



FAM
Faculdade de Americana

Minicurso MIT App Inventor Games

Professor: Daives Bergamasco

SPACE INVADERS

MIT App Inventor tradutor - Pesquisa Google

ai2.appinventor.mit.edu/?locale=en#5271214766161920

MIT App Inventor 2 Beta

Projects Connect Build Help My Projects Gallery Guide Report an Issue English DavesBergamasco@gmail.com

Start new project Delete Project Publish to Gallery

1

2

3

Create new App Inventor project

Project name: SpaceInvaders

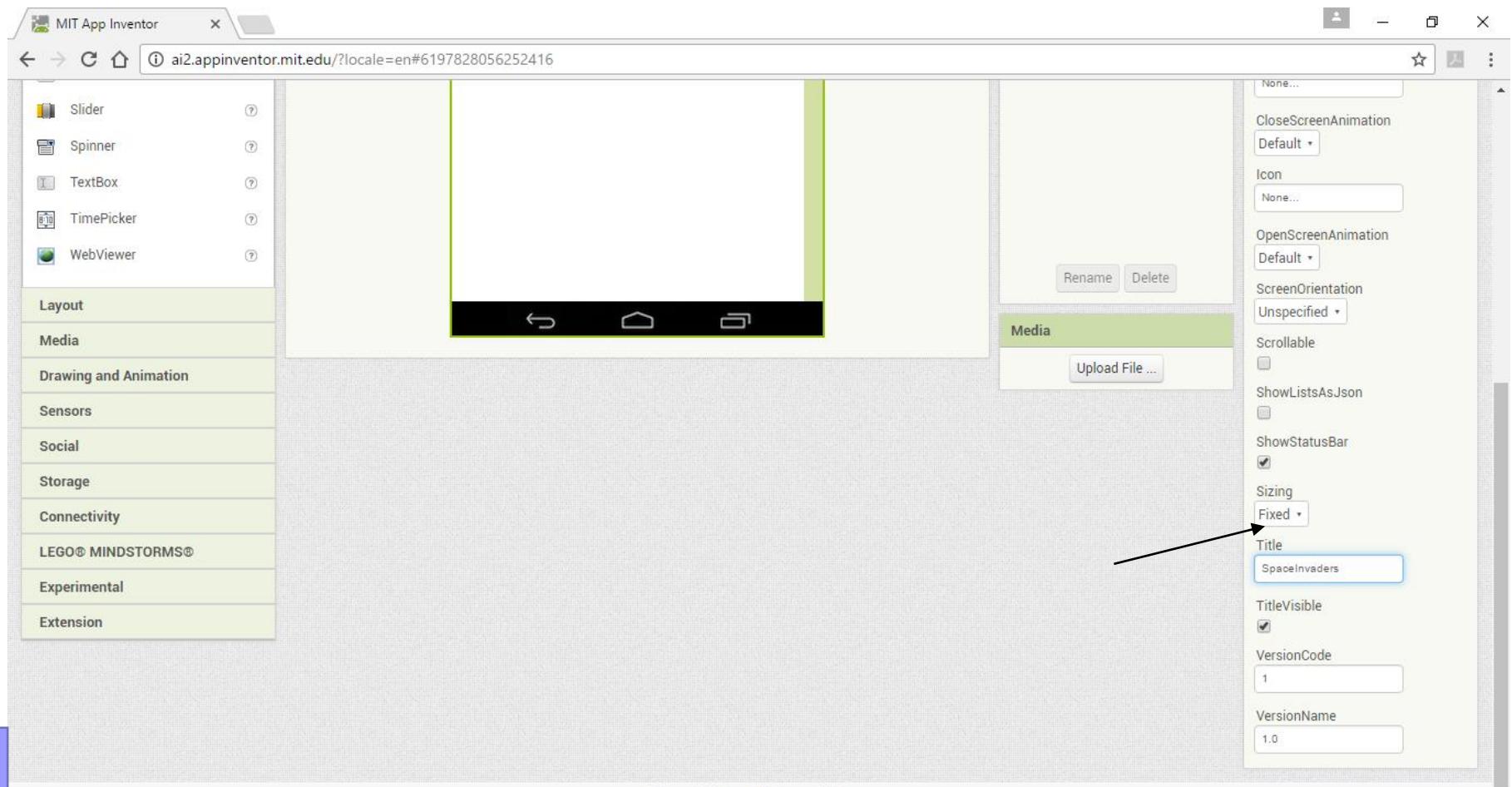
Date Created Date Modified Published

Name	Date Created	Date Modified	Published
Fam01	Aug 8, 2016, 6:16:54 PM	Mar 1, 2017, 6:41:22 PM	No
VoltarparaCasa	Jul 14, 2016, 4:30:12 PM	Dec 16, 2016, 8:55:55 PM	No
Cadastrofusion	Nov 23, 2016, 7:50:09 PM	Dec 16, 2016, 8:13:48 PM	No
AgendaContatos	Nov 23, 2016, 8:04:50 PM	Nov 23, 2016, 8:04:50 PM	No
FusionTabletestelD	No	Nov 23, 2016, 8:02:07 PM	No
FusionTable	No	Nov 20, 2016, 11:26:40 AM	No
Cad_clientes	No	Nov 20, 2016, 11:24:15 AM	No
Gatinho	No	Nov 20, 2016, 10:38:31 AM	No
Calculadoraaula3	No	Nov 15, 2016, 4:52:23 PM	No
Equacaoaula4	No	Nov 15, 2016, 4:50:09 PM	No
Aula05PaintPro	No	Nov 15, 2016, 4:49:03 PM	No
Aula6BlocoAnotacoes	No	Nov 15, 2016, 4:47:51 PM	No
Aula07AplicacaoSMS	Nov 14, 2016, 9:21:26 PM	Nov 15, 2016, 4:47:11 PM	No
Aula08aplicacaologininitial	Nov 14, 2016, 9:33:09 PM	Nov 15, 2016, 4:46:15 PM	No
Aula09Navegadorbasico	Nov 15, 2016, 11:14:40 AM	Nov 15, 2016, 4:45:13 PM	No
Aula10Caixadialogosealerta	Nov 15, 2016, 11:33:24 AM	Nov 15, 2016, 4:44:16 PM	No
Aula11Agendadecompromisso	Nov 15, 2016, 11:41:24 AM	Nov 15, 2016, 4:43:18 PM	No
Aula12Cadastrodeclientes	Nov 15, 2016, 12:08:42 PM	Nov 15, 2016, 4:42:49 PM	No
Aula13AplicacaoGPS	Nov 15, 2016, 4:20:12 PM	Nov 15, 2016, 4:41:11 PM	No
Fusiontable2	Nov 6, 2016, 10:28:04 AM	Nov 9, 2016, 9:30:04 PM	No
MoleMash	Oct 14, 2016, 4:50:05 PM	Nov 4, 2016, 4:08:10 PM	No
BDinternofam	Sep 4, 2016, 9:11:23 AM	Nov 4, 2016, 4:03:03 PM	No
PizzaParty_MIT_2016	Oct 23, 2016, 10:30:09 AM	Nov 4, 2016, 3:24:10 PM	No

Search Windows 11:17 02/03/2017 POR

MIT App Inventor ✖

ai2.appinventor.mit.edu/?locale=en#6197828056252416



The screenshot shows the MIT App Inventor interface with the following details:

- Component Properties Panel:** On the right side, the "Media" component's properties are displayed. The "Sizing" property is set to "Fixed", which is highlighted with a red arrow.
- Toolbox:** On the left, the toolbox categories are listed: Slider, Spinner, TextBox, TimePicker, WebViewer, Layout, Media, Drawing and Animation, Sensors, Social, Storage, Connectivity, LEGO® MINDSTORMS®, Experimental, and Extension.
- Preview Area:** In the center, there is a preview area showing a black bar with three icons: a left arrow, a phone-like icon, and a square icon.
- Toolbar:** At the top, there is a standard browser-style toolbar with back, forward, home, and search buttons.

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Palette

User Interface

Layout

Media

Drawing and Animation

Ball

Canvas

ImageSprite

Sensors

Social

Storage

Connectivity

LEGO® MINDSTORMS®

Experimental

Extension

Viewer

Display hidden components in Viewer

Check to see Preview on Tablet size.

SpacInvaders

Screen1

Components

Screen1

Canvas1

Properties

Canvas1

BackgroundColor

White

BackgroundImage

None...

FontSize

14.0

Height

Automatic...

Width

Automatic...

LineWidth

2.0

PaintColor

Black

TextAlignment

center : 1

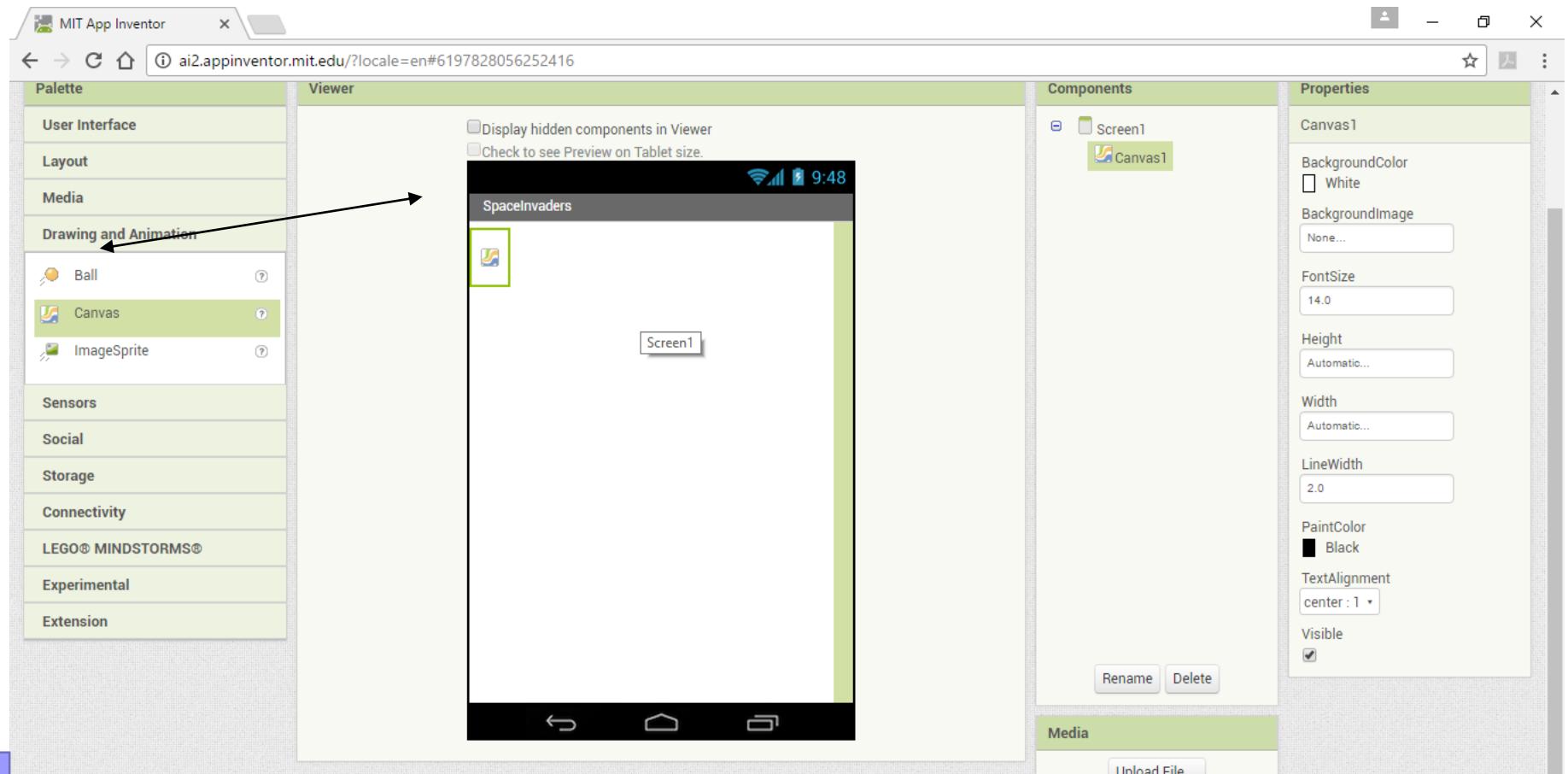
Visible

Rename

Delete

Media

Upload File ...

[Privacy Policy and Terms of Use](#)

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Palette

- User Interface
- Layout
- Media
- Drawing and Animation
 - Ball
 - Canvas
 - ImageSprite
- Sensors
- Social
- Storage
- Connectivity
- LEGO® MINDSTORMS®
- Experimental
- Extension

Viewer

Display hidden components in Viewer
Check to see Preview on Tablet size.

Components

- Screen1
- Canvas1

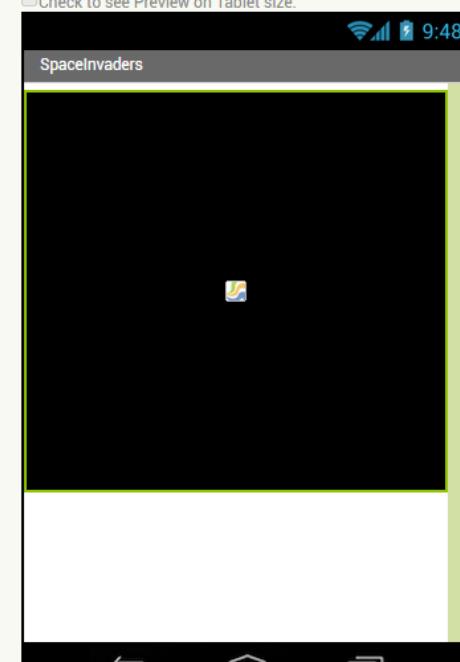
Properties

- Canvas1
- BackgroundColor Black
- BackgroundImage None...
- FontSize 14.0
- Height 300 pixels...
- Width Fill parent...
- LineWidth 2.0
- PaintColor Black
- TextAlignment center : 1
- Visible

Rename Delete

Media

Upload File ...



MIT App Inventor User Guide

ai2.appinventor.mit.edu/?locale=en#6197828056252416

SpacelInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

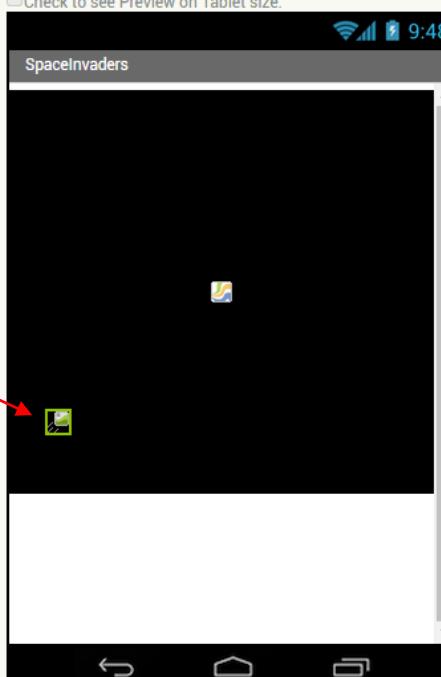
Palette

- User Interface
- Layout
- Media
- Drawing and Animation
 - Ball
 - Canvas
 - ImageSprite
- Sensors
- Social
- Storage
- Connectivity
- LEGO® MINDSTORMS®
- Experimental
- Extension

Viewer

Display hidden components in Viewer
Check to see Preview on Tablet size.

SpaceInvaders



Components

- Screen1
 - Canvas1
 - ImageSprite1

Properties

ImageSprite1	
Enabled	<input checked="" type="checkbox"/>
Heading	0
Height	Automatic...
Width	Automatic...
Interval	100
Picture	None...
Rotates	<input checked="" type="checkbox"/>
Speed	0.0
Visible	<input checked="" type="checkbox"/>
X	25
Y	25

Rename Delete

Media

Upload File

Search Windows

File Explorer Internet Explorer Microsoft Edge Windows File Explorer Microsoft Word Microsoft Excel Microsoft PowerPoint Microsoft Edge

14:11 02/03/2017 POR

MIT App Inventor

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SpacelInvaders

Screen1 Designer Blocks

Palette

- User Interface
- Layout
- Media
- Drawing and Animation
- Ball
- Canvas
- ImageSprite
- Sensors
- Social
- Storage
- Connectivity
- LEGO® MINDSTORMS®
- Experimental
- Extension

Viewer

Display hidden components in Viewer
Check to see Preview on Tablet size.

SpacelInvaders

9:48

Rename Component

Old name: ImageSprite1
New name: RocketSprite

Cancel OK

Components

- Screen1
- Canvas1
- ImageSprite1

Properties

ImageSprite1

Enabled

Heading 0

Height Automatic...

Width Automatic...

Interval 100

Picture None...

Rotates

Speed 0.0

Visible

X 25

Y

Media

Upload File

1 Rename

2

3

Search Windows

14:13
02/03/2017

MIT App Inventor

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SpacelInvaders

Screen1 | Add Screen ... | Remove Screen

Designer | Blocks

Palette

- User Interface
- Layout
- Media
- Drawing and Animation
- Ball
- Canvas
- ImageSprite**
- Sensors
- Social
- Storage
- Connectivity
- LEGO® MINDSTORMS®
- Experimental
- Extension

Viewer

Display hidden components in Viewer
Check to see Preview on Tablet size.

9:48

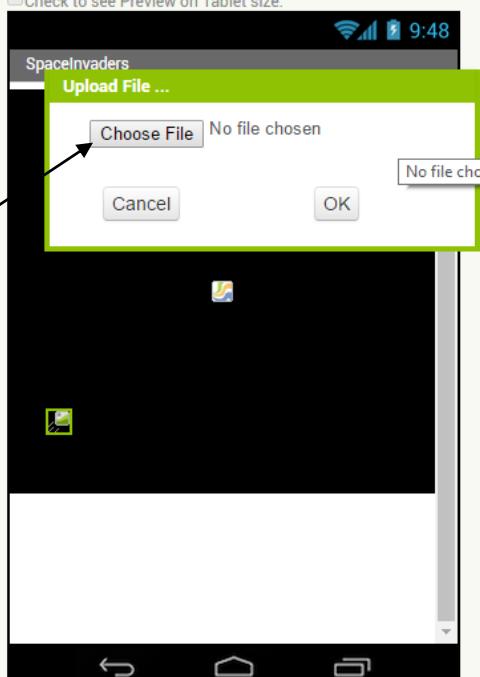
SpacelInvaders

Upload File ...

Choose File No file chosen

Cancel OK

No file chosen



Components

- Screen1
- Canvas1
- RocketSprite

Properties

RocketSprite

Enabled

Heading 0

Height Automatic...

Width Automatic...

Interval 100

Picture

None

Media

Upload File ...

Cancel OK

Search Windows

14:15 02/03/2017

3

1

2

MIT App Inventor User Guide

SpacelInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Palette

- User Interface
- Layout
- Media
- Drawing and Animation
- Ball
- Canvas
- ImageSprite**
- Sensors
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- LEGO® MINDSTORMS®
- Experimental
- Extension

Viewer

Display hidden components in Viewer
Check to see Preview on Tablet size.

9:48

SpacelInvaders

Upload File ...

Choose File rocket.png

Cancel OK

Components

- Screen1
- Canvas1
- RocketSprite

Properties

RocketSprite

Enabled

Heading 0

Height Automatic...

Width Automatic...

Interval 100

Picture None

Upload File ...

Cancel OK

Media

Upload File

Search Windows

14:17
02/03/2017

MIT App Inventor

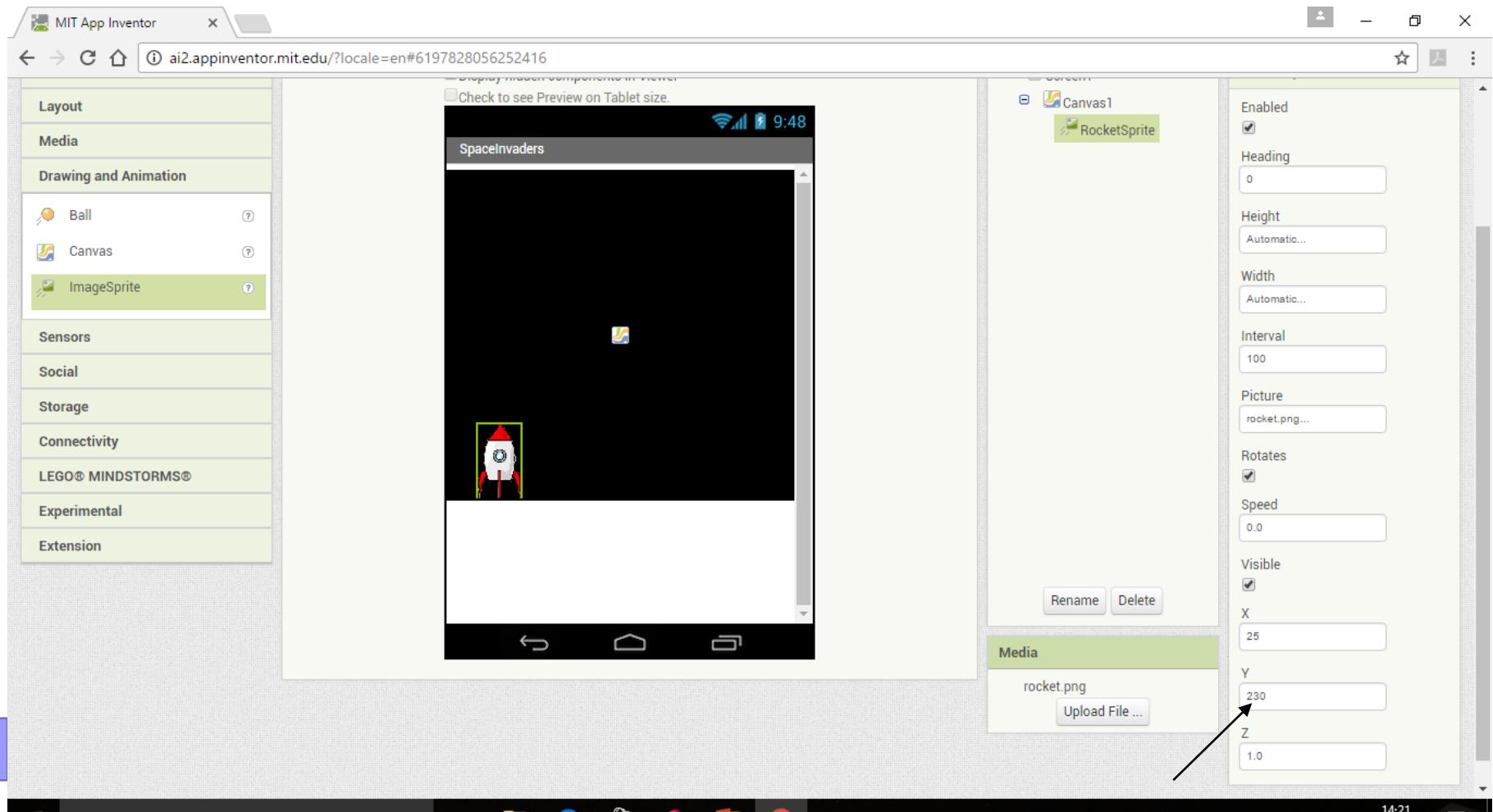
ai2.appinventor.mit.edu/?locale=en#6197828056252416

Layout
Media
Drawing and Animation
Ball
Canvas
ImageSprite
Sensors
Social
Storage
Connectivity
LEGO® MINDSTORMS®
Experimental
Extension

SpaceInvaders

Check to see Preview on Tablet size.

9:48



Enabled

Heading
0
Height
Automatic...
Width
Automatic...
Interval
100
Picture
rocket.png...
Rotates

Speed
0.0
Visible

X
25
Y
230
Upload File ...
Z
1.0

MIT App Inventor User Guide

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Check to see Preview on Tablet size.

SpacelInvaders

Canvas1

RocketSprite

ImageSprite1

Enabled

Heading 0

Height Automatic...

Width Automatic...

Interval 100

Picture None...

Rotates

Speed 0.0

Visible

X 27

Y 17

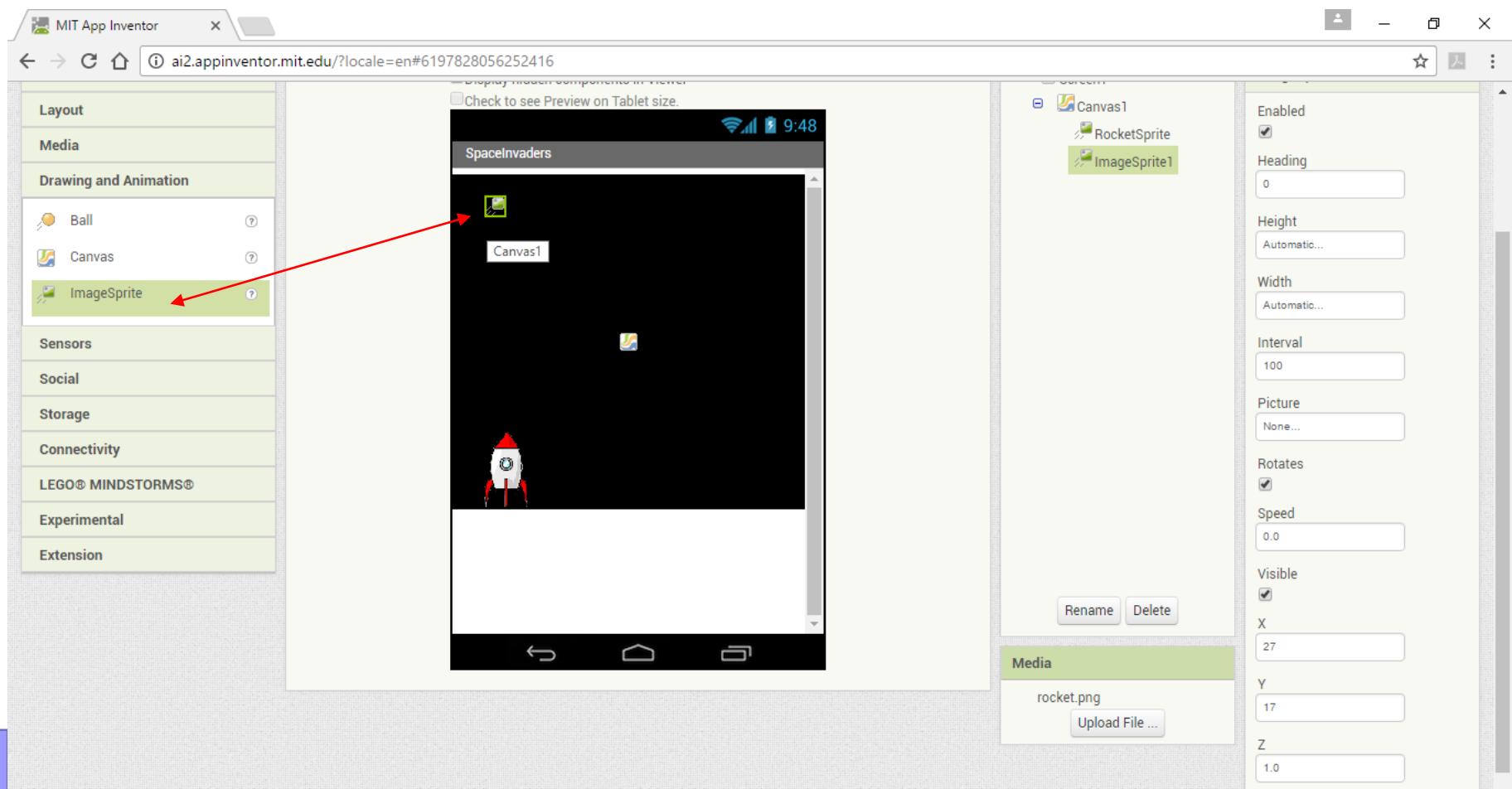
Z 1.0

Media

rocket.png

Upload File ...

Layout
Media
Drawing and Animation
Ball
Canvas
ImageSprite 
Sensors
Social
Storage
Connectivity
LEGO® MINDSTORMS®
Experimental
Extension



MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Check to see Preview on Tablet size.

Spacelnvaders

9:48

Rename Component

Old name: ImageSprite1

New name: SaucerSprite

Cancel OK

Canvas1

RocketSprite

ImageSprite1

Enabled

Heading 0

Height Automatic...

Width Automatic...

Interval 100

Picture None...

Rotates

Speed 0.0

Visible

X 27

Y 17

Z 1.0

Media

rocket.png

Upload File ...

Rename Delete

Layout

Media

Drawing and Animation

Ball

Canvas

ImageSprite

Sensors

Social

Storage

Connectivity

LEGO® MINDSTORMS®

Experimental

Extension

MIT App Inventor X

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Check to see Preview on Tablet size.

SpaceInvaders

Upload File ...

Choose File saucer.png

Cancel OK

Canvas1

RocketSprite

SaucerSprite

Enabled

Heading 0

Height Automatic...

Width Automatic...

Interval 100

Picture None rocket.png

Media

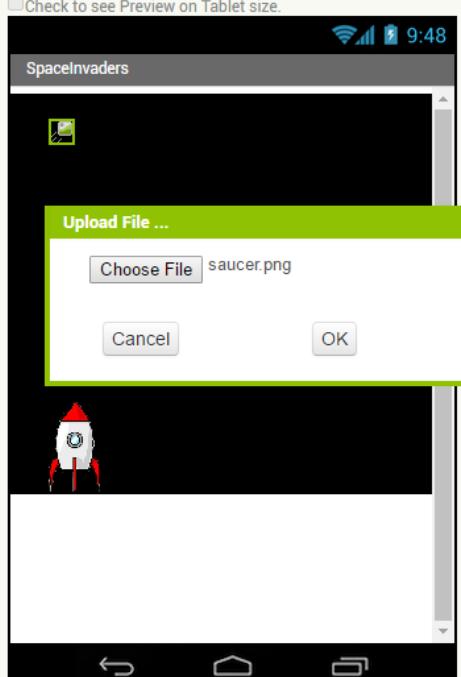
rocket.png

Upload File ...

Cancel OK

Y 17

Z 1.0



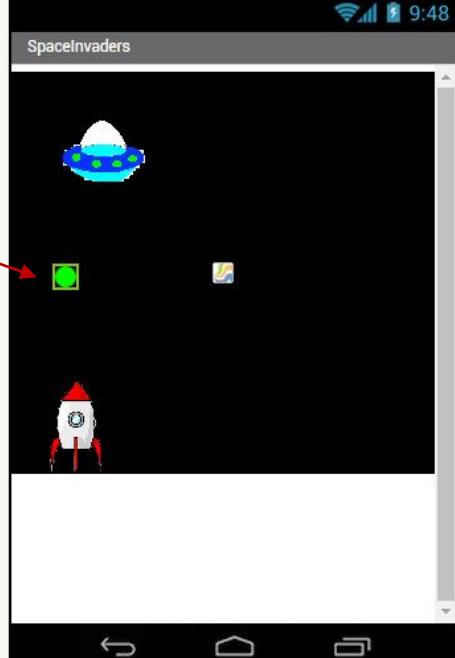
The screenshot shows the MIT App Inventor web-based development environment. On the left, a sidebar lists categories like Layout, Media, Drawing and Animation, Sensors, Social, Storage, Connectivity, LEGO® MINDSTORMS®, Experimental, and Extension. In the center, a preview window displays a mobile application titled "SpaceInvaders". A modal dialog box is open, prompting the user to "Upload File ...". Inside the dialog, there is a "Choose File" button followed by the path "saucer.png". Below the dialog are two buttons: "Cancel" and "OK". The main preview area shows a black screen with a small white rocket ship at the bottom. To the right of the preview, the "Media" component for "SaucerSprite" is configured. It has several properties set: "Enabled" is checked, "Heading" is 0, "Height" is set to "Automatic...", "Width" is set to "Automatic...", "Interval" is 100, and the "Picture" field is set to "None" with the value "rocket.png". At the bottom of the media component, there are "Upload File ...", "Cancel", and "OK" buttons. The preview window also includes standard Android navigation icons (back, home, recent apps) at the bottom. The status bar at the very bottom of the image shows the Windows taskbar with the date and time (14:24, 02/03/2017).

MIT App Inventor User Interface

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Display hidden components in viewer
Check to see Preview on Tablet size.

SpacInvaders



Screen

- Canvas1
 - RocketSprite
 - SaucerSprite
 - Ball1

Enabled:

Heading: 0

Interval: 100

PaintColor: Green

Radius: 8

Speed: 0.0

Visible:

X: 29

Y: 143

Z: 1.0

[Rename](#) [Delete](#)

Media

- rocket.png
- saucer.png

[Upload File ...](#)

[Privacy Policy and Terms of Use](#)

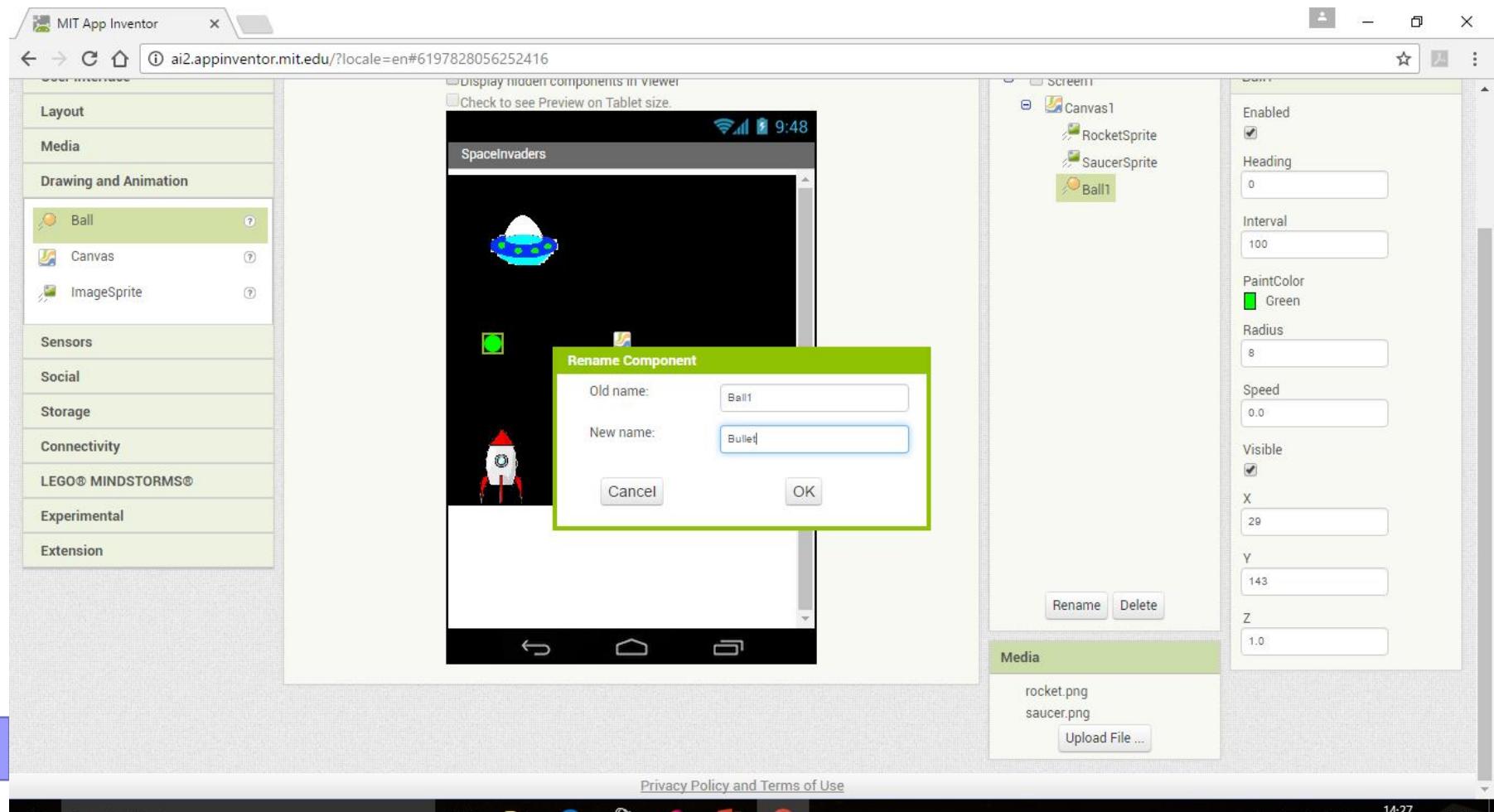
MIT App Inventor User interface

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Display hidden components in viewer
Check to see Preview on Tablet size.

SpacelInvaders

9:48



Rename Component

Old name: Ball1

New name: Bullet

Cancel OK

Screen

Canvas1

RocketSprite

SaucerSprite

Ball1

Enabled

Heading 0

Interval 100

PaintColor Green

Radius 8

Speed 0.0

Visible

X 29

Y 143

Z 1.0

Rename Delete

Media

rocket.png

saucer.png

Upload File ...

Privacy Policy and Terms of Use

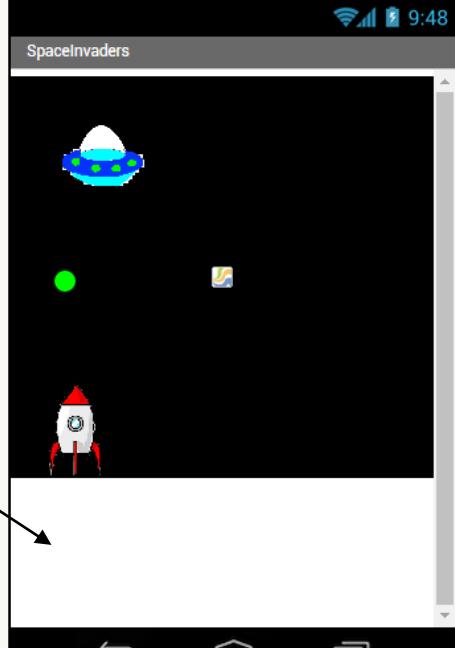
MIT App Inventor - X

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Check to see Preview on Tablet size.

Spacelvaders

9:48



Non-visible components

Clock1

Layout

Media

Drawing and Animation

Sensors

- AccelerometerSensor
- BarcodeScanner
- Clock**
- GyroscopeSensor
- LocationSensor
- NearField
- OrientationSensor
- Pedometer
- ProximitySensor

Social

Storage

Connectivity

LEGO® MINDSTORMS®

Experimental

Extension

Canvas1

RocketSprite

SaucerSprite

Bullet

Clock1

TimerAlwaysFires

TimerEnabled

TimerInterval

3000

Rename Delete

Media

rocket.png

saucer.png

Upload File ...

Search Windows

14:34
02/03/2017

Windows Taskbar icons: File Explorer, Edge, File, Power, Google Chrome, Microsoft Word, Microsoft PowerPoint.

MIT App Inventor User Interface

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Display hidden components in viewer Check to see Preview on Tablet size.

Layout

- HorizontalArrangement
- HorizontalScrollView
- TableArrangement
- VerticalArrangement
- VerticalScrollView

Media

Drawing and Animation

Sensors

Social

Storage

Connectivity

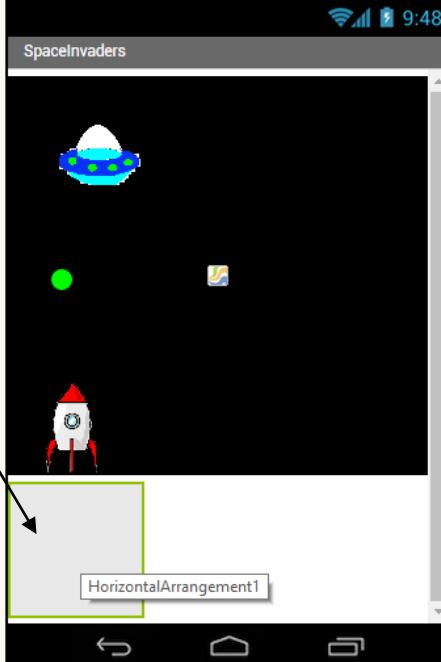
LEGO® MINDSTORMS®

Experimental

Extension

SpacInvaders

9:48



Screen

- Canvas1
- RocketSprite
- SaucerSprite
- Bullet
- HorizontalArrangement1
- Clock1

HorizontalArrangement1

AlignHorizontal: Left : 1

AlignVertical: Top : 1

BackgroundColor: Default

Height: Automatic...

Width: Automatic...

Image: None...

Visible:

Rename Delete

Media

- rocket.png
- saucer.png

Upload File ...

Privacy Policy and Terms of Use

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Display hidden components in viewer
Check to see Preview on Tablet size

Spacelvaders



Non-visible components: Clock1

Screen

- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - Clock1

Label

BackgroundColor: None
FontBold: False
FontItalic: False
FontSize: 14.0
FontTypeface: default
HTMLFormat: False
HasMargins: True
Height: Automatic...
Width: Automatic...
Text: Text for Label1
TextAlignment: left : 0
TextColor: Black
Visible: True

Media

- rocket.png
saucer.png

Upload File ...

Search Windows

14:36 02/03/2017

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Display hidden components in viewer
Check to see Preview on Tablet size.

Spacelvaders

9:48



Screen

- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - Clock1

BackgroundColor: None
FontBold:
FontItalic:
FontSize: 14.0
FontTypeface: default
HTMLFormat:
HasMargins:
Height: Automatic...
Width: Automatic...
Text: Score
TextAlignment: left : 0
TextColor: Black
Visible:

Non-visible components

- Clock1

Media

- rocket.png
- saucer.png

Upload File ...

Search Windows

14:37 02/03/2017

MIT App Inventor

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Display hidden components in viewer
Check to see Preview on Tablet size.

SpacelInvaders

Score Text for Label2

Label2

Non-visible components
Clock1

Screen

- Canvas1
- RocketSprite
- SaucerSprite
- Bullet
- HorizontalArrangement1
- Label1
- Label2
- Clock1

BackgroundColor: None
FontBold: False
FontItalic: False
FontSize: 14.0
FontTypeface: default
HTMLFormat: False
HasMargins: True
Height: Automatic...
Width: Automatic...
Text: Text for Label2
TextAlignment: left : 0
TextColor: Black
Visible: True

Media

- rocket.png
- saucer.png

Upload File ...

Search Windows

14:39
02/03/2017

MIT App Inventor User interface

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Display hidden components in viewer Check to see Preview on Tablet size.

Spacelvaders

Rename Component

Old name: Label2
New name: ScoreLabel

Cancel OK

Score 0

Non-visible components: Clock1

Screen

- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - Label2
- Clock1

BackgroundColor: None

FontBold:

FontItalic:

FontSize: 14.0

FontTypeface: default

HTMLFormat:

HasMargins:

Height: Automatic...

Width: Automatic...

Text: 0

TextAlignment: left : 0

TextColor: Black

Visible:

Media

- rocket.png
- saucer.png

Upload File ...

Search Windows

14:40 02/03/2017

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Display modern components in viewer
Check to see Preview on Tablet size.

Spacelvaders

Score 0

Text for Button1

Non-visible components
Clock1

Screen

- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - Button1
- Clock1

Button

BackgroundColor
Default

Enabled

FontBold

FontItalic

FontSize
14.0

FontTypeface
default

Height
Automatic...

Width
Automatic...

Image
None...

Shape
default

ShowFeedback

Text
Text for Button1

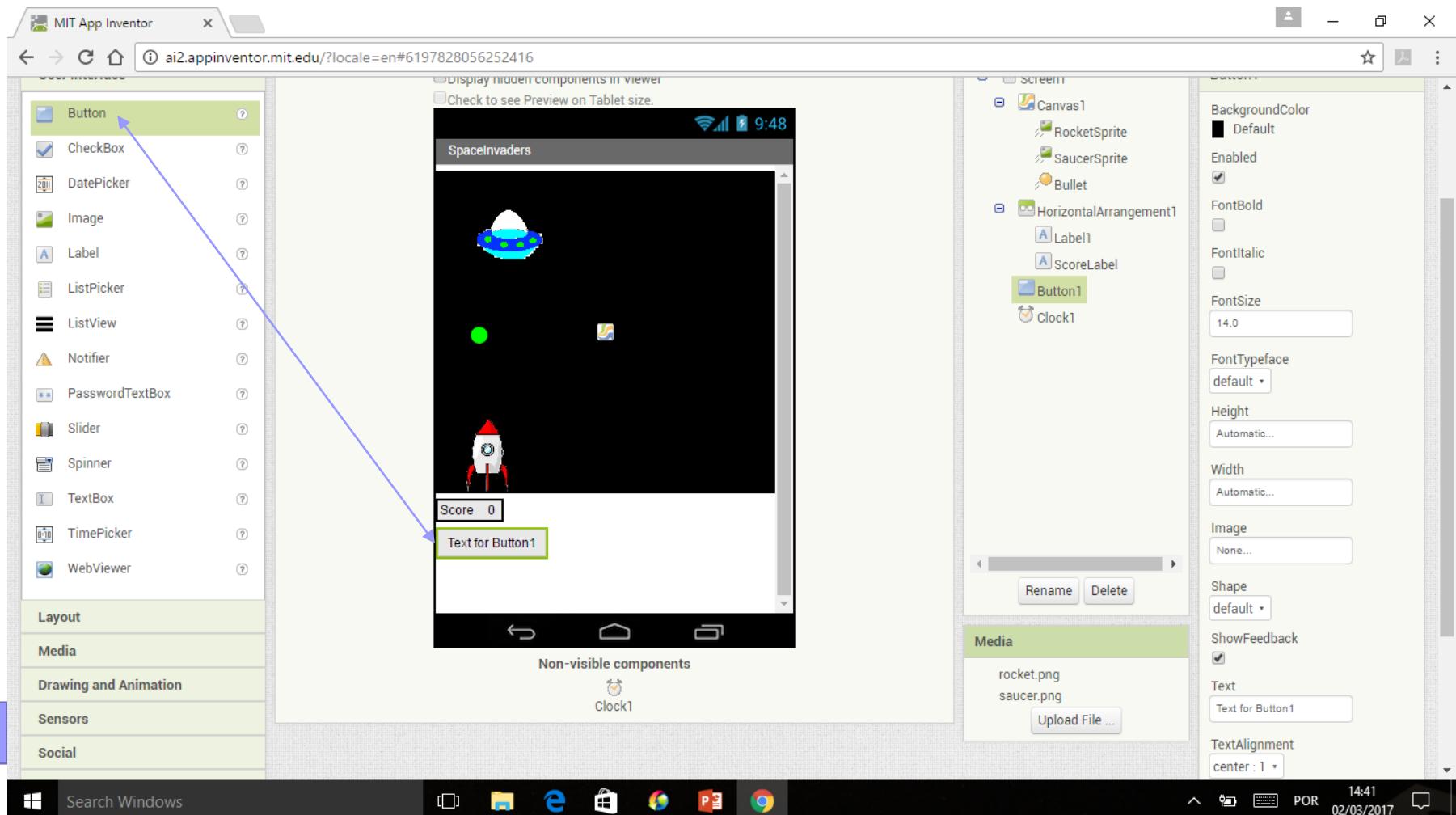
TextAlignment
center : 1

Rename Delete

Media

rocket.png
saucer.png

Upload File ...



MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#6197828056252416

Display hidden components in viewer
Check to see Preview on Tablet size

SpacInvaders

Canvas1
RocketSprite
SaucerSprite
Bullet
HorizontalArrangement1
Label1
ScoreLabel
Button1
Clock1

BackgroundColor
Enabled
FontBold
FontItalic
FontSize
14.0
FontTypeface
default
Height
Automatic...
Width
Automatic...
Image
None...
Shape
default
ShowFeedback
Text
Reset
TextAlignment
center : 1

Rename Component

Old name: Button1
New name: ResetButton|

Cancel OK

Score 0

Reset

Non-visible components
Clock1

Search Windows

14:41
02/03/2017

MIT App Inventor

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Display hidden components in viewer
Check to see Preview on Tablet size.

SpaceInvaders

Score 0

Reset

Non-visible components
Clock1

Screen

- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
- ResetButton
- Clock1

BackgroundColor
Default

Enabled

FontBold

FontItalic

FontSize
14.0

FontTypeface
default

Height
Automatic...

Width
Automatic...

Image
None...

Shape
default

ShowFeedback

Text
Reset

TextAlignment
center : 1

Media

- rocket.png
- saucer.png

Upload File ...

Search Windows

14:43
02/03/2017

Resultado final do Designer

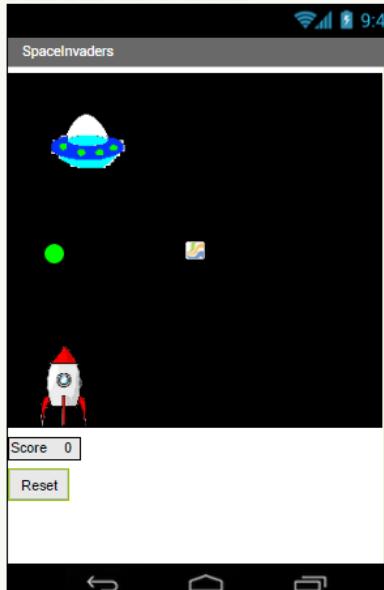
Programação

MIT App Inventor X

ai2.appinventor.mit.edu/?locale=en#6197828056252416

SpacInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Display hidden components in Viewer
Check to see Preview on Tablet size.



Score 0

Reset

Non-visible components

Clock1

Components

- Screen1
- Canvas1
- RocketSprite
- SaucerSprite
- Bullet
- HorizontalArrangement1
- Label
- ScoreLabel
- ResetButton
- Clock1

Rename Delete

Properties

ResetButton

BackgroundColor
Default

Enabled

FontBold

FontItalic

FontSize
14.0

FontTypeface
default

Height
Automatic...

Width
Automatic...

Image
None...

Shape
default

ShowFeedback

Text
Reset

TextAlignment

MIT App Inventor

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SpacInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Viewer



Media

- rocket.png
- saucer.png

Upload File ...

Search Windows

14:47 02/03/2017

MIT App Inventor User Profile | Logout

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SpacelInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Media

rocket.png
saucer.png

Upload File ...

Viewer

```

when [RocketSprite v].CollidedWith [other]
do [ ]
when [RocketSprite v].Dragged [startX] [startY] [prevX] [prevY] [currentX] [currentY]
do [ ]
when [RocketSprite v].EdgeReached [edge]
do [ ]
when [RocketSprite v].Flung [x] [y] [speed] [heading] [xvel] [yvel]
do [ ]
when [RocketSprite v].NoLongerCollidingWith [other]
do [ ]
when [RocketSprite v].TouchDown [ ]
do [ ]
  
```

Show Warnings

14:47 02/03/2017

MIT App Inventor X

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SpacInvaders Designer Blocks

Blocks Viewer

Built-in

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

Screen1

Canvas1

RocketSprite

SaucerSprite

Bullet

HorizontalArrangement1

Label1

ScoreLabel

ResetButton

Clock1

Any component

Rename Delete

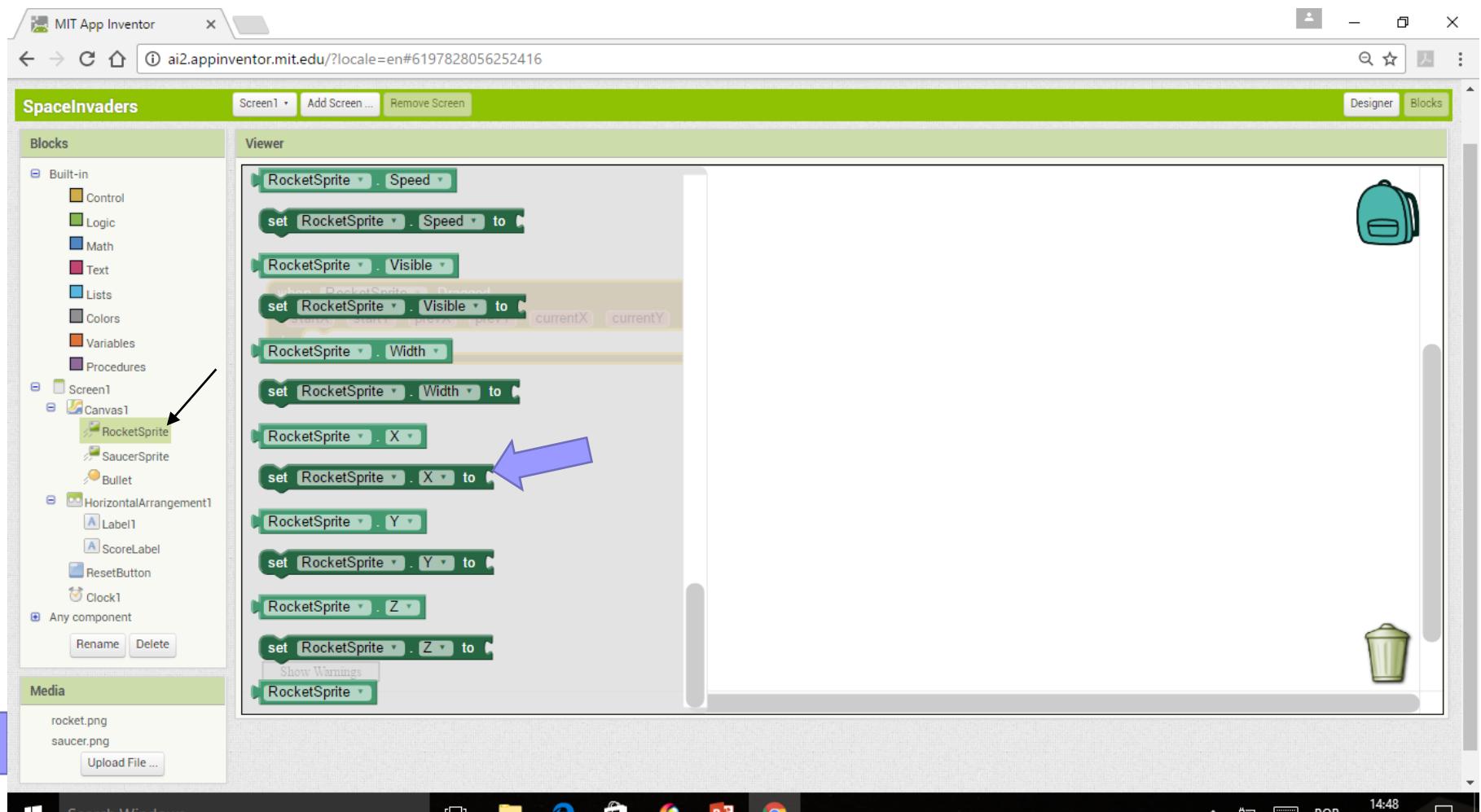
Media

rocket.png
saucer.png
Upload File ...

Viewer

```

set [RocketSprite v] . Speed to [10]
set [RocketSprite v] . Visible to [true]
set [RocketSprite v] . Visible to [true]
set [RocketSprite v] . Width to [10]
set [RocketSprite v] . X to [startX]
set [RocketSprite v] . Y to [startY]
set [RocketSprite v] . Z to [0]
Show Warnings
RocketSprite
  
```



MIT App Inventor

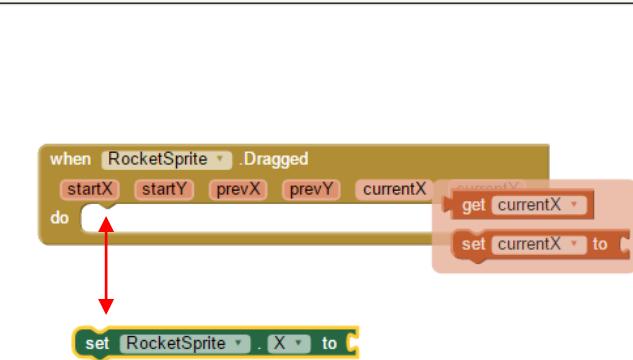
ai2.appinventor.mit.edu/?locale=en#6197828056252416

SpacelInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Viewer



```
when RocketSprite .Dragged
  do
    startX [startX v]
    startY [startY v]
    prevX [prevX v]
    prevY [prevY v]
    currentX [currentX v]
    get [currentX v]
    set [currentX v] to [get v]
  end
  set [RocketSprite . X v] to [currentX v]
```

1 0 Show Warnings

Media

- rocket.png
- saucer.png

Upload File ...

Search Windows

14:49
02/03/2017

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SpaceInvaders

Screen1 Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Viewer

```

when RocketSprite .Dragged
  startX startY prevX prevY currentX
  do set RocketSprite X to currentX
    get currentX
    set currentX to
  end
end
  
```

1 0 Show Warnings

rocket.png
saucer.png
Upload File ...

Search Windows

14:50
POR 02/03/2017

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SpaceInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

Any component

Rename Delete

Media

rocket.png

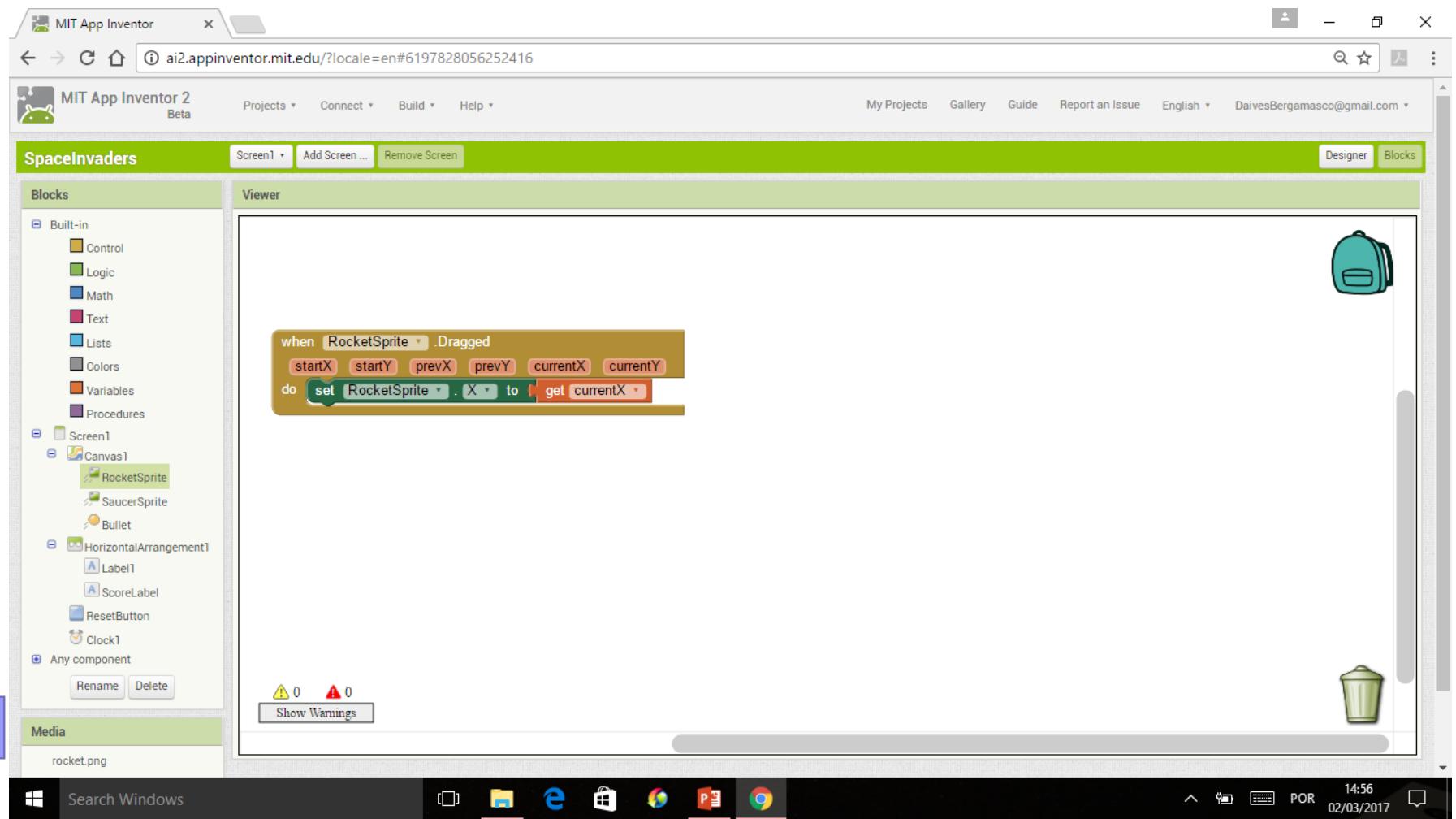
Viewer

when RocketSprite . Dragged

```
    startX startY prevX prevY currentX currentY
    do set RocketSprite . X to get currentX
```

0 0 Show Warnings

Windows Search Windows 14:56 02/03/2017



Fazer um teste para ver o comportamento do foguete

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SpacelInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

Any component

Rename Delete

Media

rocket.png

Viewer

```

when Screen1 BackPressed
do

when Screen1 ErrorOccurred
  component functionName errorNumber message
do startX startY prevX prevY currentX currentY
do set RocketSprite to get currentX
do set RocketSprite to get currentY

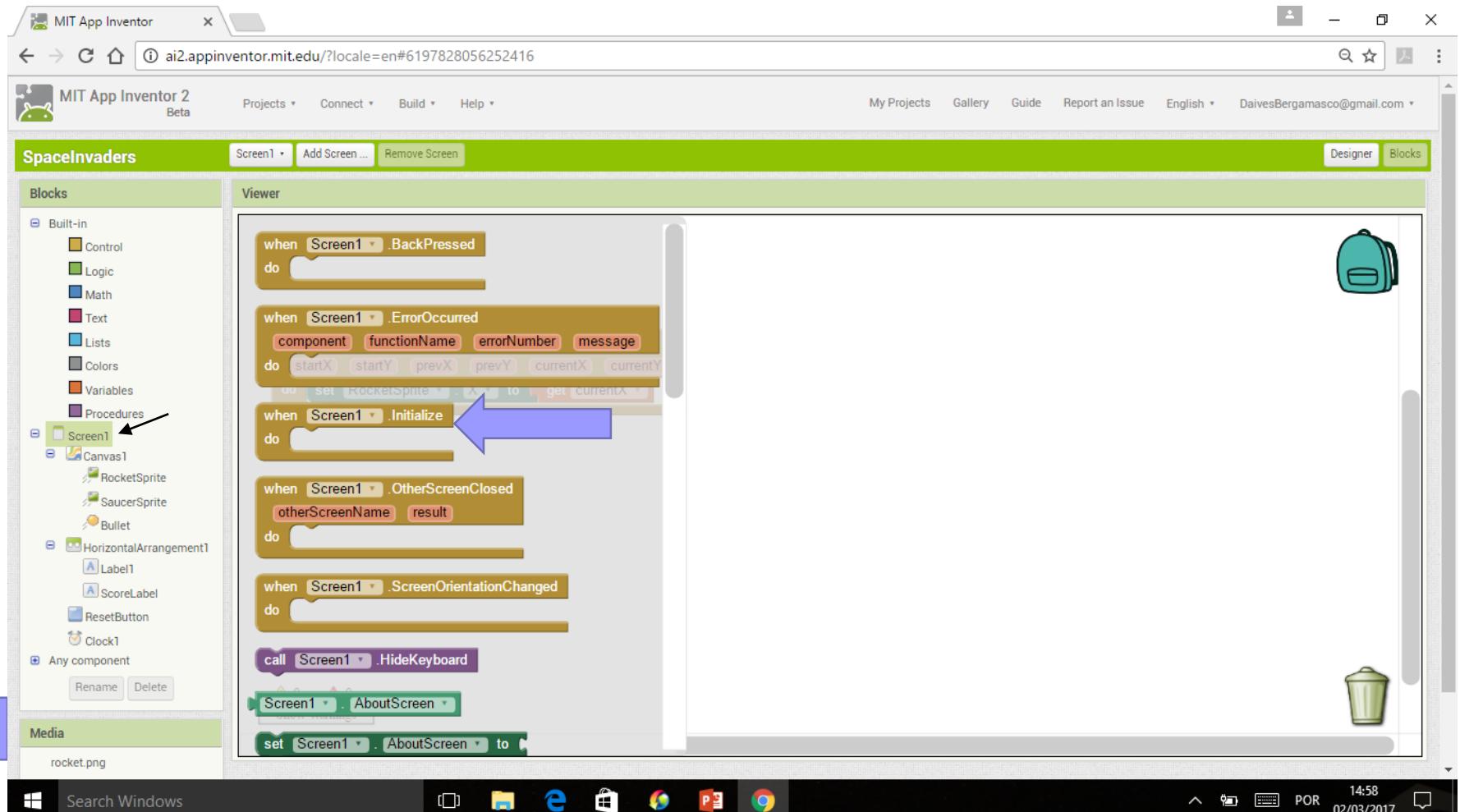
when Screen1 .Initialize
do

when Screen1 .OtherScreenClosed
  otherScreenName result
do

when Screen1 .ScreenOrientationChanged
do

call Screen1 .HideKeyboard

Screen1 . AboutScreen
set Screen1 . AboutScreen to
  
```



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SpacInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet** ←

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

Any component

Rename Delete

Media

rocket.png

Viewer

```

  Bullet . Radius
  set Bullet . Radius to
  Bullet . Speed
  when RocketSprite . Dragged
    set Bullet . Speed to [ currentX - prevX , currentY - prevY ]
  Bullet . Visible
  set Bullet . Visible to
  when Screen1 . Initialize
    Bullet . X
    set Bullet . X to
    Bullet . Y
    set Bullet . Y to
    Bullet . Z
    set Bullet . Z to
  Bullet
  
```

Show Warnings

←

trash can icon

Search Windows

14:59 02/03/2017

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SpacInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

Any component

Rename Delete

Media

rocket.png

Viewer

```

  true
  false
  not when RocketSprite .Dragged
    = startX prevX currentX currentY
    do set RocketSprite . X to get currentX
  and
  or Screen1 .Initialize
    do set Bullet . Visible to
  
```

1 1 Show Warnings

Designer

Blocks

Backpack icon

Trash can icon

Search Windows

File Explorer

Edge

Windows Store

PowerPoint

Google Chrome

15:01
02/03/2017

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SpacelInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

Any component

Rename Delete

Media

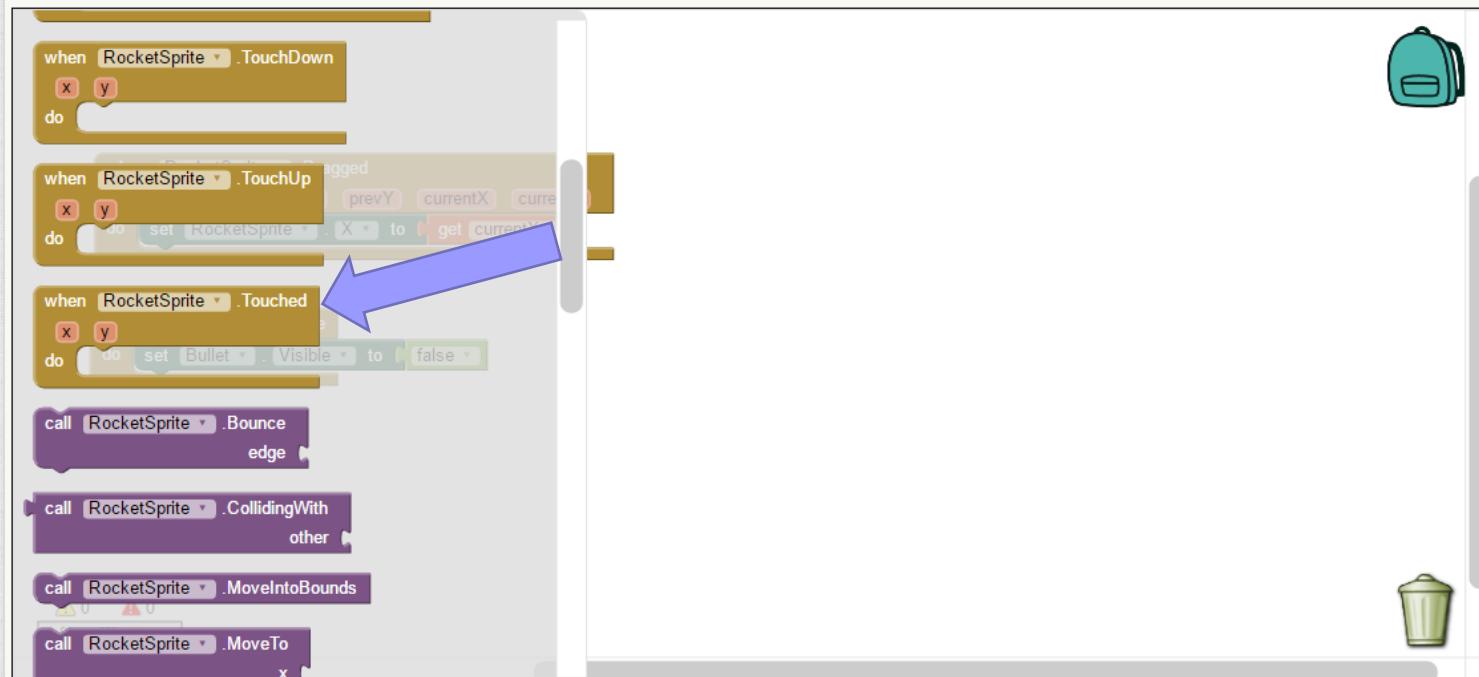
rocket.png

Viewer

```

when [RocketSprite v].TouchDown [x v] [y v]
do [ ]
when [RocketSprite v].TouchUp [x v] [y v]
do [do [set [RocketSprite v].X to [get [currentX v]]] [set [RocketSprite v].Y to [get [currentY v]]]]]
when [RocketSprite v].Touched [x v] [y v]
do [do [set [Bullet v].Visible to [false v]]]
call [RocketSprite v].Bounce [edge v]
call [RocketSprite v].CollidingWith [other v]
call [RocketSprite v].MoveIntoBounds [ ]
call [RocketSprite v].MoveTo [x v]

```



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SpacInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
- ResetButton
- Clock1
- Any component
 - Rename Delete

Media rocket.png

Viewer

when RocketSprite.Dragged
do set RocketSprite.X to get currentX

when Screen1.Initialize
do set Bullet.Visible to false

Duplicate

Clicar com o botão direito do mouse

0 0 Show Warnings

Search Windows

15:05 02/03/2017 POR

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SpacInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename Delete

Media

rocket.png

Viewer

when RocketSprite .Dragged
startX startY prevX prevY currentX currentY
do set RocketSprite . X to get currentX

when Screen1 .Initialize
do set Bullet . Visible to false

when RocketSprite .Touched
x y
do set Bullet . Visible to
false
true
false

0 0 Show Warnings

Search Windows

15:08 02/03/2017

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SpacInvaders

Screen1 Add Screen... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet** ←
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename Delete

Media

rocket.png

Viewer

```

set Bullet . Interval to
Bullet . PaintColor
set Bullet . PaintColor to
set Bullet . Radius to X to get currentX
Bullet . Speed
set Bullet . Speed to
set Bullet . Visible to false
Bullet . Visible
set Bullet . Visible to Touched
set Bullet . X to
set Bullet . Y to
  
```

A screenshot of the MIT App Inventor 2 web-based interface. The project is titled "SpacInvaders". The left sidebar shows the "Blocks" palette with categories like Built-in, Screen1, and HorizontalArrangement1. A blue arrow points to the "Bullet" block under the "Screen1" section. The main workspace is the "Viewer" showing a sequence of Scratch-style blocks for a bullet sprite. The blocks include setting the bullet's interval, paint color, radius, speed, visibility, and position. The Windows taskbar at the bottom shows various application icons.

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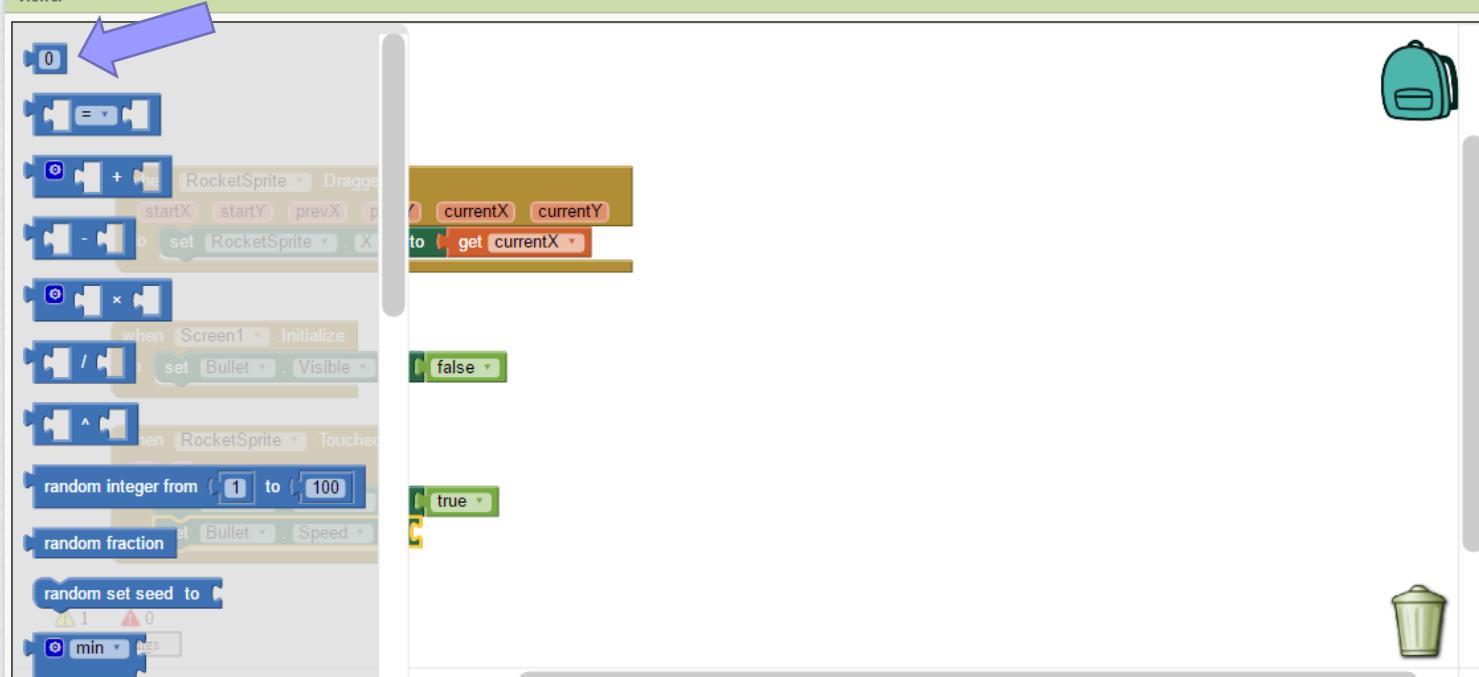
SpacInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math** (highlighted)
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename Delete

Viewer



```

when Screen1.Initialize
  set [currentX v] to [get currentX v]
  set [Bullet Visible v] to [false]
  random integer from [1] to [100]
  random fraction
  random set seed to [1]
  min [25] [0]
  
```

rocket.png

Search Windows

15:10 02/03/2017 POR

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SpaceInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math**
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Media
rocket.png

Viewer

when **RocketSprite**.Dragged
 startX startY prevX prevY currentX currentY
 do set **RocketSprite**.X to get currentX

when **Screen1**.Initialize
 do set **Bullet**.Visible to false

when **RocketSprite**.Touched
 (x y)
 do set **Bullet**.Visible to true
 set **Bullet**.Speed to 5

Trocar pra 5

⚠ 0 ⚡ 0 Show Warnings

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Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet**
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Media

- rocket.png
- saucer.png
- Upload File ...

Viewer

```

x
y

call Bullet . PointTowards
  target
when RocketSprite . Dragged
  Bullet . Enabled startY prevX prevY currentX
    do set RocketSprite . X to currentX
    set Bullet . Enabled to currentY
  Bullet . Heading
    set Bullet . Heading to
  Bullet . Interval
    when RocketSprite . Touched
    set Bullet . Interval to
      do set Bullet . Visible to true
    Bullet . PaintColor
      set Bullet . Speed to 5
    set Bullet . PaintColor to
  Bullet . Radius
    set Bullet . Radius to
  
```



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Search Windows

15:13
02/03/2017

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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Rename Delete

Media

rocket.png
saucer.png

Upload File ...

Viewer

when RocketSprite .Dragged

```

startX startY prevX prevY currentX currentY
do set RocketSprite . X to get currentX
  
```

when Screen1 .Initialize

```

do set Bullet . Visible to false
  
```

when RocketSprite .Touched

```

x y
do set Bullet . Visible to true
set Bullet . Speed to 5
set Bullet . Heading to 90
  
```

Trocar pra 90

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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet**
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Media

rocket.png
saucer.png

Upload File ...

Viewer

```

when [Bullet v].CollidedWith [other]
do [ ]
  when [Bullet v].Dragged
    [startX v] [startY v] [prevX v] [prevY v] [currentX v] [currentY v]
    do [ ] do [set [RocketSprite v] X v to [get currentX v]]
      [set [RocketSprite v] Y v to [get currentY v]]
  when [Bullet v].EdgeReached [edge]
    [Initialize]
    do [ ] do [set [Bullet v] Visible v to false v]
  when [Bullet v].Flung
    [x v] [y v] [speed v] [heading v] [xvel v] [yvel v]
    do [ ] do [set [Bullet v] Speed v to (5)]
      [set [Bullet v] Heading v to (90)]
  when [Bullet v].NoLongerCollidingWith [other]
    do [ ]
      when [Bullet v].TouchDown
        [Show Warnings]

```

A blue arrow points from the 'Bullet' component in the Components pane to the 'when Bullet.CollidedWith' block in the Blocks Editor.

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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Rename Delete

Media

rocket.png
saucer.png
Upload File ...

Viewer

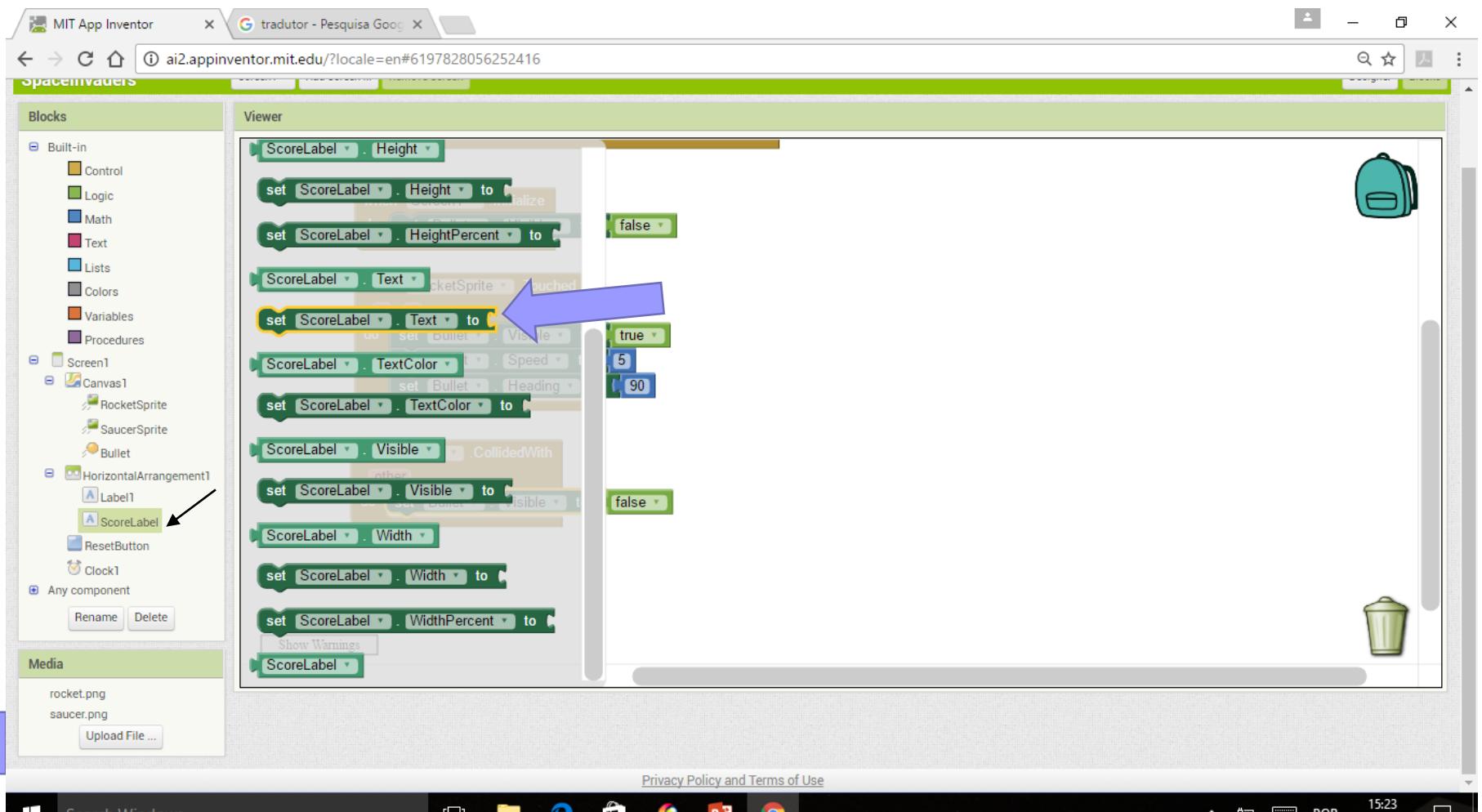
```

  ScoreLabel . Height
  set ScoreLabel . Height to [ initial screen . Initialize ]
  set ScoreLabel . HeightPercent to [ false ]
  ScoreLabel . Text [ rocketSprite . touched ]
  set ScoreLabel . Text to [ true ]
  ScoreLabel . TextColor [ 5 ]
  ScoreLabel . TextColor [ 90 ]
  ScoreLabel . Visible [ other . CollidedWith ]
  set ScoreLabel . Visible to [ false ]
  ScoreLabel . Width
  set ScoreLabel . Width to [ ]
  set ScoreLabel . WidthPercent to [ ]
  ScoreLabel
  
```

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POR
02/03/2017



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SpaceInvaders

Blocks

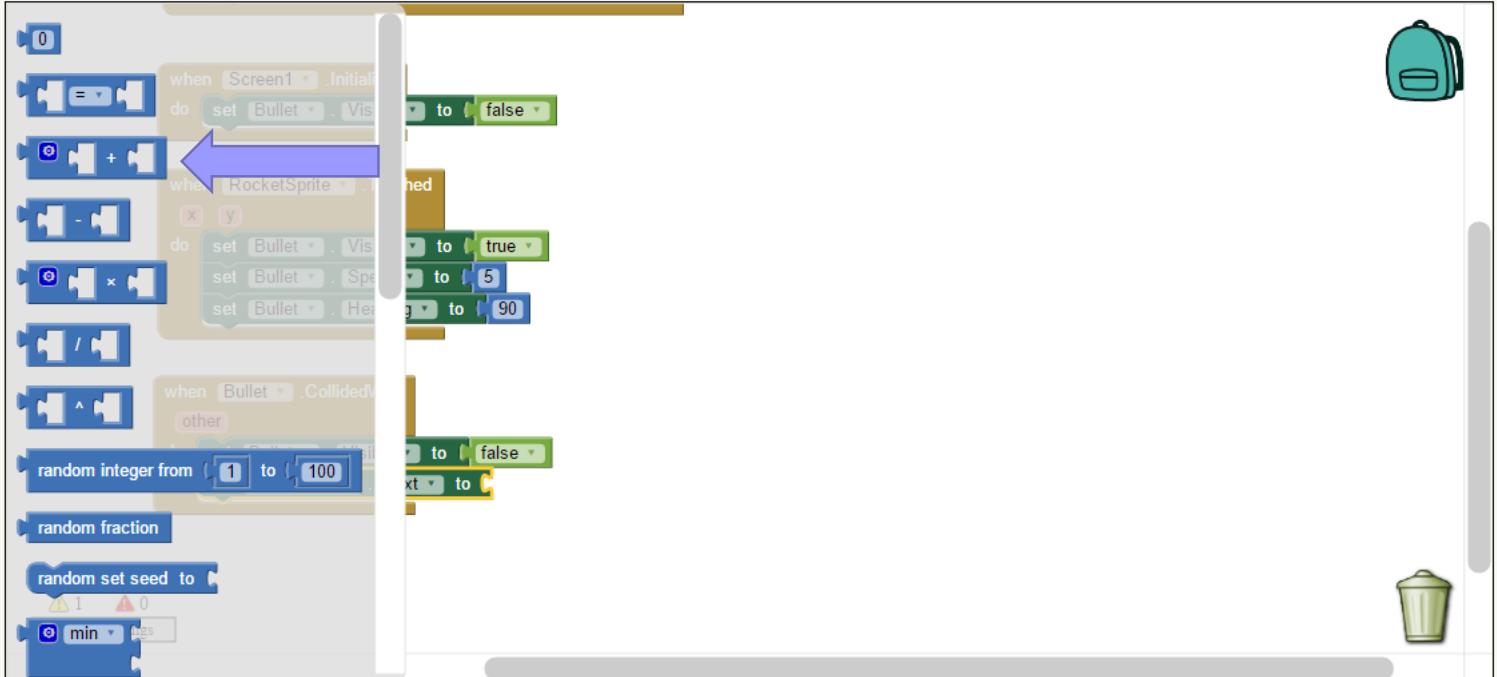
- Built-in
 - Control
 - Logic
 - Math** (highlighted with a blue arrow)
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Rename Delete

Media

rocket.png
saucer.png
Upload File ...

Viewer



```

when Screen1.Initialize
  do [set Bullet1.Visible to false]
  end
when RocketSprite.Touched
  do [set Bullet1.Visible to true
    set Bullet1.Speed to 5
    set Bullet1 Heading to 90]
  end
when Bullet1.CollidedWith other
  random integer from [1] to [100]
  random fraction
  random set seed to
  min [1] [0]
end
  
```

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Spacemvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Rename Delete

Media

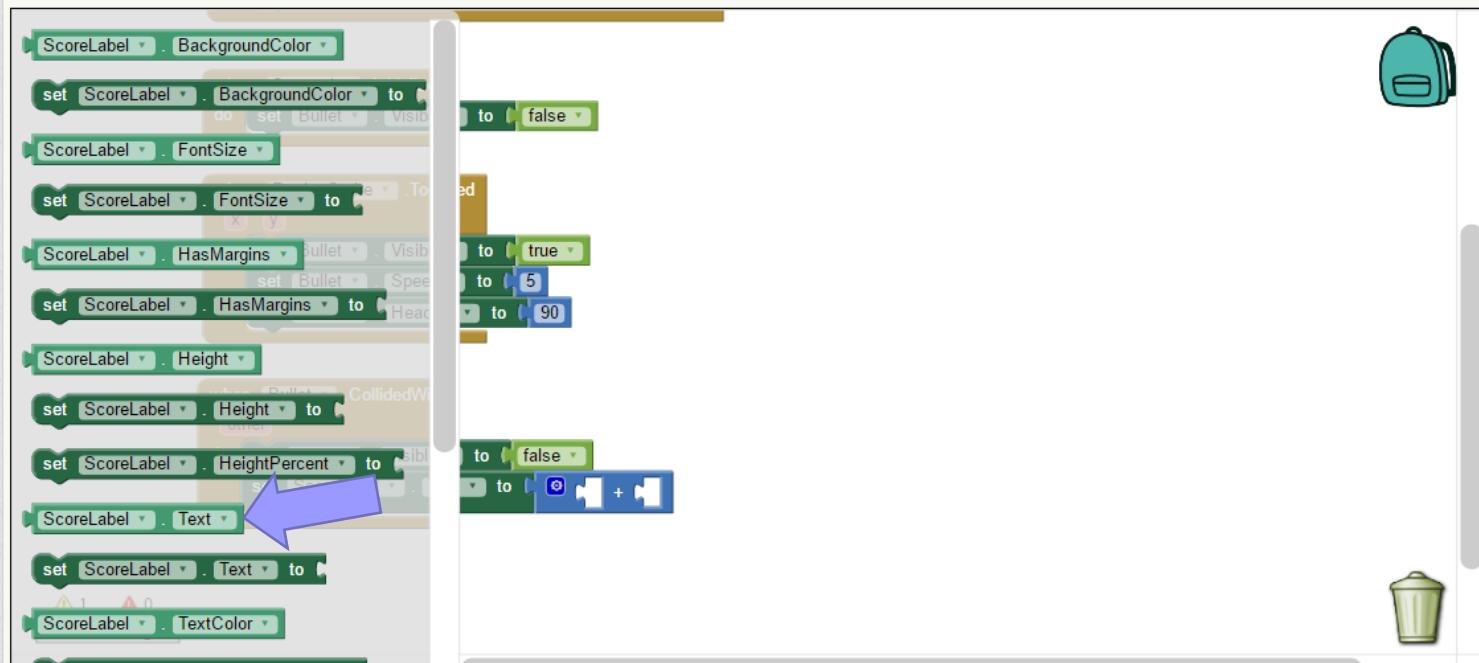
rocket.png
saucer.png
Upload File ...

Viewer

```

  ScoreLabel . BackgroudColor
  set ScoreLabel . BackgroudColor to
  do set Bullet . Visib
  ScoreLabel . FontSize
  set ScoreLabel . FontSize to
  ScoreLabel . HasMargins
  set ScoreLabel . HasMargins to
  ScoreLabel . Height
  set ScoreLabel . Height to
  ScoreLabel . HeightPercent
  set ScoreLabel . HeightPercent to
  ScoreLabel . Text
  set ScoreLabel . Text to
  ScoreLabel . TextColor
  set ScoreLabel . TextColor to
  
```

to false
to true
to 5
to 90
to false
to +



MIT App Inventor

SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
- Any component
 - Rename
 - Delete

Media

- rocket.png
- saucer.png
- Upload File ...

Viewer

```

call [Bullet v].Bounce
when [Screen1 v].Initialize
  do [set [Bullet v].Visible to true]
  [set [ScoreLabel v].Text to "0"]

call [Bullet v].CollidingWith
  other [RocketSprite v].Touched
do [set [Bullet v].Visible to false]
  [set [ScoreLabel v].Text to (+ [ScoreLabel v].Text 1)]

call [Bullet v].MoveIntoBounds
do [set [Bullet v].Visible to true]
  [set [ScoreLabel v].Text to (+ [ScoreLabel v].Text 1)]

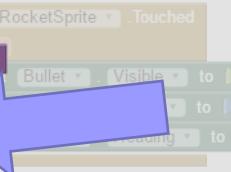
call [Bullet v].MoveTo
  x [y]
do [set [Bullet v].Visible to true]
  [set [ScoreLabel v].Text to (+ [ScoreLabel v].Text 1)]

call [Bullet v].PointInDirection
  x [y]

call [Bullet v].PointTowards
  target
do [set [Bullet v].Visible to true]
  [set [ScoreLabel v].Text to (+ [ScoreLabel v].Text 1)]

call [Bullet v].Enabled
do [set [Bullet v].Visible to true]
  [set [ScoreLabel v].Text to (+ [ScoreLabel v].Text 1)]
  [set [Bullet v].Enabled to true]
  [set [ScoreLabel v].Text to (+ [ScoreLabel v].Text 1)]

```



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spaceminvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Media

rocket.png
saucer.png
Upload File ...

Viewer

```

when Screen1.Initialize
do set Bullet .Visible to false

when RocketSprite.Touched
do call Bullet .MoveTo [x] [y]
set Bullet .Visible to true
set Bullet .Speed to 5
set Bullet .Heading to 90

when Bullet.CollidedWith
other
do set Bullet .Visible to false
set ScoreLabel .Text to + 1
  
```

INSERIR

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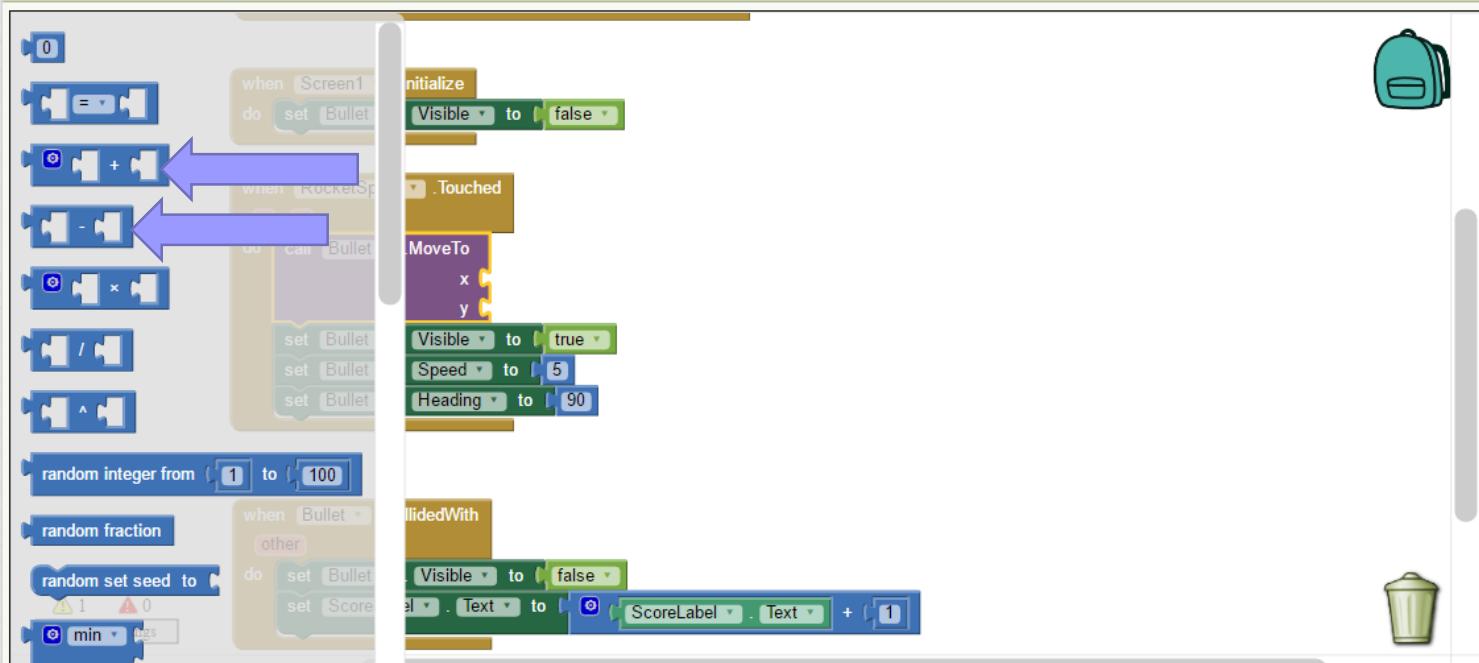
ai2.appinventor.mit.edu/?locale=en#6197828056252416

Spaceminvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math**
 - Text
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 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Viewer



```

when [Screen1] opens
  do [set [Bullet1] to [false]
  when [Touched] [.Touched]
    do [MoveTo [x] [y]
       set [Visible] to [true]
       set [Speed] to [5]
       set [Heading] to [90]
    ]
  end
  when [Bullet1] collides with [other]
    do [set [Visible] to [false]
       set [ScoreLabel] to [ScoreLabel + 1]
    ]
  end
end
  
```

Media

- rocket.png
- saucer.png

Upload File ...

