

STEP 1:

MIT APP INVENTOR

Lesson_1_Visualizing_Climate_Data_template

singleCaseScreen

singleCaseScreen

Appearance

AboutScreen

Climate Data

AlignHorizontal

Center : 3

AlignVertical

Top : 1

BackgroundColor

#FFEADEF

BackgroundImage

None

BigDefaultText

CloseScreenAnimation

Default

HighContrast

OpenScreenAnimation

Default

WebView

Layout

Media

Drawing and Animation

Maps

Charts

Data Science

Sensors

Social

Storage

Connectivity

LEGO® MINDSTORMS®

Experimental

Extension

Home

Show Data

Ice Duration

Days of Ice Cover

Temperature

Temperature (C)

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Lesson_1_Visualizing_Climate_Data_template

Screens: singleCaseScreen

Designer

Built-in

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

singleCaseScreen

HorizontalArrang

Media

when homeButton Click

do open another screen screenName Screen1

when showDataButton Click

do

- call spreadsheet1 ReadSheet
- sheetName Spirit Lake
- call topChartData2D Clear
- call bottomChartData2D1 Clear

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 bottomChartData2D1 ImportFromSpreadsheet
- spreadsheet spreadsheet1
- xColumn Year
- yColumn Temp
- useHeaders true

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Screens: multiCaseScreen

Designer

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- Lists
- Dictionaries
- Colors
- Variables
- Procedures

multiCaseScreen

HorizontalArrang

Media

when homeButton Click

do open another screen screenName Screen1

when spreadsheet1 GotSheetData

sheetData

do

- set topChartLabel Text to Spirit Lake, Orleans, Iowa
- call topChartData2D ImportFromSpreadsheet
- spreadsheet spreadsheet1
- xColumn Year
- yColumn Ice
- useHeaders true

when showDataButton Click

do

- call spreadsheet1 ReadSheet
- sheetName Spirit Lake
- call spreadsheet2 ReadSheet
- sheetName Otsego Lake
- call topChartData2D Clear
- call bottomChartData2D1 Clear

when spreadsheet2 GotSheetData

sheetData

do

- set bottomChartLabel2 Text to Otsego Lake, Cooperstown, NY
- call bottomChartData2D1 ImportFromSpreadsheet
- spreadsheet spreadsheet2
- xColumn Year
- yColumn Ice
- useHeaders true

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STEP 2 Y 3:

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Lessons_2_and_3_Modeling_and_Cleaning_Climate_Data_template_copy Donate to App Inventor Screens: drawLOBScreen

WebView Layout Media Drawing and Animation Maps Charts Data Science Sensors Social Storage Connectivity LEGO® MINDSTORMS® Experimental

Phone (320 x 650) Android 5+ (Material)

Climate Data: Create a Model

Home Show Data Draw Line of Best Fit

Days of Ice Cover

Days of Ice Cover

M = B = R =

drawLOBScreen

HorizontalArrang

homeButton

SpacerVertica

showDataButt

SpacerVertica

drawLineOfBes

LineHorizontalArr

topChartLabel

topChart

topChartData

topTrendline

Rename Delete

Media

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Lessons_2_and_3_Modeling_and_Cleaning_Climate_Data_template_copy Donate to App Inventor Screens: cleanDataScreen

WebView Layout Media Drawing and Animation Maps Charts Data Science Sensors Social Storage Connectivity LEGO® MINDSTORMS® Experimental

Phone (320 x 650) Android 5+ (Material)

Climate Data: Cleaning the Data

Home Show Data

Detect Anomalies Draw Line of Best Fit

Days of Ice Cover

Days of Ice Cover

M = B = R =

cleanDataScreen

buttonHorizontal

homeButton

SpacerVertica

showDataButt

buttonHorizontal

detectAnomal

SpacerVertica

drawLineOfBes

blackLineHorizon

topChartLabel

dataCleaningHor

Rename Delete

Media

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Lessons_2_and_3_Modeling_and_Cleaning_Climate_Data_template_copy

DrawLOBFScreen

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 spreadsheet1 GotSheetData

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 ShowDataButton Click

do

call topChartData2D Clear

call bottomChartData2D Clear

call spreadsheet1 ReadSheet

sheetName Spirit Lake

when drawLineOfBestFitButton Click

do

set topTrendline1 ChartData to topChartData2D

set bottomTrendline2 ChartData to bottomChartData2D

set topSlopeValueLabel Text to topTrendline1 LinearCoefficient

set topY_intValueLabel Text to topTrendline1 Yintercept

set topCor_coefValueLabel Text to topTrendline1 CorrelationCoefficient

set bottomSlopeValueLabel Text to bottomTrendline2 LinearCoefficient

set bottomY_intValueLabel Text to bottomTrendline2 Yintercept

set bottomCor_coefValueLabel Text to bottomTrendline2 CorrelationCoefficient

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Lessons_2_and_3_Modeling_and_Cleaning_Climate_Data_template_copy

cleanDataScreen

Built-in

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

cleanDataScreen

buttonHorizontal

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

do

set topChartLabel Text to Spirit Lake, Orleans, Iowa

call dataCleaningChartData2D ImportFromSpreadsheet

spreadsheet spreadsheet1

xColumn Year

yColumn Ice

useHeaders true

call cleanedChartData2D ImportFromSpreadsheet

spreadsheet spreadsheet1

xColumn Year

yColumn Ice

useHeaders true

when dataCleaningChartData2D EntryClick

do

call dataCleaningChartData2D RemoveEntry

x get X

y get Y

call cleanedChartData2D Clear

call cleanedChartData2D ImportFromList

list call dataCleaningChartData2D GetAllEntries

when Trendline1 Updated

do

set SlopeValueLabel Text to Trendline1 LinearCoefficient

set Y_intValueLabel Text to Trendline1 Yintercept

set Y_intValueLabel Text to Trendline1 CorrelationCoefficient

when detectAnomaliesButton Click

do

call dataCleaningChartData2D HighlightDataPoints

dataPoints call AnomalyDetection1 DetectAnomaliesInChartData

chartData dataCleaningChartData2D

color

threshold

when drawLineOfBestFitButton Click

do

Trendline1 ChartData to cleanedChartData2D

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STEP 4:

