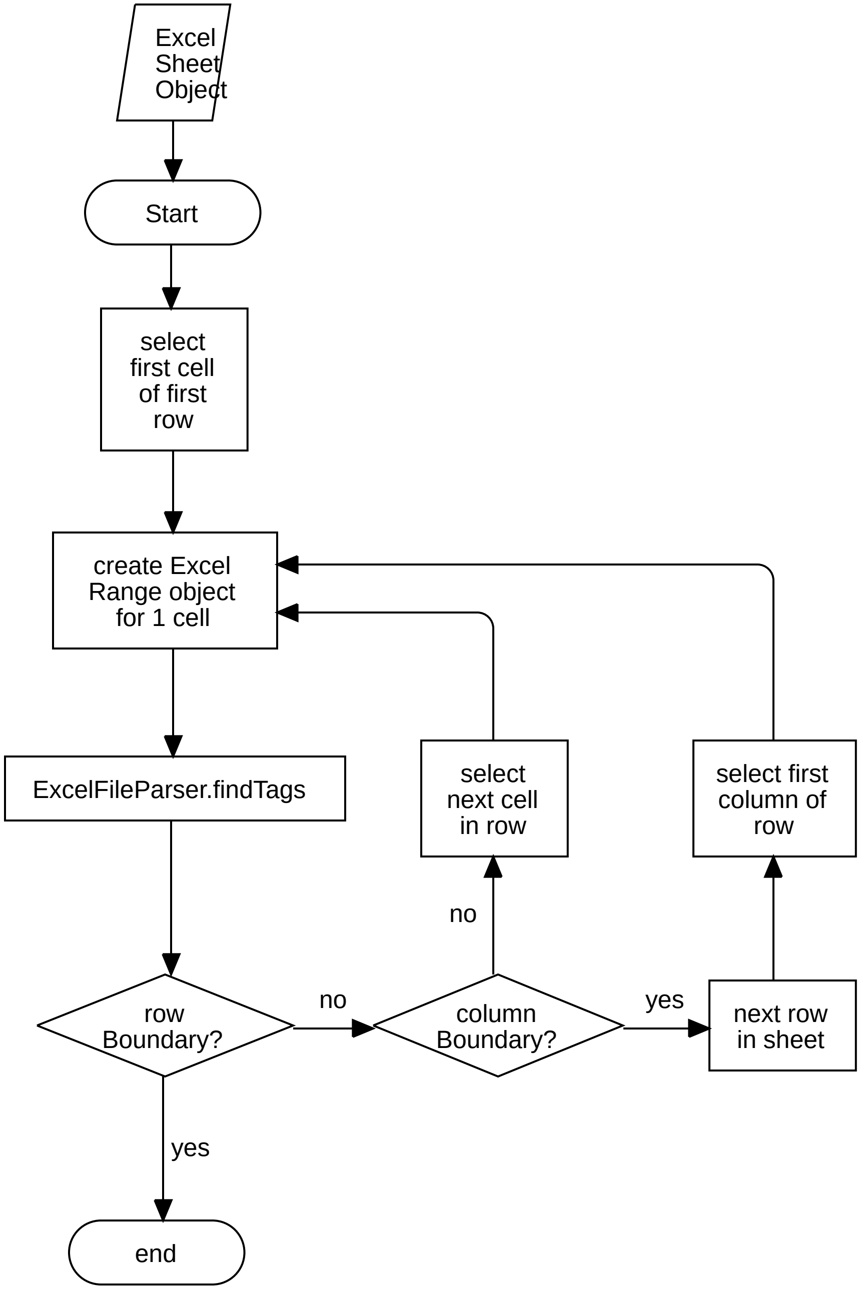


Class Diagram EBOM Creation Tool::ExcelFileHandler::readFile::Flowchart excelFileHandler.readFile::Flowchart excelFileHandler.readFile

link	Activity excelFileHandler.excelFileHandler

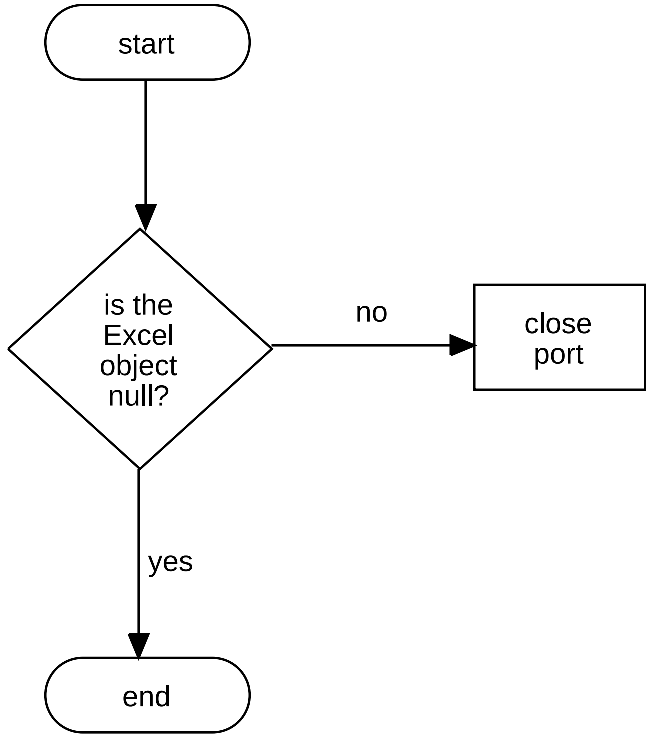
Flowchart excelFileHandler.readFile

link	Flowchart ExcelFileParser.findTags



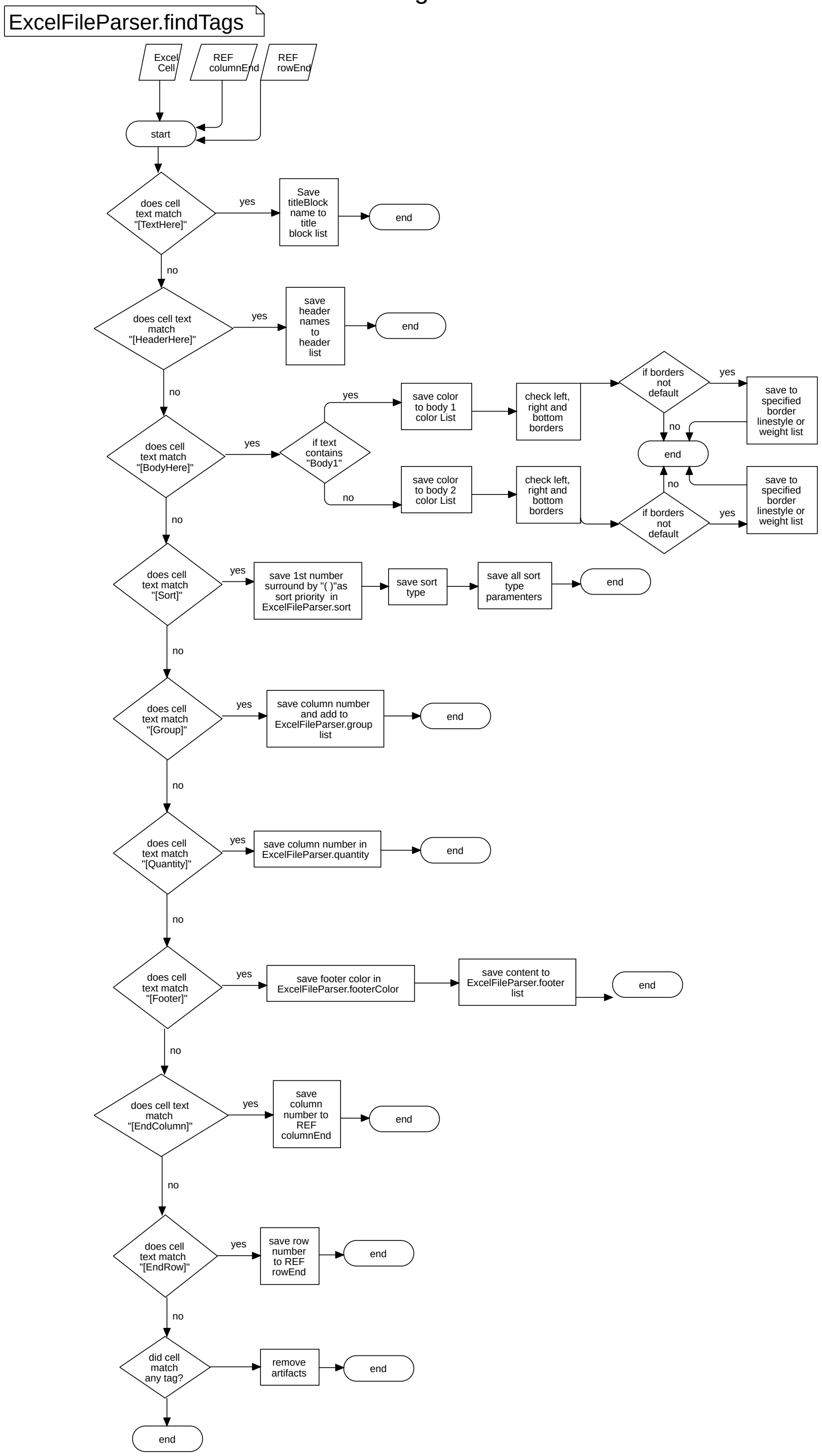
Class Diagram EBOM Creation Tool::ExcelFileHandler::handlePortIssues::Flowchart1::Flowchart ExcelFileHandler.handlePortIssues

ExcelFileHandler.handlePortIssues



Class Diagram EBOM Creation Tool::ExcelFileParser::findTags::Flowchart ExcelFileParser.findTags::Flowchart ExcelFileParser.findTags

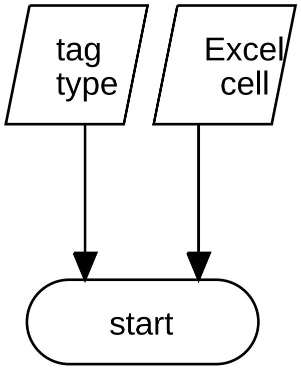
link	Flowchart excelFileHandler.readFile


ExcelFileParser.findTags
Excel Cell
REF columnEnd
REF rowEnd
start
does cell text match "[TextHere]"
yes
Save titleBlock name to title block list
end
no
does cell text match "[HeaderHere]"
yes
save header names to header list
end
no
does cell text match "[BodyHere]"
yes
if text contains "Body1"
yes
save color to body 1 color List
check left, right and bottom borders
if borders not default
yes
save to specified border linestyle or weight list
no
end
no
save color to body 2 color List
check left, right and bottom borders
if borders not default
yes
save to specified border linestyle or weight list
no
no
does cell text match "[Sort]"
yes
save 1st number surround by "( )"as sort priority in ExcelFileParser.sort
save sort type
save all sort type paramenters
end
no
does cell text match "[Group]"
yes
save column number and add to ExcelFileParser.group list
end
no
does cell text match "[Quantity]"
yes
save column number in ExcelFileParser.quantity
end
no
does cell text match "[Footer]"
yes
save footer color in ExcelFileParser.footerColor
save content to ExcelFileParser.footer list
end
no
does cell text match "[EndColumn]"
yes
save column number to REF columnEnd
end
no
does cell text match "[EndRow]"
yes
save row number to REF rowEnd
end
no
did cell match any tag?
remove artifacts
end
end

Class Diagram EBOM Creation Tool::ExcelFileParser::saveTagInfo::Flowchart ExcelFileParser.saveTagInfo::Flowchart ExcelFileParser.saveTagInfo

