← Lesson_4_Predictions_template   Donate to App Inventor   Screens: Screen1 ▾ + −   Designer   Blocks

Built-in
- Control
- Logic
- Math
- Text
- Lists
- Dictionaries
- Colors
- Variables
- Procedures
- Screen1
  - SpacerHorizonta

Rename   Delete

Media

when lineOfBestFitButton ▾ .Click
do   open another screen   screenName   drawLOBFscreen ▾

when cleanDataButton ▾ .Click
do   open another screen   screenName   cleanDataScreen ▾

when makePredictionsButton ▾ .Click
do   open another screen   screenName   makePredictionsScreen ▾

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← | Lesson_4_Predictions_template | Donate to App Inventor | Screens: | cleanDataScreen ▾ | + | − | ⚙ | 🌐 | ▣ Designer | Blocks

Built-in
- Control
- Logic
- Math
- Text
- Lists
- Dictionaries
- Colors
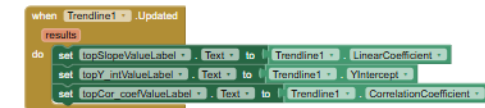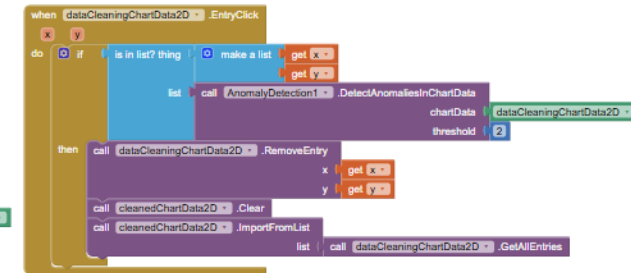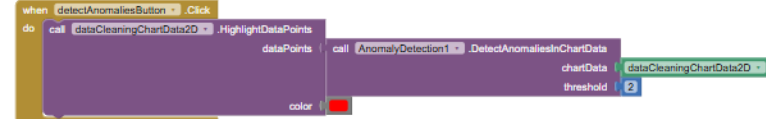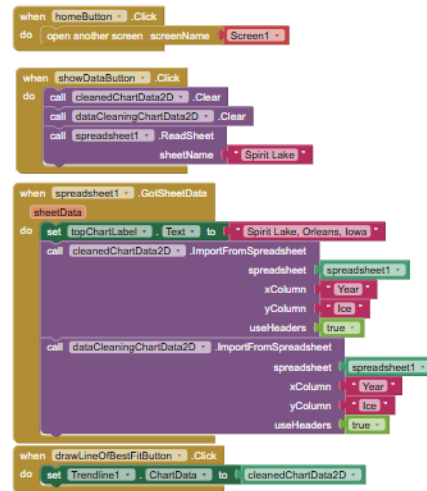- Variables
- Procedures

cleanDataScreen
- HorizontalArrang

Rename   Delete

Media

```
when homeButton .Click
do  open another screen screenName  Screen1

when showDataButton .Click
do  call cleanedChartData2D .Clear
    call dataCleaningChartData2D .Clear
    call spreadsheet1 .ReadSheet
                      sheetName  "Spirit Lake"

when spreadsheet1 .GotSheetData
     sheetData
do  set topChartLabel . Text . to  "Spirit Lake, Orleans, Iowa"
    call cleanedChartData2D .ImportFromSpreadsheet
                           spreadsheet  spreadsheet1
                              xColumn  "Year"
                              yColumn  "Ice"
                           useHeaders  true
    call dataCleaningChartData2D .ImportFromSpreadsheet
                           spreadsheet  spreadsheet1
                              xColumn  "Year"
                              yColumn  "Ice"
                           useHeaders  true

when drawLineOfBestFitButton .Click
do  set Trendline1 . ChartData . to  cleanedChartData2D
```

```
when detectAnomaliesButton .Click
do  call dataCleaningChartData2D .HighlightDataPoints
                            dataPoints  call AnomalyDetection1 .DetectAnomaliesInChartData
                                                                  chartData  dataCleaningChartData2D
                                                                  threshold  2
                                 color  ■

when dataCleaningChartData2D .EntryClick
     x   y
do  if    is in list? thing  make a list  get x
                         list  call AnomalyDetection1 .DetectAnomaliesInChartData
                                                          chartData  dataCleaningChartData2D
                                                          threshold  2
    then  call dataCleaningChartData2D .RemoveEntry
                                    x  get x
                                    y  get y
          call cleanedChartData2D .Clear
          call cleanedChartData2D .ImportFromList
                               list  call dataCleaningChartData2D .GetAllEntries

when Trendline1 .Updated
     results
do  set topSlopeValueLabel . Text . to  Trendline1 . LinearCoefficient .
    set topY_intValueLabel . Text . to  Trendline1 . YIntercept .
    set topCor_coefValueLabel . Text . to  Trendline1 . CorrelationCoefficient .
```

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Lesson_4_Predictions_template   Donate to App Inventor