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SpaceInvaders

Blocks

- Built-in
 - Control
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 - Math
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 - Colors
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- Screen1
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 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Media

rocket.png
saucer.png
[Upload File ...](#)

Viewer

```

when Screen1.Initialize
do set Bullet.Visible to false

when RocketSprite.Touched
do call Bullet.MoveTo
  x (x + 5)
  y (y - 5)
set Bullet.Visible to true
set Bullet.Speed to 5
set Bullet.Heading to 90

when Bullet.CollidedWith
other
do set Bullet.Visible to false
set ScoreLabel.Text to (ScoreLabel.Text + 1)
  
```

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SpaceInvaders

Blocks

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 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Media

rocket.png
saucer.png

Upload File ...

Viewer

```

when Screen1 opened
do
  set Bullet Visible to false
  set Bullet Speed to 5
  set Bullet Heading to 90
  set Bullet CollidedWith other to false
  set Score to 0
  set SaucerY to random integer from 1 to 100
  set SaucerX to random fraction
  set Bullet x to SaucerX + 2
  set Bullet y to SaucerY - 0
  call Bullet MoveTo [x y]
  set Bullet CollidedWith other to true
  set ScoreLabel Text to ScoreLabel Text + 1
end

when RocketSprite Touched
do
  call Bullet Shoot
end

when Bullet collides with other
do
  set Bullet Visible to false
  set ScoreLabel Text to ScoreLabel Text + 1
end
  
```

A screenshot of the MIT App Inventor interface showing the code for a Space Invaders game. The code is organized into three main sections: `when Screen1 opened`, `when RocketSprite Touched`, and `when Bullet collides with other`. A large blue arrow points to the `when RocketSprite Touched` section.

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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Rename Delete

Media

rocket.png
saucer.png
Upload File ...

Viewer

```

when Screen1.Initialize
do set Bullet.Visible to false

when RocketSprite.Touched
do call Bullet.MoveTo
  x (x + 5) / 2
  y (y - 5)
set Bullet.Visible to true
set Bullet.Speed to 5
set Bullet.Heading to 90

when Bullet.CollidedWith other
do set Bullet.Visible to false
set ScoreLabel.Text to (ScoreLabel.Text + 1)
  
```

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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

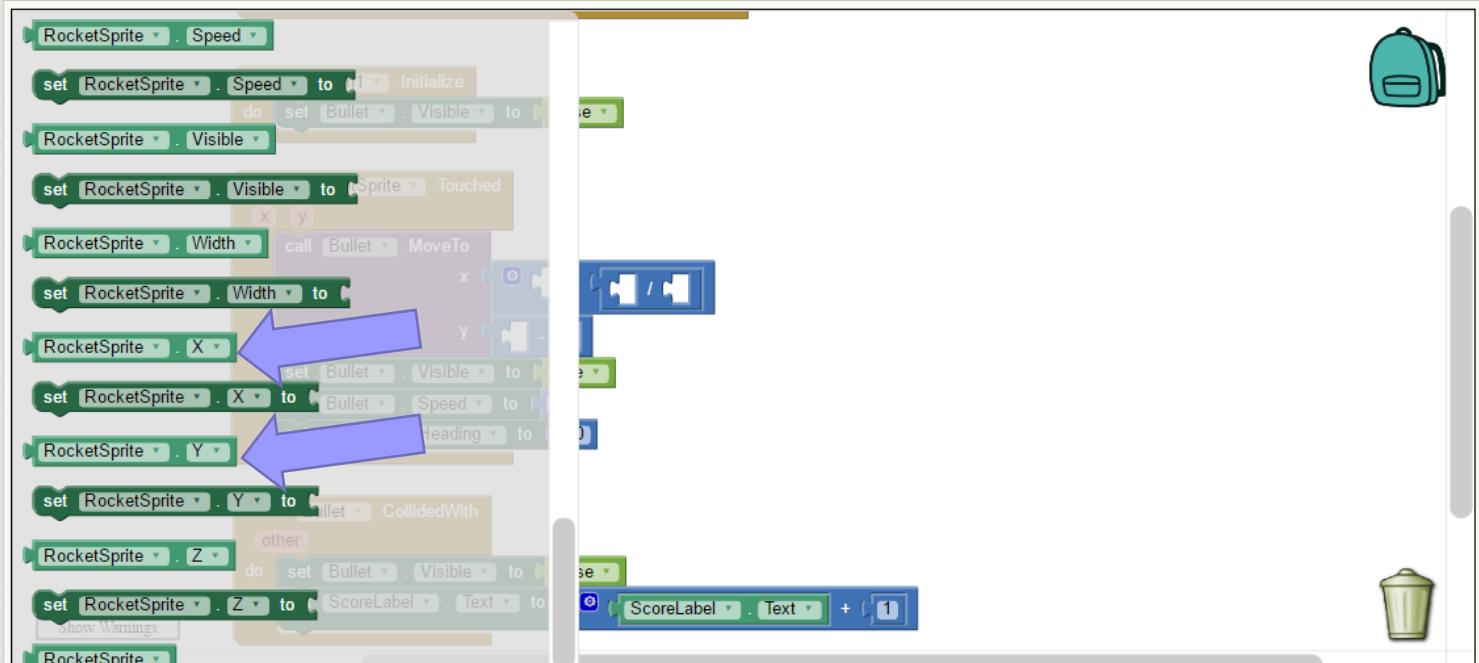
Media

- rocket.png
- saucer.png
- Upload File ...

Viewer

```

  RocketSprite . Speed
  set [RocketSprite . Speed] to [1]
  Initialize
  do [set [Bullet . Visible] to [true]] [while [not [Bullet . CollidedWith] [RocketSprite]]]
  RocketSprite . Visible
  set [RocketSprite . Visible] to [Sprite Touched]
  RocketSprite . Width
  call [Bullet . MoveTo]
  set [RocketSprite . Width] to [1]
  set [RocketSprite . X] to [Bullet . X]
  set [RocketSprite . Y] to [Bullet . Y]
  set [Bullet . Visible] to [true]
  set [Bullet . Speed] to [1]
  set [Bullet . Heading] to [90]
  RocketSprite . X
  RocketSprite . Y
  set [Bullet . CollidedWith] to [true]
  RocketSprite . Z
  do [set [Bullet . Visible] to [false]] [while [not [Bullet . CollidedWith] [RocketSprite]]]
  set [ScoreLabel . Text] to [ScoreLabel . Text + 1]
  ScoreLabel . Text
  RocketSprite
  
```



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spaceminvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
- ResetButton
- Clock1
- Any component

[Rename](#) [Delete](#)

Media

- rocket.png
- saucer.png
- [Upload File ...](#)

Viewer

```

when Screen1.Initialize
do set Bullet.Visible to false

when RocketSprite.Touched
do
  call Bullet.MoveTo
    x : RocketSprite.X + [1 / 1]
    y : RocketSprite.Y - [1]
  set Bullet.Visible to true
  set Bullet.Speed to 5
  set Bullet.Heading to 90

when Bullet.CollidedWith
other
do
  set Bullet.Visible to false
  set ScoreLabel.Text to [ScoreLabel.Text + 1]

```

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 15:36
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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Rename Delete

Media

rocket.png
saucer.png
Upload File ...

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Blocks View

```

set [RocketSprite v] . Speed to (1) Initialize
do [set [Bullet v] . Visible to (true)]
set [RocketSprite v] . Visible to (true)
set [RocketSprite v] . Width to (100)
set [RocketSprite v] . X to (100)
set [RocketSprite v] . Y to (100)
set [RocketSprite v] . Z to (100)
if [Collision with other]
  do [set [Bullet v] . Visible to (false)]
  set [ScoreLabel v] . Text to (+ 1)
end
  
```

A blue arrow points from the 'RocketSprite' block in the 'Any component' section of the blocks palette to the 'RocketSprite' block in the script editor.

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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
- ResetButton
- Clock1
- Any component

Viewer

```

when Screen1.Initialize
do set Bullet.Visible to false

when RocketSprite.Touched
do call Bullet.MoveTo
  x [RocketSprite.X + RocketSprite.Width / 2]
  y [RocketSprite.Y - 1]
set Bullet.Visible to true
set Bullet.Speed to 5
set Bullet.Heading to 90

when Bullet.CollidedWith
other
do set Bullet.Visible to false
set ScoreLabel.Text to [ScoreLabel.Text + 1]
  
```

Media

- rocket.png
- saucer.png

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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement
 - Label1
 - ScoreLabel
- ResetButton
- Clock1
- Any component
 - Rename
 - Delete

Media

rocket.png
saucer.png
Upload File ...

Viewer

```

when Screen1.Initialize
do set Bullet.Visible to false

when RocketSprite.Touched
do
  call Bullet.MoveTo
    x : (RocketSprite.X + RocketSprite.Width / 2)
    y : (RocketSprite.Y - 20)
  set Bullet.Visible to true
  set Bullet.Speed to 5
  set Bullet.Heading to 90

when Bullet.CollidedWith other
do
  set Bullet.Visible to false
  set ScoreLabel.Text to (ScoreLabel.Text + 1)

```

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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet**
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Media

- rocket.png
- saucer.png
- Upload File ...

Viewer

```

when Bullet .CollidedWith
other
do
  set Bullet .Y to (RocketSprite .Y) - 20
  set Bullet .Visible to true
  set Bullet .Speed to 5
  set Bullet .Heading to 90

when Bullet .Dragged
startX startY prevX prevY currentX currentY
do
  when Bullet .CollidedWith
    other
    do
      set Bullet .Y to (RocketSprite .Y) - 20
      set Bullet .Visible to true
      set Bullet .Speed to 5
      set Bullet .Heading to 90

when Bullet .EdgeReached
edge
do
  set ScoreLabel .Text to false
  set ScoreLabel .Text to (ScoreLabel .Text) + 1

when Bullet .Flung
x y speed heading xv1 yv1
do

when Bullet .NoLongerCollidingWith
other
do

when Bullet .TouchDown
do
  
```

A large blue arrow points from the 'Bullet' component in the Component List to the 'when Bullet .EdgeReached' event block in the script editor.

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Spacemvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Viewer

```

when [Bullet v].CollidedWith [other]
do
  set [Bullet v].Visible to [false]
  set [ScoreLabel v].Text to [ScoreLabel v].Text + [1]

when [Bullet v].EdgeReached [edge]
do
  set [Bullet v].Visible to [false]
  
```

Media

- rocket.png
- saucer.png

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SpacelInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Viewer

```

when [ResetButton].Click
do
  [Bullet] .Visible to true
  Bullet .Speed to 5
  Bullet .Heading to 90
  [let] .CollidedWith
    [Bullet] .Visible to false
    ScoreLabel .Text to [ScoreLabel .Text + 1]
  [let] EdgeReached
  Bullet .Visible to false
end

when [ResetButton].GotFocus
do
end

when [ResetButton].LongClick
do
end

when [ResetButton].LostFocus
do
end

when [ResetButton].TouchDown
do
end

when [ResetButton].TouchUp
do
end

[ResetButton].BackgroundColor
set [ResetButton].BackgroundColor to
  
```

A large blue arrow points from the "ResetButton" component in the left sidebar towards the "when [ResetButton].Click" block in the blocks editor.

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SpacInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks Viewer

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel

ResetButton

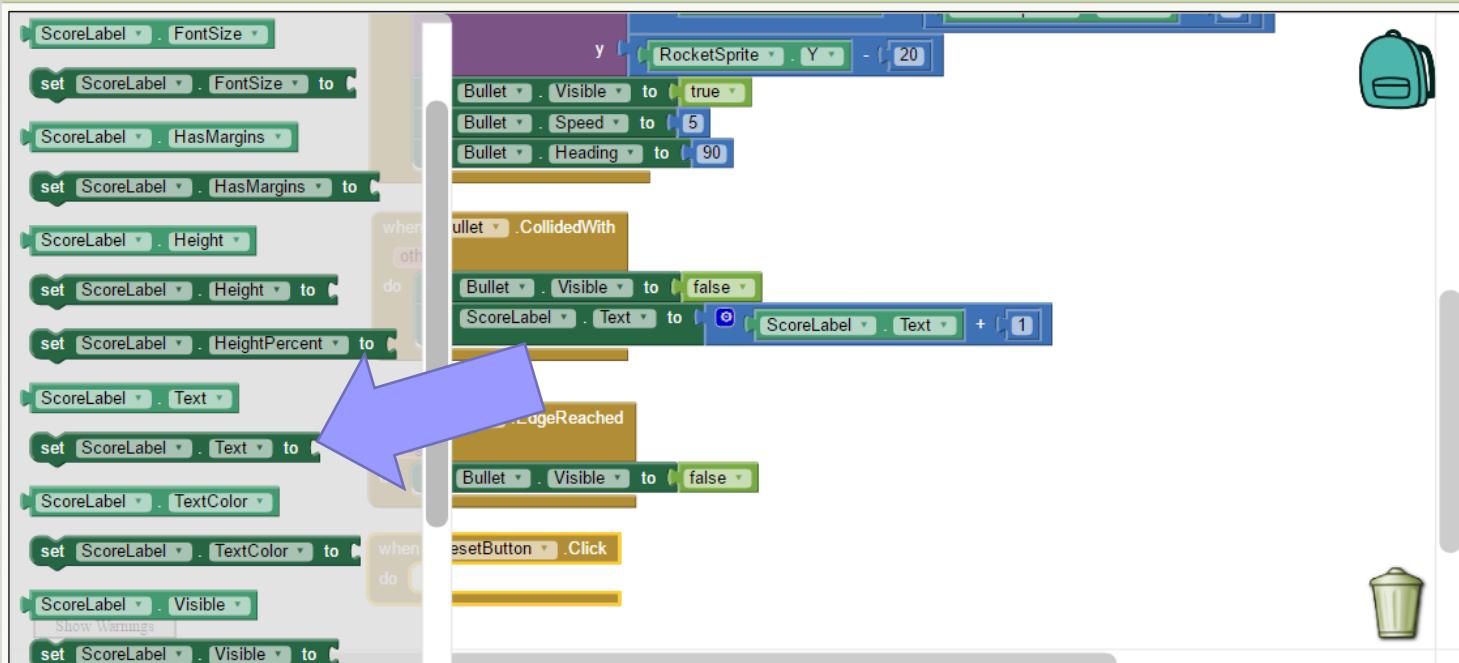
Clock1

Any component

Rename Delete

Media

rocket.png



```

sequence [ScoreLabel]
    set [ScoreLabel v] .FontSize to 20
    set [ScoreLabel v] .HasMargins to true
    set [ScoreLabel v] .Height to 10
    set [ScoreLabel v] .HeightPercent to 10
    set [ScoreLabel v] .Text to "0"
    set [ScoreLabel v] .TextColor to black
    set [ScoreLabel v] .Visible to true
end

when [Green Flag] [do]
    set [ScoreLabel v] .FontSize to 20
    set [ScoreLabel v] .HasMargins to true
    set [ScoreLabel v] .Height to 10
    set [ScoreLabel v] .HeightPercent to 10
    set [ScoreLabel v] .Text to "0"
    set [ScoreLabel v] .TextColor to black
    set [ScoreLabel v] .Visible to true
end

when [ResetButton v] .Click [do]
    set [ScoreLabel v] .FontSize to 20
    set [ScoreLabel v] .HasMargins to true
    set [ScoreLabel v] .Height to 10
    set [ScoreLabel v] .HeightPercent to 10
    set [ScoreLabel v] .Text to "0"
    set [ScoreLabel v] .TextColor to black
    set [ScoreLabel v] .Visible to true
end

when [Bullet v] .CollidedWith [RocketSprite v] [do]
    set [ScoreLabel v] .Text to (ScoreLabel v) .Text + 1
    set [ScoreLabel v] .Visible to false
end

when [Bullet v] .CollidedWith [SaucerSprite v] [do]
    set [ScoreLabel v] .Text to (ScoreLabel v) .Text + 1
    set [ScoreLabel v] .Visible to false
end

when [Bullet v] .CollidedWith [Bullet v] [do]
    set [ScoreLabel v] .Text to (ScoreLabel v) .Text + 1
    set [ScoreLabel v] .Visible to false
end
  
```

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SpacelInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Viewer

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

Any component

Rename Delete

Media

rocket.png

0 0 Show Warnings

```

when Bullet .CollidedWith
other
do set Bullet .Visible to false
set ScoreLabel .Text to + 1

when Bullet .EdgeReached
edge
do set Bullet .Visible to false

when ResetButton .Click
do set ScoreLabel .Text to 0
  
```

11:20 03/03/2017

Aumentando a dificuldade

Mudar o módulo whem Bullet.collidesWith

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SpacInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component

Rename Delete

Media

rocket.png

Viewer

```

when [Bullet v].CollidedWith [other]
do
  set [Bullet v].Visible to [false]
  set [ScoreLabel v].Text to [ScoreLabel v].Text + [1]

```

when [Bullet v].EdgeReached [edge]
do
 set [Bullet v].Visible to [false]

when [ResetButton v].Click
do
 set [ScoreLabel v].Text to [0]

Adicionar linha....

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Blocks

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

Any component

Rename Delete

Media

rocket.png

Viewer

```

SaucerSprite . Speed
set SaucerSprite . Speed to [ ]
SaucerSprite . Visible
set SaucerSprite . Visible to [ ]
SaucerSprite . Width
set SaucerSprite . Width to [ ]
SaucerSprite . X
set SaucerSprite . X to [ ]
SaucerSprite . Y
set SaucerSprite . Y to [ ]
SaucerSprite . Z
set SaucerSprite . Z to [ ]
SaucerSprite .
```

```

when Bullet . Col
other do
  set Bullet . Visible to true
  set Bullet . Speed to [ ]
  set Bullet . Heading to [ ]
  endWith
  set Bullet . Visible to false
end
when Bullet . Edge
reached
do
  set Bullet . Visible to false
end
when ResetButton
Click
do
  set ScoreLabel . Text to [ ]
end

```

A screenshot of the MIT App Inventor 2 interface showing a project titled "SpaceInvaders". The left sidebar lists components: RocketSprite, SaucerSprite, Bullet, and a HorizontalArrangement1 containing Label1, ScoreLabel, ResetButton, and Clock1. A blue arrow points from the "SaucerSprite" component in the component list to its corresponding sprite in the script editor. The script editor shows a sequence of blocks: first, setting SaucerSprite Speed and Visible properties; then, a loop that sets Bullet Speed and Heading, makes it visible, and then hides it again; finally, a loop that checks if the Bullet has reached an edge and hides it if so. A purple arrow points from the "Bullet" component in the component list to its corresponding variable in the script editor.