link	Flowchart ExcelFileParser.findTags

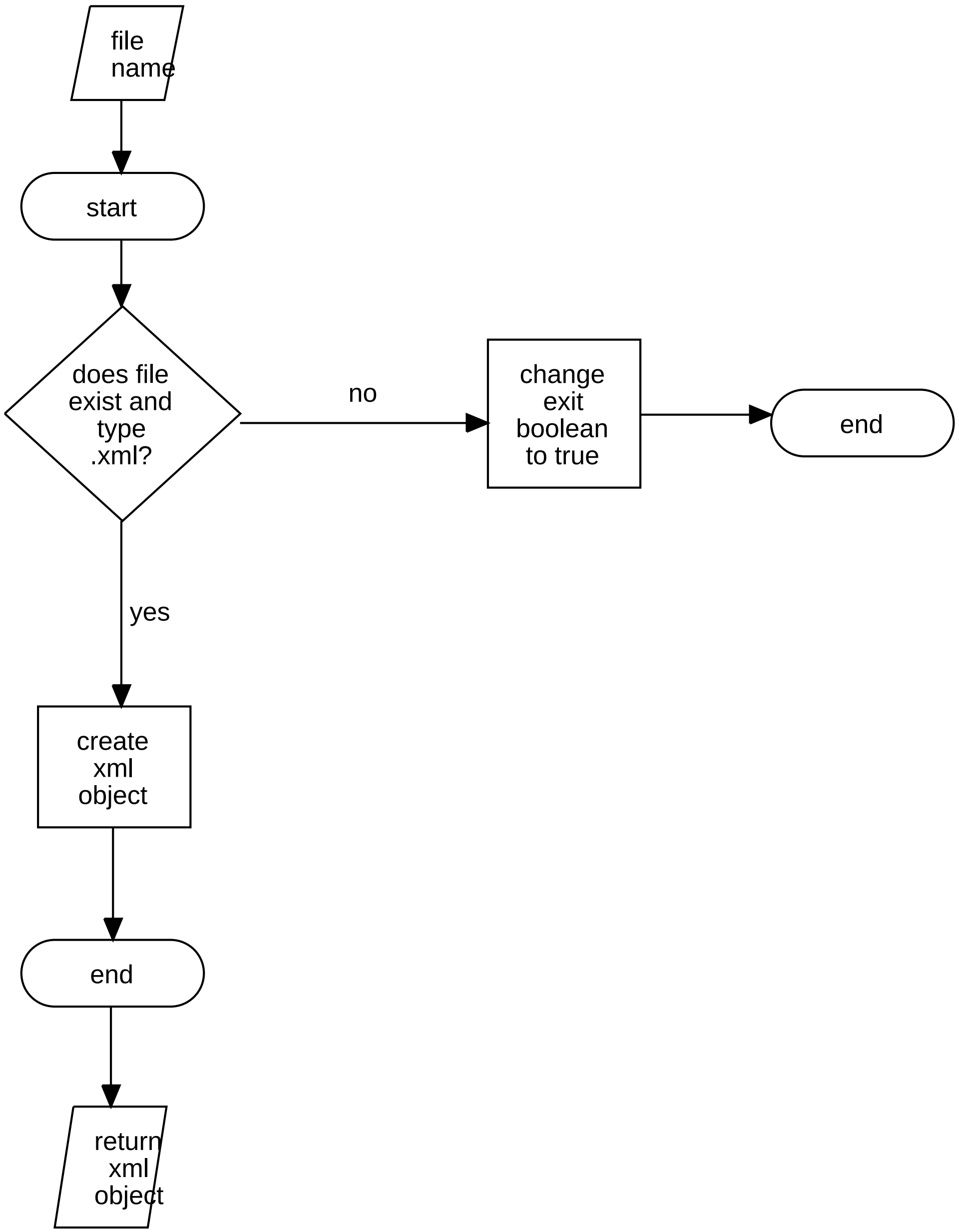
ExcelFileParser.saveTagInfo



Class Diagram EBOM Creation Tool::xmlFileHandler::openFile::Flowchart XMLfileHandler.openFile::Flowchart XMLfileHandler.openFile