Screens: drawLOBFscreen ▾   +   −   ⚙   🌐   Designer   Blocks

Built-in
- Control
- Logic
- Math
- Text
- Lists
- Dictionaries
- Colors
- Variables
- Procedures

drawLOBFscreen
- HorizontalArrang

Rename   Delete

Media

```
when homeButton .Click
do  open another screen screenName  Screen1

when showDataButton .Click
do  call topChartData2D .Clear
    call bottomChartData2D .Clear
    call spreadsheet1 .ReadSheet
                      sheetName  " Spirit Lake "

when spreadsheet1 .GotSheetData
    sheetData
do  set topChartLabel . Text to  " Spirit Lake, Orleans, Iowa "
    call topChartData2D .ImportFromSpreadsheet
                spreadsheet  spreadsheet1
                   xColumn  " Year "
                   yColumn  " Ice "
                useHeaders  true
    call bottomChartData2D .ImportFromSpreadsheet
                spreadsheet  spreadsheet1
                   xColumn  " Year "
                   yColumn  " Temp "
                useHeaders  true

when drawLineOfBestFitButton .Click
do  set topTrendline . ChartData to  topChartData2D
    set bottomTrendline . ChartData to  bottomChartData2D
    set topSlopeValueLabel . Text to  topTrendline . LinearCoefficient
    set topY_intValueLabel . Text to  topTrendline . YIntercept
    set topCor_coefValueLabel . Text to  topTrendline . CorrelationCoefficient
    set bottomSlopeValueLabel . Text to  bottomTrendline . LinearCoefficient
    set bottomY_intValueLabel . Text to  bottomTrendline . YIntercept
    set bottomCor_coefValueLabel . Text to  bottomTrendline . CorrelationCoefficient
```

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← Lesson_4_Predictions_template   Donate to App Inventor   Screens: makePredictionsScreen ▾   +   −   ⚙   🌐   Designer   Blocks

Built-in
- Control
- Logic
- Math
- Text
- Lists
- Dictionaries
- Colors
- Variables
- Procedures

makePredictionsSc...
- ▥ buttonHorizontal...

Rename   Delete

Media

```
when homeButton .Click
do  open another screen screenName  "Screen1"

when spreadsheet1 .GotSheetData
  sheetData
do  set topChartLabel . Text  to  "Spirit Lake, Orleans, Iowa"
    call cleanedChartData2D .ImportFromSpreadsheet
              spreadsheet  spreadsheet1
              xColumn  "Year"
              yColumn  "Ice"
              useHeaders  true
    call dataCleaningChartData2D .ImportFromSpreadsheet
              spreadsheet  spreadsheet1
              xColumn  "Year"
              yColumn  "Ice"
              useHeaders  true

when detectAnomaliesButton .Click
do  call dataCleaningChartData2D .HighlightDataPoints
              dataPoints  call AnomalyDetection1 .DetectAnomaliesInChartData
                                chartData  dataCleaningChartData2D
                                threshold  2
              color  █

when dataCleaningChartData2D .EntryClick
  x  y
do  call dataCleaningChartData2D .RemoveEntry
              x  get x
              y  get y
    call cleanedChartData2D .Clear
    ChartData2D .ImportFromList
              list  call dataCleaningChartData2D .GetAllEntries
```

```
when drawLineOfBestFitButton .Click
do  set Trendline1 . ChartData  to  cleanedChartData2D

when ChatBot1 .GotResponse
  responseText
do  set AiResponseTextBox . Text  to  get responseText

when showDataButton .Click
do  call cleanedChartData2D .Clear
    call dataCleaningChartData2D .Clear
    call spreadsheet1 .ReadSheet
              sheetName  "Spirit Lake"
    set dataCleaningChart . Visible  to  true
    set dataCleaningHorizontalArrangement . Visible  to  true
    set AiAnalysisButton . Visible  to  false

when Trendline1 .Updated
  results
do  set SlopeValueLabel . Text  to  Trendline1 . LinearCoefficient
    set Y_IntValueLabel . Text  to  round  Trendline1 . YIntercept
    set Cor_coefValueLabel . Text  to  Trendline1 . CorrelationCoefficient
    set X_IntValueLabel . Text  to  round  Trendline1 . XIntercepts
    call cleanedDataChart .ExtendDomainToInclude
              x  Trendline1 . XIntercepts
```

```
when AiAnalysisButton .Click
do  set dataCleaningChart . Visible  to  false
    set dataCleaningHorizontalArrangement . Visible  to  false
    set AiAnalysisButton . Visible  to  true
    call ChatBot1 .Converse
              question  ⊕ join  "Given the following data for the annual"
                              "number of days a freshwater lake was frozen,"
                              call cleanedChartData2D .GetAllEntries
                              "The correlation coefficient for the line of best..."
                              Trendline1 . CorrelationCoefficient
                              "The correlation coefficient for the line of best..."
                              Trendline1 . LinearCoefficient
                              "The y-intercept for the line of best fit is"
                              Trendline1 . YIntercept
                              "First, predict the year there will likely be no"
                              "ice cover on the lake. Show your work and"
                              "all steps. Next, what are the implications of"
                              "this data for climate change?"
                              "Limit your response to 120 words."
```

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Android App for Lesson_4_Predictions_template

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Dismiss