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SpacInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

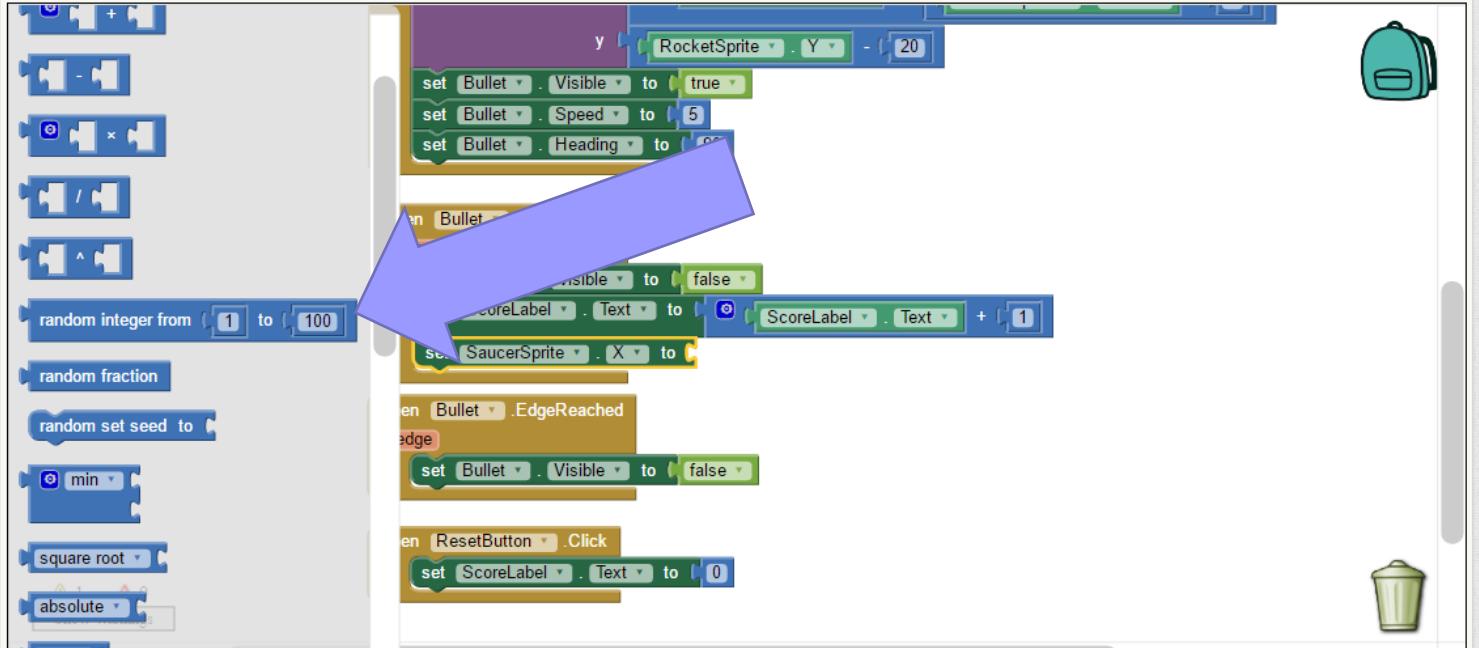
Any component

Rename Delete

Media

rocket.png

Viewer



```

sequence1:
  set Bullet . Visible to true
  set Bullet . Speed to 5
  set Bullet . Heading to 90
  if Bullet.EdgeReached then
    set Bullet . Visible to false
  end
  ScoreLabel . Text to ScoreLabel . Text + 1
end

when ResetButton.Click
  set ScoreLabel . Text to 0
end
  
```

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SpacelInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename Delete

Viewer

```

when [Bullet].CollidedWith [other]
do
  set [Bullet].Visible to [false]
  set [ScoreLabel].Text to [ScoreLabel.Text + 1]
  set [SaucerSprite].X to [random integer from 0 to 100]

when [Bullet].EdgeReached [edge]
do
  set [Bullet].Visible to [false]

when [ResetButton].Click
do
  set [ScoreLabel].Text to [0]

```

1 0 Show Warnings

rocket.png

Search Windows

11:37 03/03/2017

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SpacInvaders Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

- Control
- Logic
- Math** (highlighted)
- Text
- Lists
- Colors
- Variables
- Procedures

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

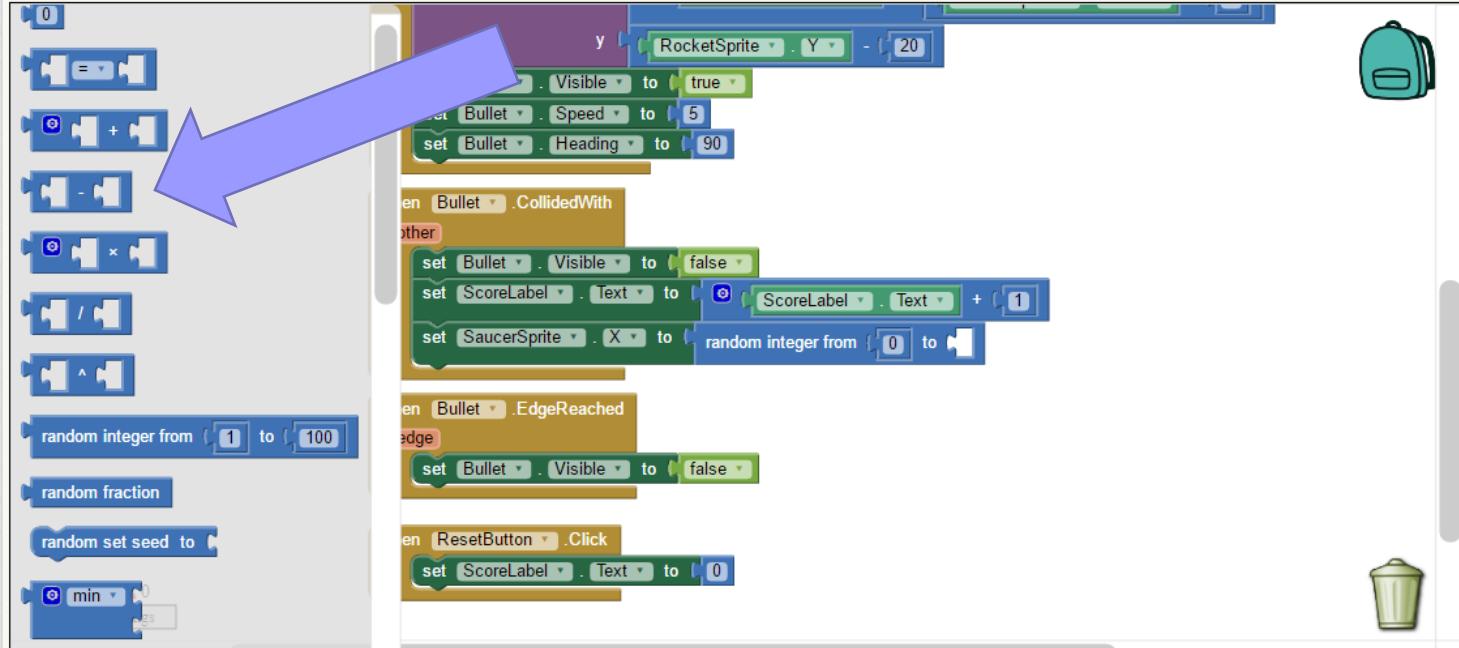
Any component

Rename Delete

Media

rocket.png

Viewer



```

 0 [set Bullet . Speed to 5]
 [set Bullet . Heading to 90]
 [en (Bullet . CollidedWith other)
   [set Bullet . Visible to false]
   [set ScoreLabel . Text to + 1]
   [set SaucerSprite . X to random integer from 0 to 100]
 ]
 [en (Bullet . EdgeReached edge)
   [set Bullet . Visible to false]
 ]
 [en (ResetButton . Click)
   [set ScoreLabel . Text to 0]
 ]

```

ScoreLabel

RocketSprite

Bullet

SaucerSprite

ResetButton

ScoreLabel

Label1

Clock1

11:38 03/03/2017

MIT App Inventor User icon

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MIT App Inventor 2 Beta Projects Connect Build Help My Projects Gallery Guide Report an Issue English DavesBergamasco@gmail.com

SpacInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

Canvas1

- RocketSprite
- SaucerSprite
- Bullet

HorizontalArrangement1

- Label1
- ScoreLabel
- ResetButton
- Clock1

Any component

Rename Delete

Media

rocket.png

Viewer

```

when Bullet.CollidedWith other
do
  set Bullet.Visible to false
  set ScoreLabel.Text to (ScoreLabel.Text + 1)
  set SaucerSprite.X to random integer from [0] to [2]
when Bullet.EdgeReached edge
do
  set Bullet.Visible to false
when ResetButton.Click
do
  set ScoreLabel.Text to 0
  
```

1 0 Show Warnings

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SpacInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Viewer

set Canvas1 . HeightPercent to

Canvas1 . LineWidth

set Canvas1 . LineWidth to

Canvas1 . PaintColor

set Canvas1 . PaintColor to [The name of a file containing the background image for the canvas]

when [Bullet . CollidedWith

do set Bullet . Visible to false

set ScoreLabel . Text to

set SaucerSprite . X to

when [Bullet . CollidedWith

do set Bullet . Visible to false

set ScoreLabel . Text + 1

Random integer from [0 to]

when [ResetButton . Click

do set ScoreLabel . Text to

set Canvas1 . Width to

set Canvas1 . WidthPercent to

Show Warnings

Canvas1

Control Logic Math Text Lists Colors Variables Procedures

Screen1

Canvas1

RocketSprite

SaucerSprite

Bullet

HorizontalArrangement1

Label1

ScoreLabel

ResetButton

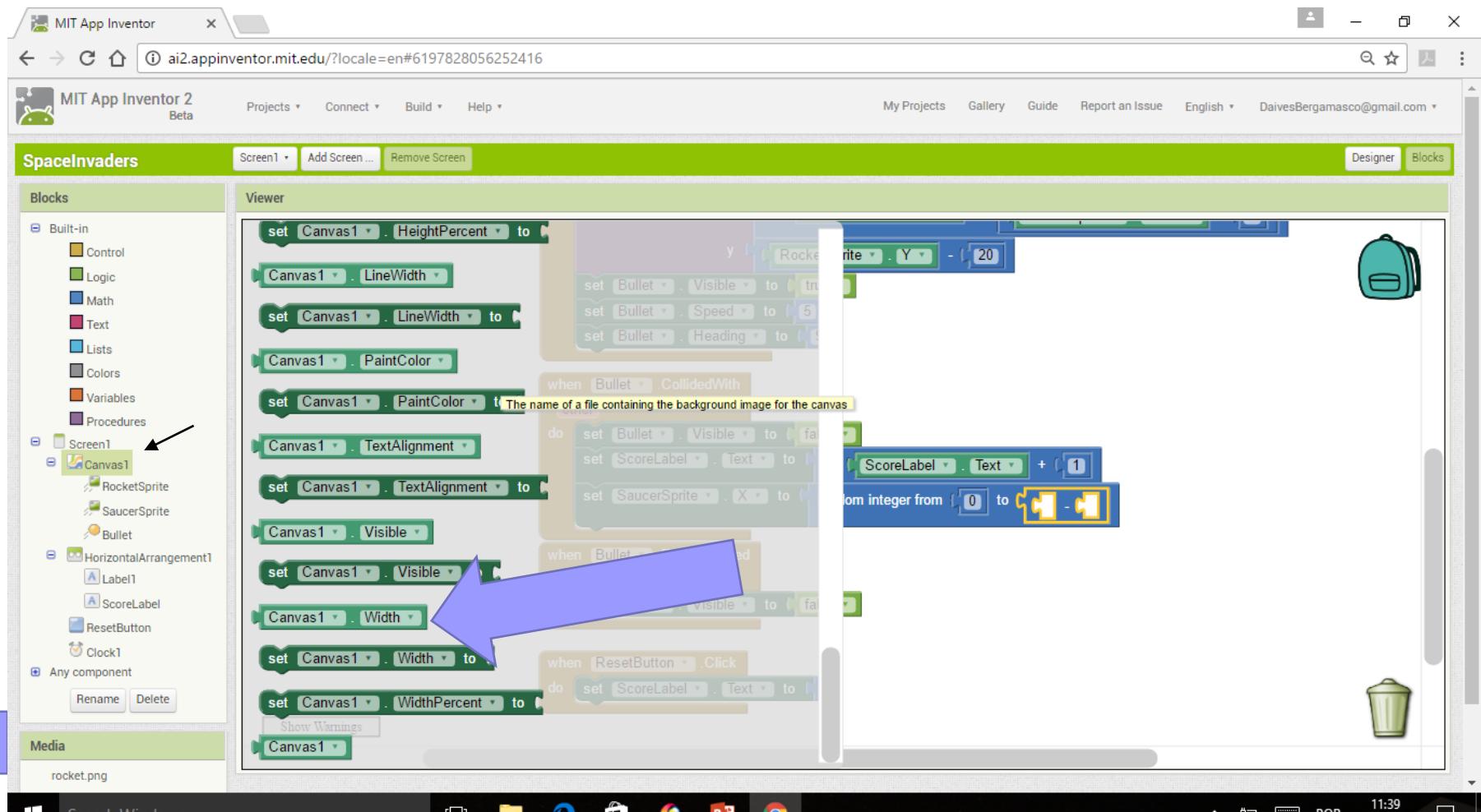
Clock1

Any component

Rename Delete

Media

rocket.png



MIT App Inventor X

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SpacelInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

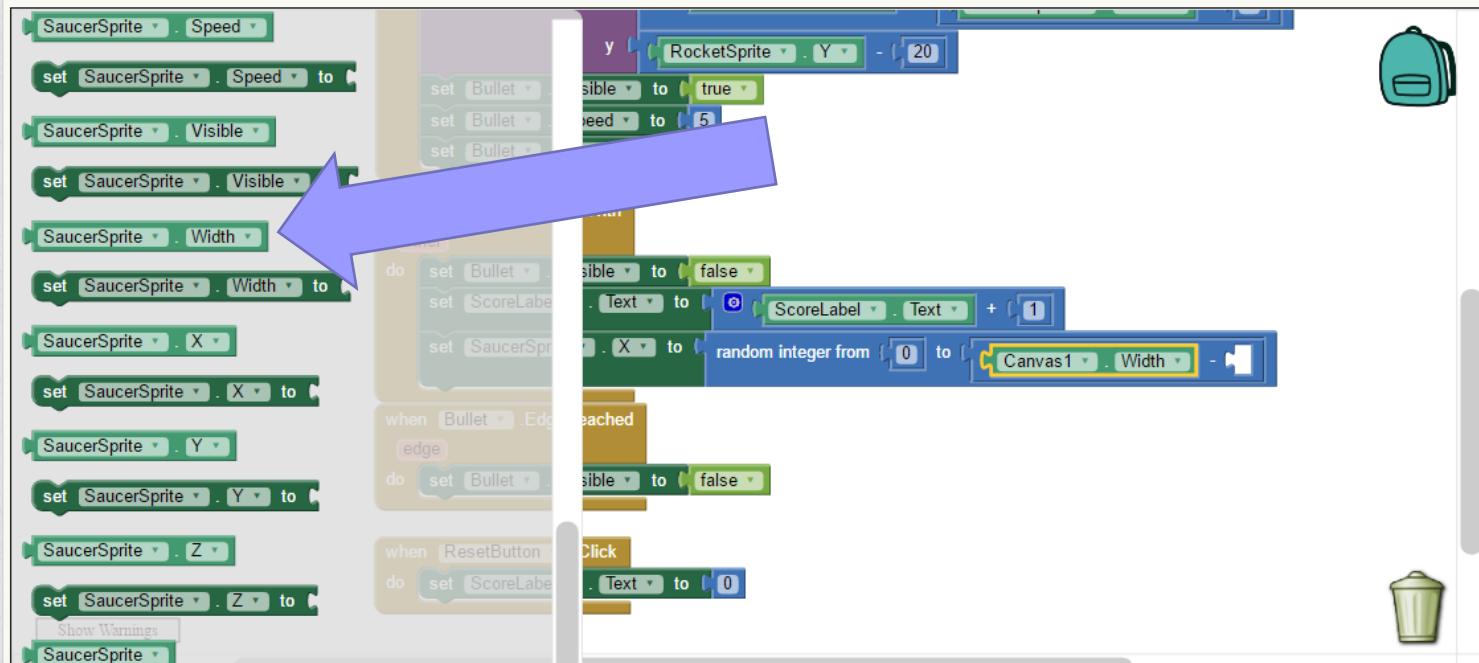
Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock1
- Any component
 - Rename
 - Delete

Media

rocket.png

Viewer



```

    SaucerSprite . Speed
    set SaucerSprite . Speed to [5]
    SaucerSprite . Visible
    set SaucerSprite . Visible to [true]
    SaucerSprite . Width
    set SaucerSprite . Width to [20]
    do
      set Bullet . Visible to [false]
      set ScoreLabel . Text to [ScoreLabel . Text + 1]
      set SaucerSprite . X to [random integer from 0 to Canvas1 . Width]
      when Bullet . Edge reached
        do
          set Bullet . Visible to [false]
      Click
      . Text to [0]
    end
  
```

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SpaceInvaders

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
 - HorizontalArrangement1
 - Label1
 - ScoreLabel
 - ResetButton
 - Clock
- Any component
 - Rename
 - Delete

Media

rocket.png
saucer.png
Upload File ...