link	Flowchart XMLfileHandler.XMLfileHandler

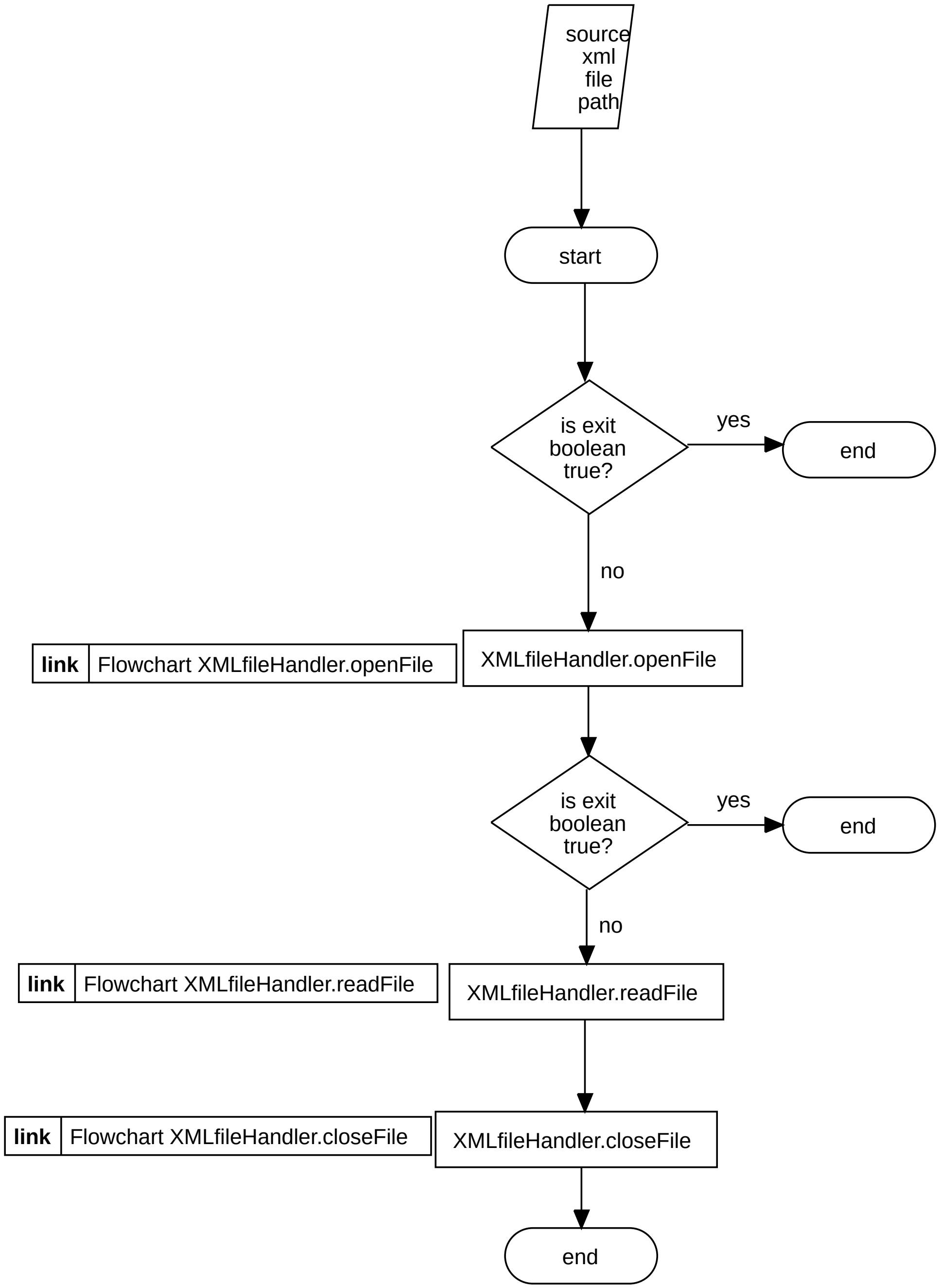
XMLfileHandler.openFile



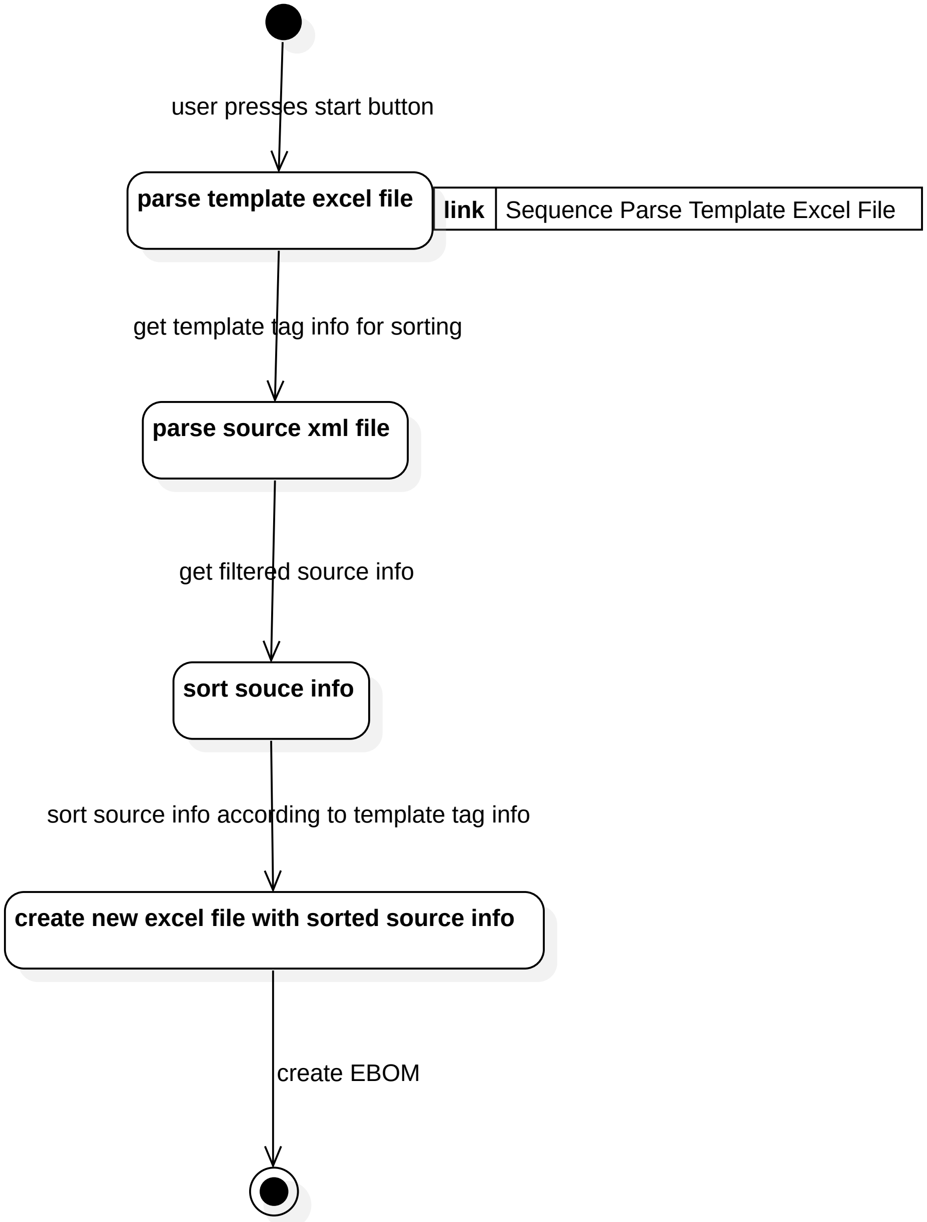
Class Diagram EBOM Creation Tool::xmlFileHandler::xmlFileHandler::Flowchart XMLfileHandler.XMLfileHandler::Flowchart XMLfileHandler.XMLfileHandler

link	Activity mainFrame.start
link	Parse source .xml file

XMLfileHandler.XMLfileHandler



Activity Copy .xml source file into EBOM::Activity Copy .xml source file into EBOM


user presses start button
parse template excel file
link
Sequence Parse Template Excel File
get template tag info for sorting
parse source xml file
get filtered source info
sort souce info
sort source info according to template tag info
create new excel file with sorted source info
create EBOM

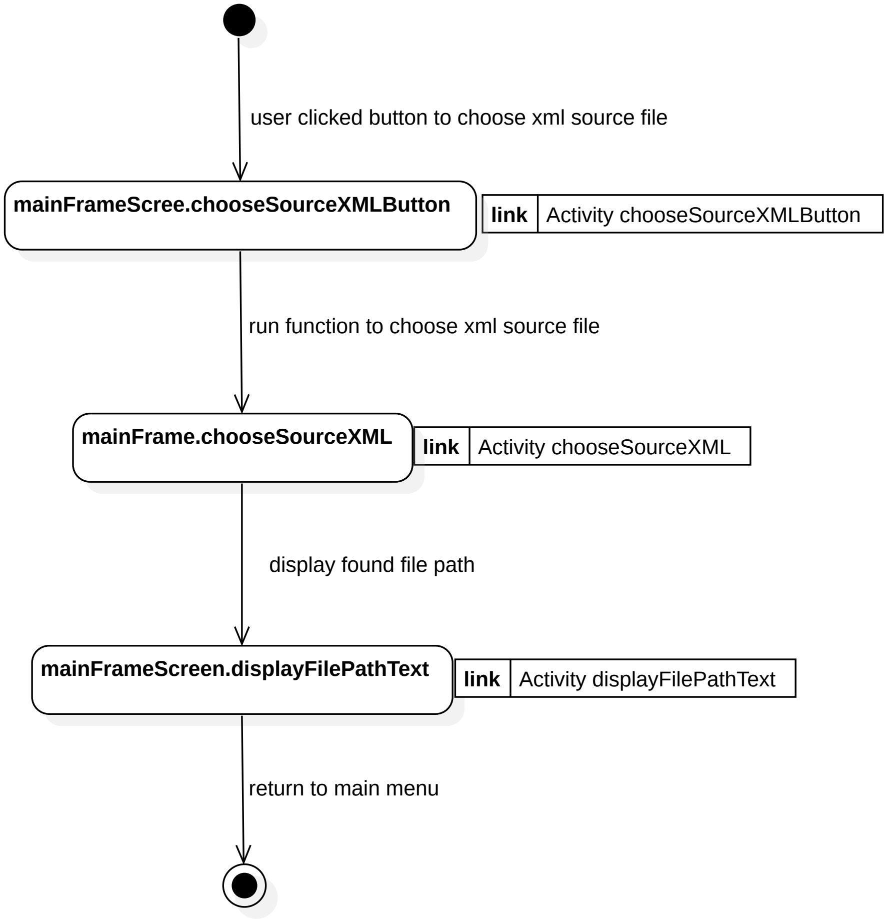
Activity Copy .xml source file into EBOM::ActivityDiagram1

ChooseSourceXML::Activity ChooseSourceXML

link	UseCaseDiagram

link	Sequence ChooseSourceXML

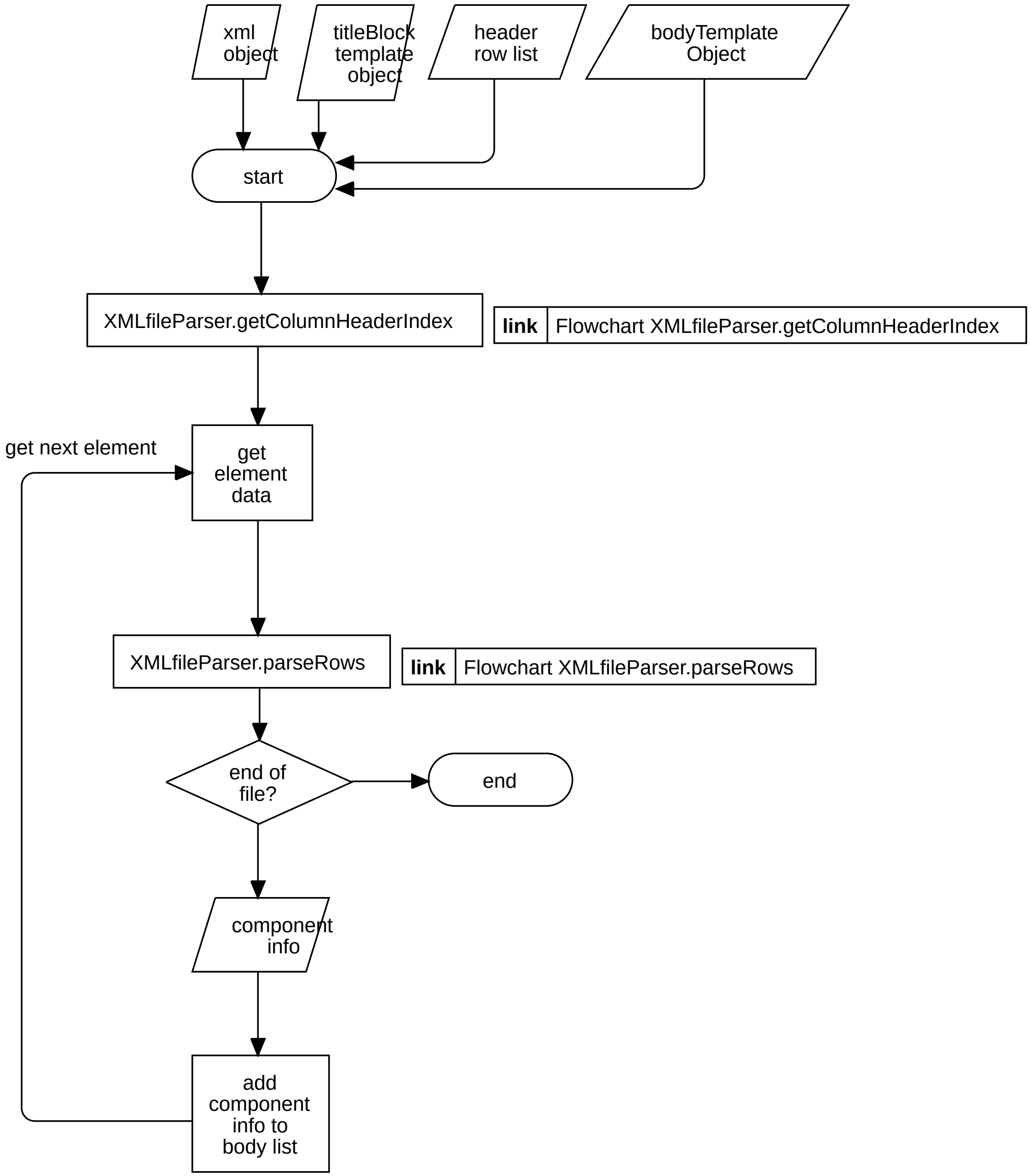
Text Use Case: choose source .xml file
Primary actor: user
Description:
0.□User has started the program
1.□User selects button to choose source xml
2.□System opens file browser window
3.□User selects source xml
4.□System populates text box with selected file path.


user clicked button to choose xml source file
mainFrameScree.chooseSourceXMLButton
link
Activity chooseSourceXMLButton
run function to choose xml source file
mainFrame.chooseSourceXML
link
Activity chooseSourceXML
display found file path
mainFrameScreen.displayFilePathText
link
Activity displayFilePathText
return to main menu

Class Diagram EBOM Creation Tool::xmlFileHandler::readFile::Flowchart XMLfileHandler.readFile::Flowchart XMLfileHandler.readFile

link	Flowchart XMLfileHandler.XMLfileHandler

XMLfileHandler.readFile

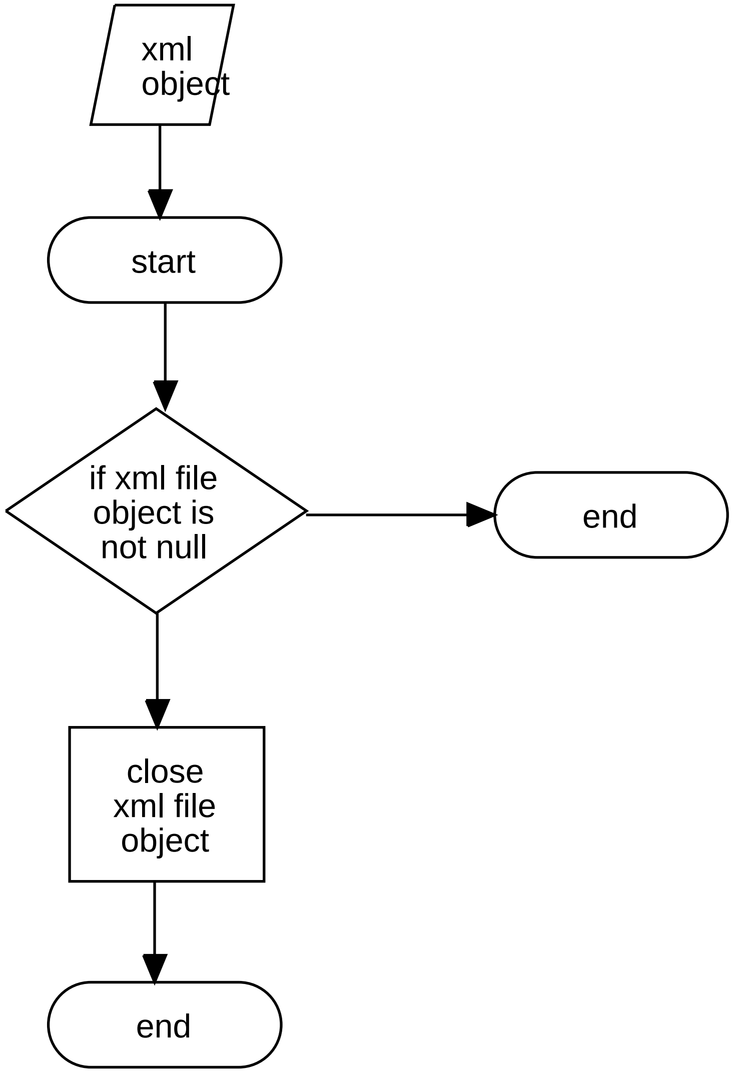


xml object
titleBlock template object
header row list
bodyTemplate Object
start
XMLfileParser.getColumnHeaderIndex
link
Flowchart XMLfileParser.getColumnHeaderIndex
get next element
get element data
XMLfileParser.parseRows
link
Flowchart XMLfileParser.parseRows
end of file?
end
component info
add component info to body list

Class Diagram EBOM Creation Tool::xmlFileHandler::closeFile::Flowchart XMLfileHandler.closeFile::Flowchart XMLfileHandler.closeFile

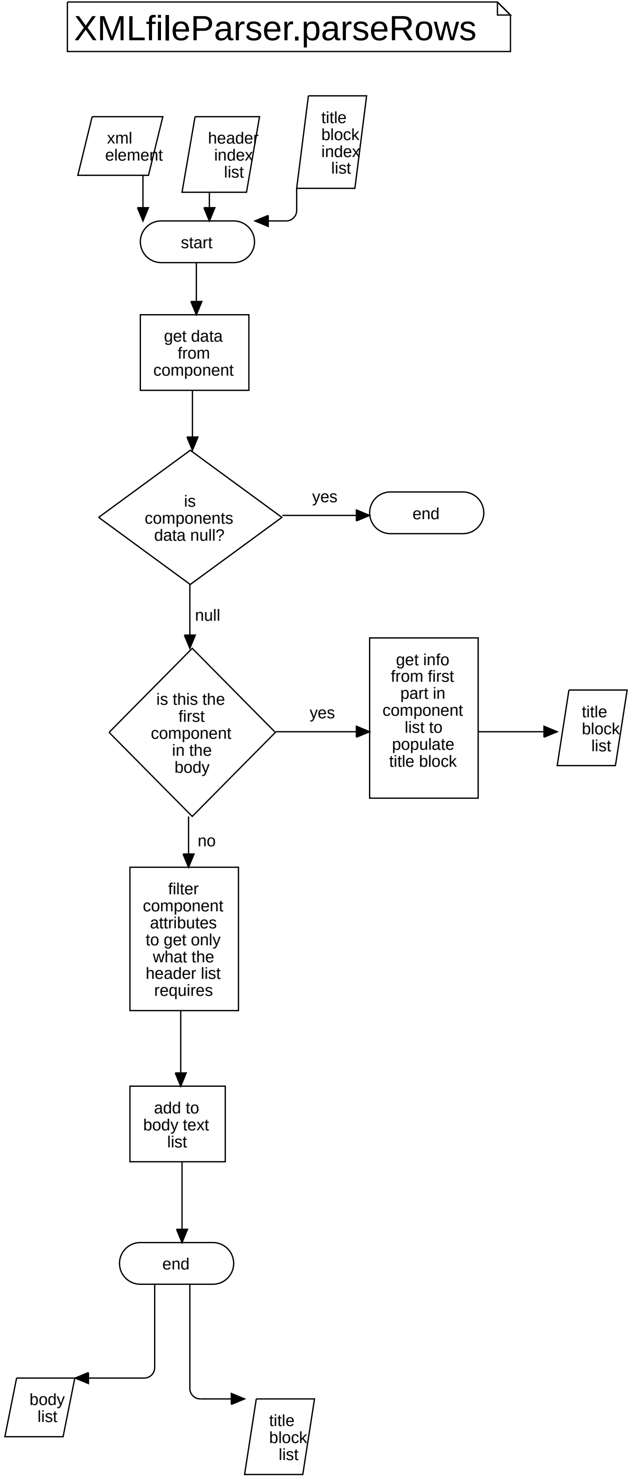
link	Flowchart XMLfileHandler.XMLfileHandler

XMLfileHandler.closeFile



Class Diagram EBOM Creation Tool::XMLFileParser::parseRows::Flowchart XMLfileParser.parseRows::Flowchart XMLfileParser.parseRows

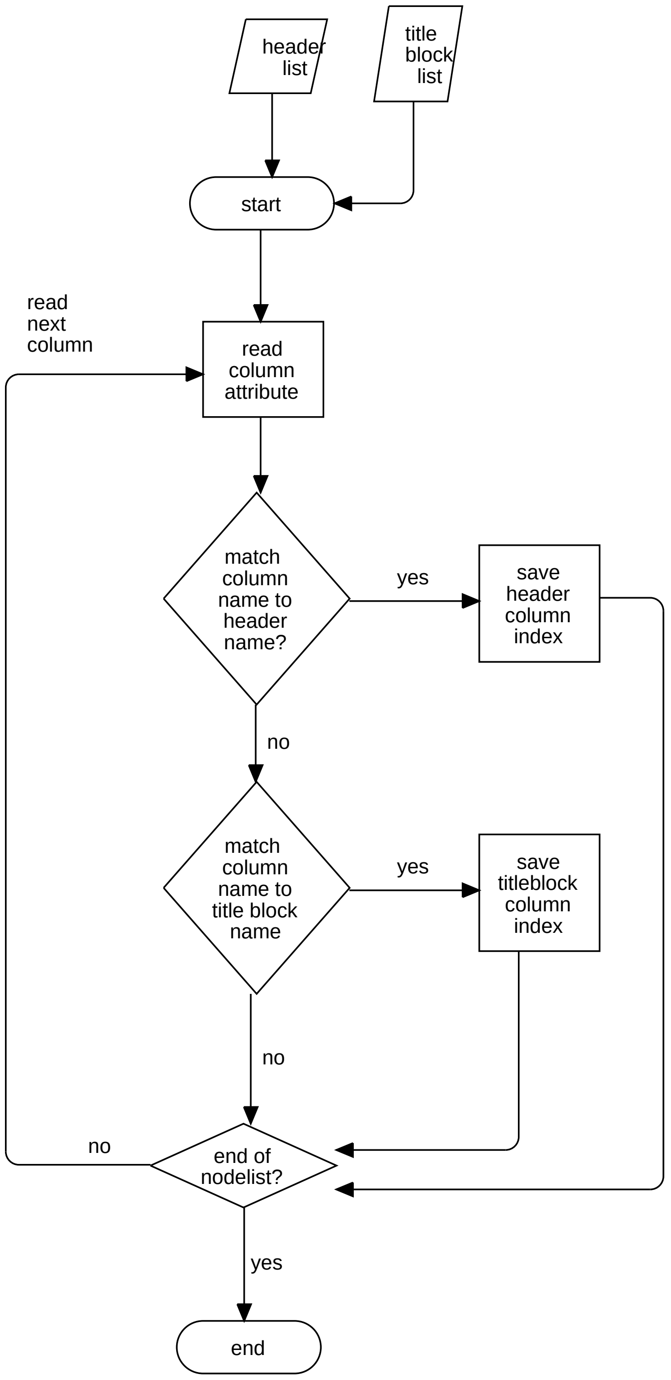
link	Flowchart XMLfileHandler.readFile



Class Diagram EBOM Creation Tool::XMLFileParser::getColumnHeaderIndex::Flowchart XMLfileParser.getColumnHeaderIndex::Flowchart XMLfileParser.getColumnHeaderIndex

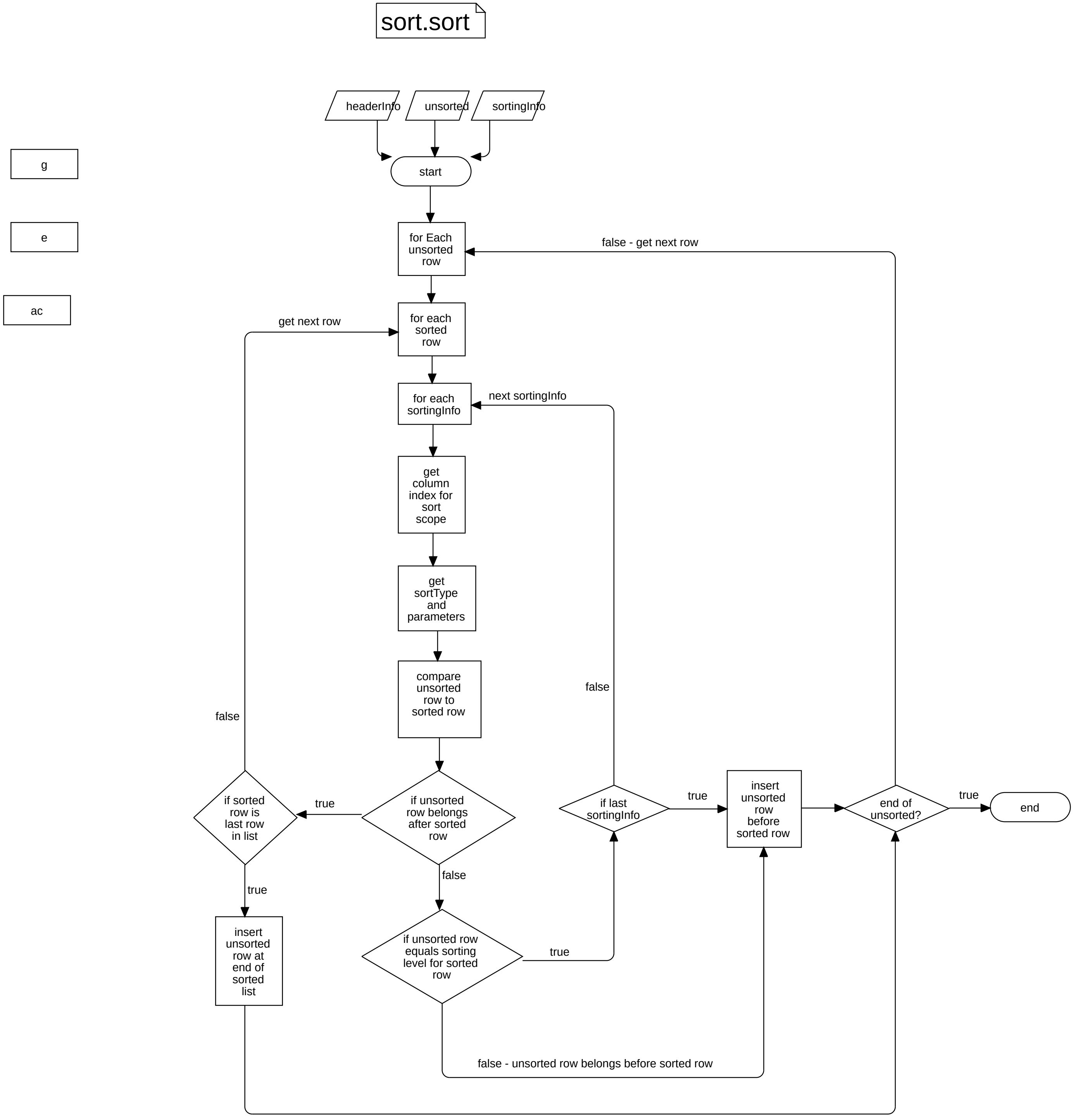
link	Flowchart XMLfileHandler.readFile

XMLfileParser.getColumnHeaderIndex



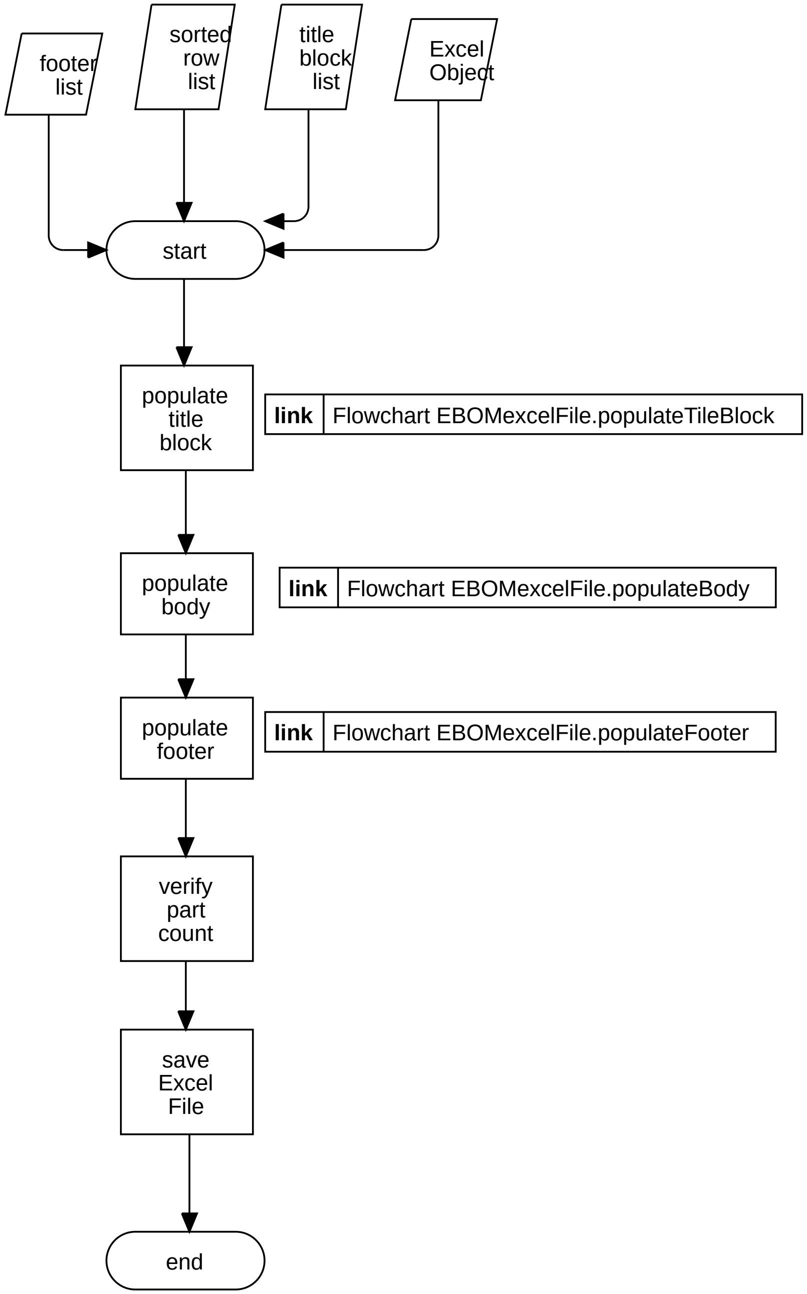
Class Diagram EBOM Creation Tool::sort::sort::Flowchart sort.sort::Flowchart sort.sort

link	Activity mainFrame.start


sort.sort
headerInfo
unsorted
sortingInfo
g
e
ac
start
for Each unsorted row
false - get next row
for each sorted row
get next row
for each sortingInfo
next sortingInfo
get column index for sort scope
get sortType and parameters
compare unsorted row to sorted row
false
false
if sorted row is last row in list
true
if unsorted row belongs after sorted row
if last sortingInfo
true
insert unsorted row before sorted row
end of unsorted?
true
end
true
false
insert unsorted row at end of sorted list
if unsorted row equals sorting level for sorted row
true
false - unsorted row belongs before sorted row

link Activity mainFrame.start

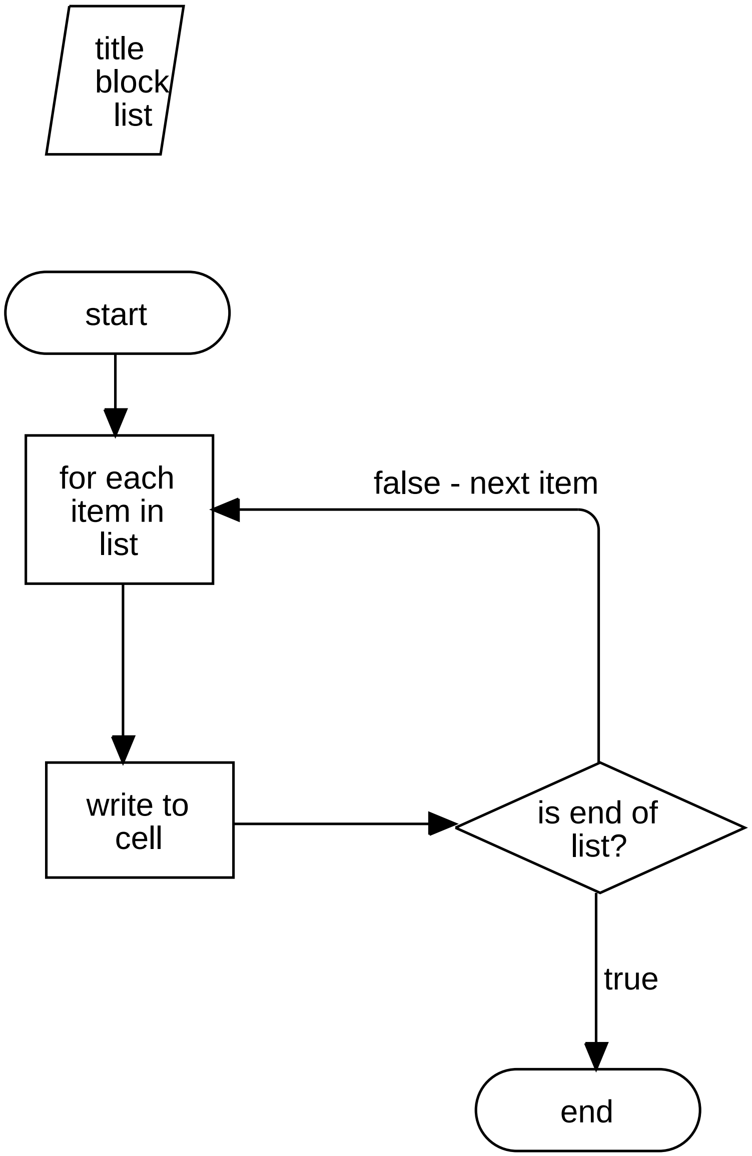
EBOMexcelFile.EBOMexcelFile



Class Diagram EBOM Creation Tool::EBOMexcelFile::populateTitleBlock::Flowchart EBOMexcelFile.populateTileBlock::Flowchart EBOMexcelFile.populateTileBlock

link	Flowchart EBOMexcelFile.EBOMexcelFile

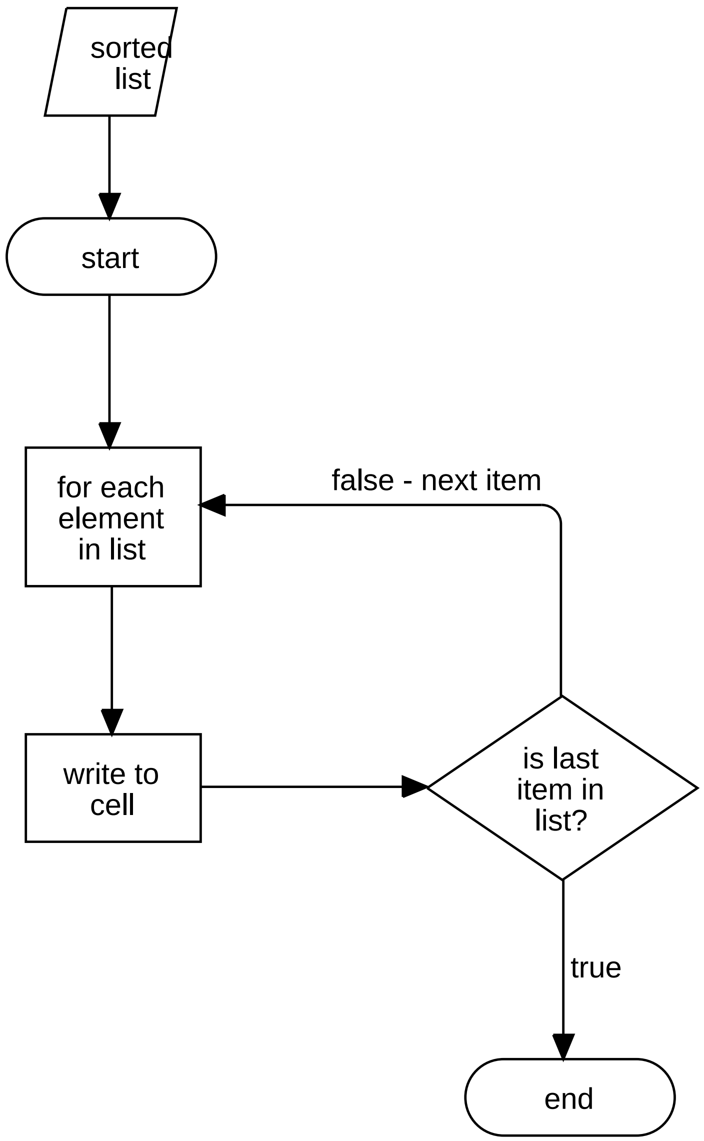
EBOMexcelFile.populateTileBlock



Class Diagram EBOM Creation Tool::EBOMexcelFile::populateBody::Flowchart EBOMexcelFile.populateBody::Flowchart EBOMexcelFile.populateBody

link	Flowchart EBOMexcelFile.EBOMexcelFile

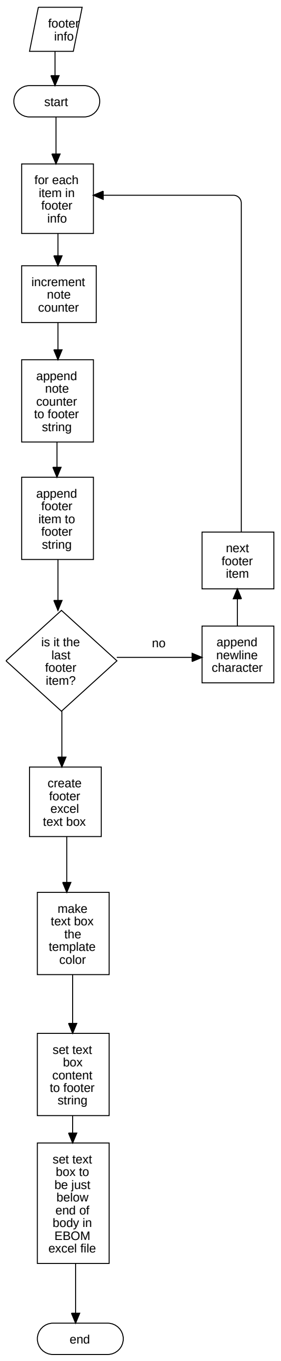
EBOMexcelFile.populateBody



Class Diagram EBOM Creation Tool::EBOMexcelFile::populateFooter::Flowchart EBOMexcelFile.populateFooter::Flowchart EBOMexcelFile.populateFooter

link	Flowchart EBOMexcelFile.EBOMexcelFile

EBOMexcelFile.populateFooter


footer info
start
for each item in footer info
increment note counter
append note counter to footer string
append footer item to footer string
is it the last footer item?
no
append newline character
next footer item
create footer excel text box
make text box the template color
set text box content to footer string
set text box to be just below end of body in EBOM excel file
end

Class Diagram EBOM Creation Tool::EBOMexcelFile::verifyPartRowCount::Flowchart1::FlowchartDiagram1

link

EBOMexcelFile.verifyParyCount