Viewer

```

when [Clock1] .Timer
do
  call [Clock1] .Add [Days]
    instant
    quantity
  call [Clock1] .Add [Duration]
    instant
    quantity
  call [Clock1] .Add [Hours]
    instant
    quantity
  call [Clock1] .Add [Minutes]
    instant
    quantity
  call [Clock1] .Add [Months]
    instant
    quantity
  set [ScoreLabel] .Text to (1)
  set [SaucerSprite] .X to (random integer from 0 to [Canvas1] .Width - [SaucerSprite] .Width)
  Bullet .Visible to false
  when [Bullet] .EdgeReached [edge]
    do
      set [Bullet] .Visible to false
  when [ResetButton] .Click
    do
      set [ScoreLabel] .Text to 0
  end
end
  
```

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11:43 03/03/2017

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SpacInvaders

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- Canvas1
 - RocketSprite
 - SaucerSprite
 - Bullet
- HorizontalArrangement1
 - Label1
 - ScoreLabel
- ResetButton
- Clock1
- Any component

Viewer

```

do set Bullet . Visible to false
set ScoreLabel . Text to ScoreLabel . Text + 1
set SaucerSprite . X to random integer from 0 to Canvas1 . Width - SaucerSprite . Width

when Bullet . EdgeReached
edge
do set Bullet . Visible to false

when ResetButton . Click
do set ScoreLabel . Text to 0

when Clock1 . Timer
do set SaucerSprite . X to random integer from 0 to Canvas1 . Width - SaucerSprite . Width
  
```

⚠ 0 ⚡ 0 Show Warnings

rocket.png

Search Windows

11:45 03/03/2017

Jogo da Velha

MIT App Inventor X

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Projects Connect Built Help

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Start new project Delete Project Publish

My Projects

Name	Date Created	Date Modified	Published
SpaceInvaders	Mar 2, 2017, 2:05:33 PM	Mar 3, 2017, 11:46:41 AM	No
Fam01	Aug 8, 2016, 6:16:54 PM	Mar 2, 2017, 11:08:19 AM	No
VoltarparaCasa	Jul 14, 2016, 4:30:12 PM	Dec 16, 2016, 8:55:55 PM	No
Cadastrofusion	Nov 23, 2016, 7:50:09 PM	Dec 16, 2016, 8:13:48 PM	No
AgendaContatos	Nov 23, 2016, 8:04:50 PM	Nov 23, 2016, 8:04:50 PM	No
FusionTabletestID	Nov 20, 2016, 10:39:20 AM	Nov 23, 2016, 8:02:07 PM	No
FusionTable	Oct 23, 2016, 4:16:37 PM	Nov 20, 2016, 11:26:40 AM	No
Cad_clientes	May 28, 2016, 6:00:13 PM	Nov 20, 2016, 11:24:15 AM	No
Gatinho	Nov 9, 2016, 9:30:03 PM	Nov 20, 2016, 10:38:31 AM	No
Calculadoraaula3	Nov 9, 2016, 9:44:58 PM	Nov 15, 2016, 4:52:23 PM	No
Equacaoaula4	Nov 11, 2016, 9:32:01 PM	Nov 15, 2016, 4:50:09 PM	No
Aula05PaintPro	Nov 14, 2016, 8:36:38 PM	Nov 15, 2016, 4:49:03 PM	No
Aula6BlocoAnotacoes	Nov 14, 2016, 8:58:02 PM	Nov 15, 2016, 4:47:51 PM	No
Aula07AplicacaoSMS	Nov 14, 2016, 9:21:26 PM	Nov 15, 2016, 4:47:11 PM	No
Aula08aplicacaologinicial	Nov 14, 2016, 9:33:09 PM	Nov 15, 2016, 4:46:15 PM	No
Aula09Navegadorbasico	Nov 15, 2016, 11:14:40 AM	Nov 15, 2016, 4:45:13 PM	No
Aula10Caixadialogosealerta	Nov 15, 2016, 11:33:24 AM	Nov 15, 2016, 4:44:16 PM	No
Aula11Agendadecompromissos	Nov 15, 2016, 11:41:24 AM	Nov 15, 2016, 4:43:18 PM	No
Aula12Cadastrodeclientes	Nov 15, 2016, 12:08:42 PM	Nov 15, 2016, 4:42:49 PM	No
Aula13AplicacaoGPS	Nov 15, 2016, 4:20:12 PM	Nov 15, 2016, 4:41:11 PM	No
Fusiontable2	Nov 6, 2016, 10:28:04 AM	Nov 9, 2016, 9:30:04 PM	No
MoleMash	Oct 14, 2016, 4:50:05 PM	Nov 4, 2016, 4:08:10 PM	No
BDinternofam	Sep 4, 2016, 9:11:23 AM	Nov 4, 2016, 4:03:03 PM	No
PizzaParty_MIT_2016	Oct 23, 2016, 10:30:09 AM	Nov 4, 2016, 3:24:10 PM	No
VideoWall	Oct 23, 2016, 10:20:07 AM	Oct 23, 2016, 10:23:49 AM	No
GetTheGold	Oct 23, 2016, 10:12:06 AM	Oct 23, 2016, 10:14:10 AM	No
Contpassos	Sep 30, 2016, 4:55:41 PM	Oct 2, 2016, 10:57:23 AM	No
aula02	Sep 28, 2016, 7:33:09 PM	Sep 28, 2016, 7:33:09 PM	No
FAMTinyWEBDB	Sep 25, 2016, 10:33:40 AM	Sep 28, 2016, 7:17:03 PM	No
DABCelsiusFahrenheit	Sep 23, 2016, 8:32:10 PM	Sep 26, 2016, 1:25:25 PM	No
DAPmedia	Sep 22, 2016, 5:21:22 PM	Sep 26, 2016, 1:24:28 PM	No

Start new project

Import project (.aia) from my computer ...
Import project (.aia) from a repository ...
Delete Project
Save project
Save project as ...
Checkpoint
Export selected project (.aia) to my computer
Export all projects
Import keystore
Export keystore
Delete keystore

Search Windows

07:14 14/03/2017

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Start new project Delete Project Publish to Gallery

My Projects

Name	Date Created	Date Modified	Published
SpaceInvaders	Mar 2, 2017, 2:05:33 PM	Mar 3, 2017, 11:46:41 AM	No
Fam01	Aug 8, 2016, 6:16:54 PM	Mar 2, 2017, 11:08:19 AM	No
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AgendaContatos	Nov 23, 2016, 8:04:50 PM	Nov 23, 2016, 8:04:50 PM	No
FusionTabletestelD	Nov 20, 2016, 10:39:20 AM	Nov 23, 2016, 8:02:07 PM	No
FusionTable	Oct 23, 2016, 11:26:40 AM	Nov 20, 2016, 11:26:40 AM	No
Cad_clientes	May 2, 2016, 11:26:40 AM	Nov 20, 2016, 11:24:15 AM	No
Gatinho	Nov 9, 2016, 11:26:40 AM	Nov 20, 2016, 10:38:31 AM	No
Calculadoraaula3	Nov 9, 2016, 11:26:40 AM	Nov 15, 2016, 4:52:23 PM	No
Equacaoaula4	Nov 11, 2016, 11:26:40 AM	Nov 15, 2016, 4:50:09 PM	No
Aula05PaintPro	Nov 14, 2016, 11:26:40 AM	Nov 15, 2016, 4:49:03 PM	No
Aula06BlocoAnotacoes	Nov 14, 2016, 11:26:40 AM	Nov 15, 2016, 4:47:51 PM	No
Aula07AplicacaoSMS	Nov 14, 2016, 11:26:40 AM	Nov 15, 2016, 4:47:11 PM	No
Aula08aplicacaologininitial	Nov 14, 2016, 11:26:40 AM	Nov 15, 2016, 4:46:15 PM	No
Aula09Navegadorbasico	Nov 15, 2016, 11:33:24 AM	Nov 15, 2016, 4:45:13 PM	No
Aula10Caxiadialogosealerta	Nov 15, 2016, 11:41:24 AM	Nov 15, 2016, 4:44:16 PM	No
Aula11Agendadecompromissos	Nov 15, 2016, 12:08:42 PM	Nov 15, 2016, 4:43:18 PM	No
Aula12Cadastrodeclientes	Nov 15, 2016, 4:20:12 PM	Nov 15, 2016, 4:42:49 PM	No
Aula13AplicacaoGPS	Nov 6, 2016, 10:28:04 AM	Nov 15, 2016, 4:41:11 PM	No
Fusiontable2	Oct 14, 2016, 4:50:05 PM	Nov 9, 2016, 9:30:04 PM	No
MoleMash	Sep 4, 2016, 9:11:23 AM	Nov 4, 2016, 4:08:10 PM	No
BDinternofam	Oct 23, 2016, 10:30:09 AM	Nov 4, 2016, 4:03:03 PM	No
PizzaParty_MIT_2016	Oct 23, 2016, 10:20:07 AM	Nov 4, 2016, 3:24:10 PM	No
VideoWall	Oct 23, 2016, 10:12:06 AM	Oct 23, 2016, 10:23:49 AM	No
GetTheGold	Sep 30, 2016, 4:55:41 PM	Oct 23, 2016, 10:14:10 AM	No
Contpassos	Sep 28, 2016, 7:33:09 PM	Oct 2, 2016, 10:57:23 AM	No
aula02	Sep 25, 2016, 10:33:40 AM	Sep 28, 2016, 7:33:09 PM	No
FAMTinyWEBDB	Sep 23, 2016, 8:32:10 PM	Sep 28, 2016, 7:17:03 PM	No
DABCelsiusFahrenheit	Sep 22, 2016, 5:21:22 PM	Sep 26, 2016, 1:25:25 PM	No
DAPmedia	Sep 22, 2016, 5:21:22 PM	Sep 26, 2016, 1:24:28 PM	No

Create new App Inventor project

Project name: JogoVelha

Cancel OK

Search Windows

07:16
14/03/2017

MIT App Inventor

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Palette

User Interface

Layout

- HorizontalArrangement
- HorizontalScrollViewArrangement
- TableArrangement**
- VerticalArrangement
- VerticalScrollViewArrangement

Media

Drawing and Animation

Sensors

Social

Storage

Connectivity

LEGO® MINDSTORMS®

Experimental

Extension

Viewer

Display hidden components in Viewer

Check to see Preview on Tablet size

Screen1

TableArrangement1

Components

Properties

TableArrangement1

Columns: 3

Height: Automatic...

Width: Automatic...

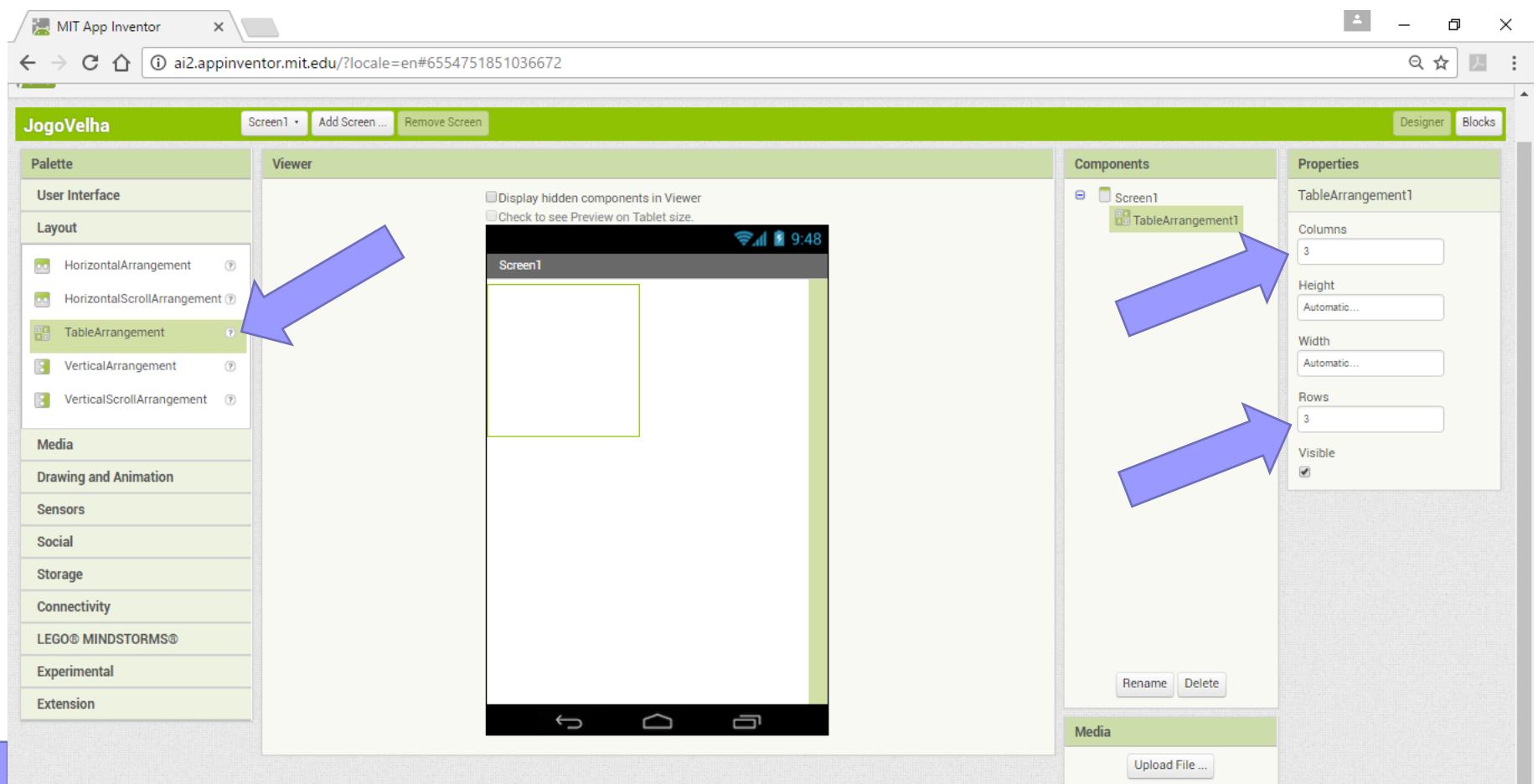
Rows: 3

Visible:

Rename Delete

Media

Upload File ...



Adicionar nove botões na tabela

MIT App Inventor

ai2.appinventor.mit Plocale=en#6554751851036672

Palette

User Interface

- Button
- CheckBox
- DatePicker
- Image
- Label
- ListPicker
- ListView
- Notifier
- PasswordTextBox
- Slider
- Spinner
- TextBox
- TimePicker
- WebViewer

Components

- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Properties

Button9	BackgroundColor Default
	Enabled <input checked="" type="checkbox"/>
	FontBold <input type="checkbox"/>
	FontItalic <input type="checkbox"/>
	FontSize 14.0
	FontTypeface default
	Height Automatic...
	Width Automatic...
	Image None...
	Shape default
	ShowFeedback <input checked="" type="checkbox"/>
	Text Text for Button9
	TextAlignment center : 1
	TextColor

Display hidden components in Viewer

Check to see Preview on Tablet size.

Screen1

Text for Button1 Text for Button2 Text for Button3

Text for Button4 Text for Button5 Text for Button6

Text for Button7 Text for Button8 Text for Button9

Screen1

Search Windows

07:21 14/03/2017

Apagar a propriedade texto de todos os botoes

MIT App Inventor

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Palette

User Interface

- Button
- CheckBox
- DatePicker
- Image
- Label
- ListPicker
- ListView
- Notifier
- PasswordTextBox
- Slider
- Spinner
- TextBox
- TimePicker
- WebViewer

Layout

Media

Drawing and Animation

Sensors

Social

Storage

Viewer

Display hidden components in Viewer
Check to see Preview on Tablet size.

Screen1

Text for Button2

Text for Button3

Text for Button4

Text for Buttons5

Text for Button6

Text for Button7

Text for Button8

Text for Button9

Components

- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Properties

Button2

BackgroundColor
Default

Enabled

FontBold

FontItalic

FontSize
14.0

FontTypeface
default

Height
Automatic...

Width
Automatic...

Image
None...

Shape
default

ShowFeedback

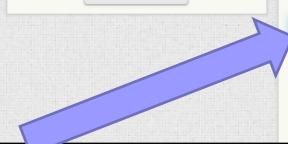
Text
Text for Button2

TextAlignment
center : 1

TextColor

Rename Delete

Upload File ...



MIT App Inventor

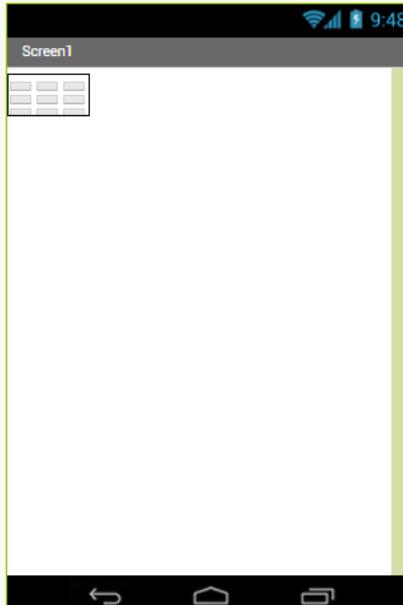
ai2.appinventor.mit.edu/?locale=en#6554751851036672

Palette

- User Interface
 - Button
 - CheckBox
 - DatePicker
 - Image
 - Label
 - ListPicker
 - ListView
 - Notifier
 - PasswordTextBox
 - Slider
 - Spinner
 - TextBox
 - TimePicker
 - WebViewer
- Layout
- Media
- Drawing and Animation
- Sensors
- Social
- Storage

Viewer

Display hidden components in Viewer
Check to see Preview on Tablet size.



Components

- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Screen1

AboutScreen

AlignHorizontal Left : 1

AlignVertical Top : 1

AppName JogoVelha

BackgroundColor White

BackgroundImage None...

CloseScreenAnimation Default

Icon None...

OpenScreenAnimation Default

ScreenOrientation Unspecified

Scalable

ShowListsAsJson

ShowStatusBar

Sizing

Media

Upload File ...

Search Windows

07:24 14/03/2017

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Palette

User Interface

- Button
- CheckBox
- DatePicker
- Image
- Label
- ListPicker
- ListView
- Notifier
- PasswordTextBox
- Slider
- Spinner
- TextBox
- TimePicker
- WebViewer

Viewer

Display hidden components in Viewer

Check to see Preview on Tablet size.

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Components

Properties

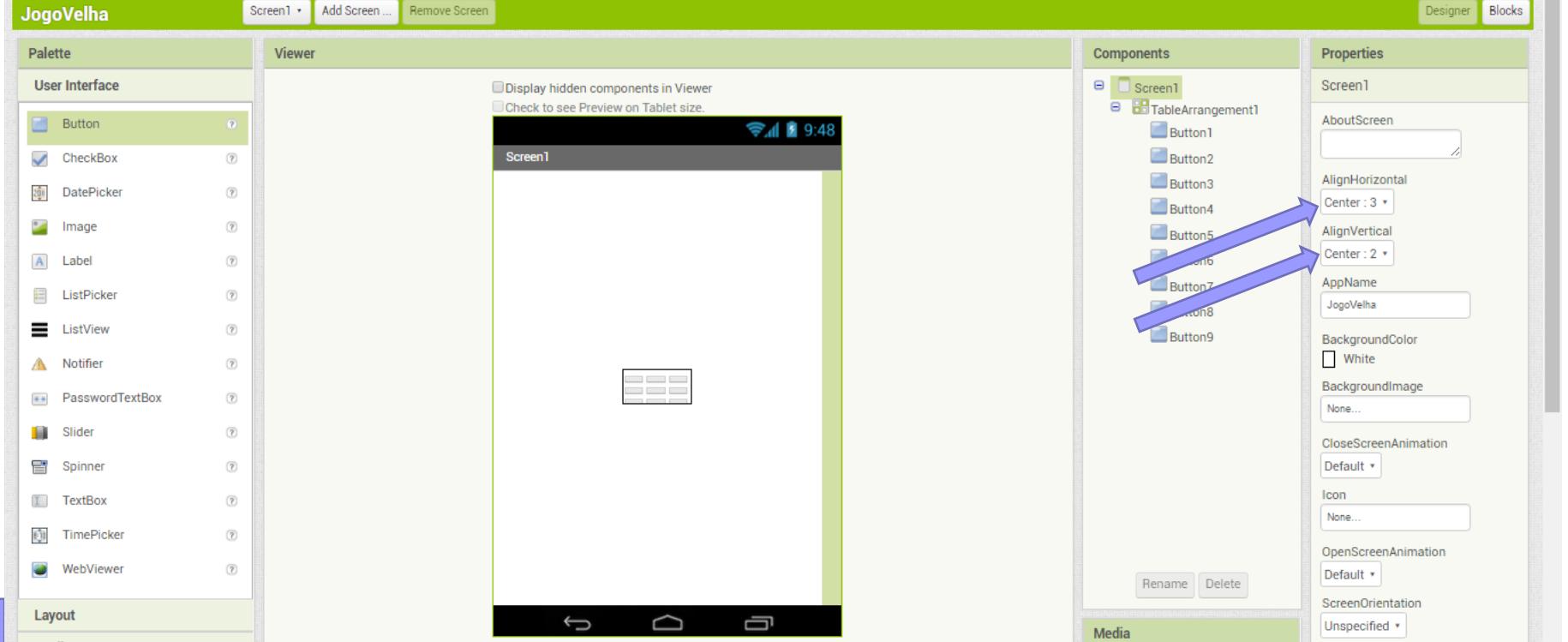
Screen1

- AboutScreen
- AlignHorizontal Center : 3
- AlignVertical Center : 2
- AppName JogoVelha
- BackgroundColor White
- BackgroundImage None...
- CloseScreenAnimation Default
- Icon None...
- OpenScreenAnimation Default
- ScreenOrientation Unspecified
- Scrollable

Rename Delete

Media

Upload File ...

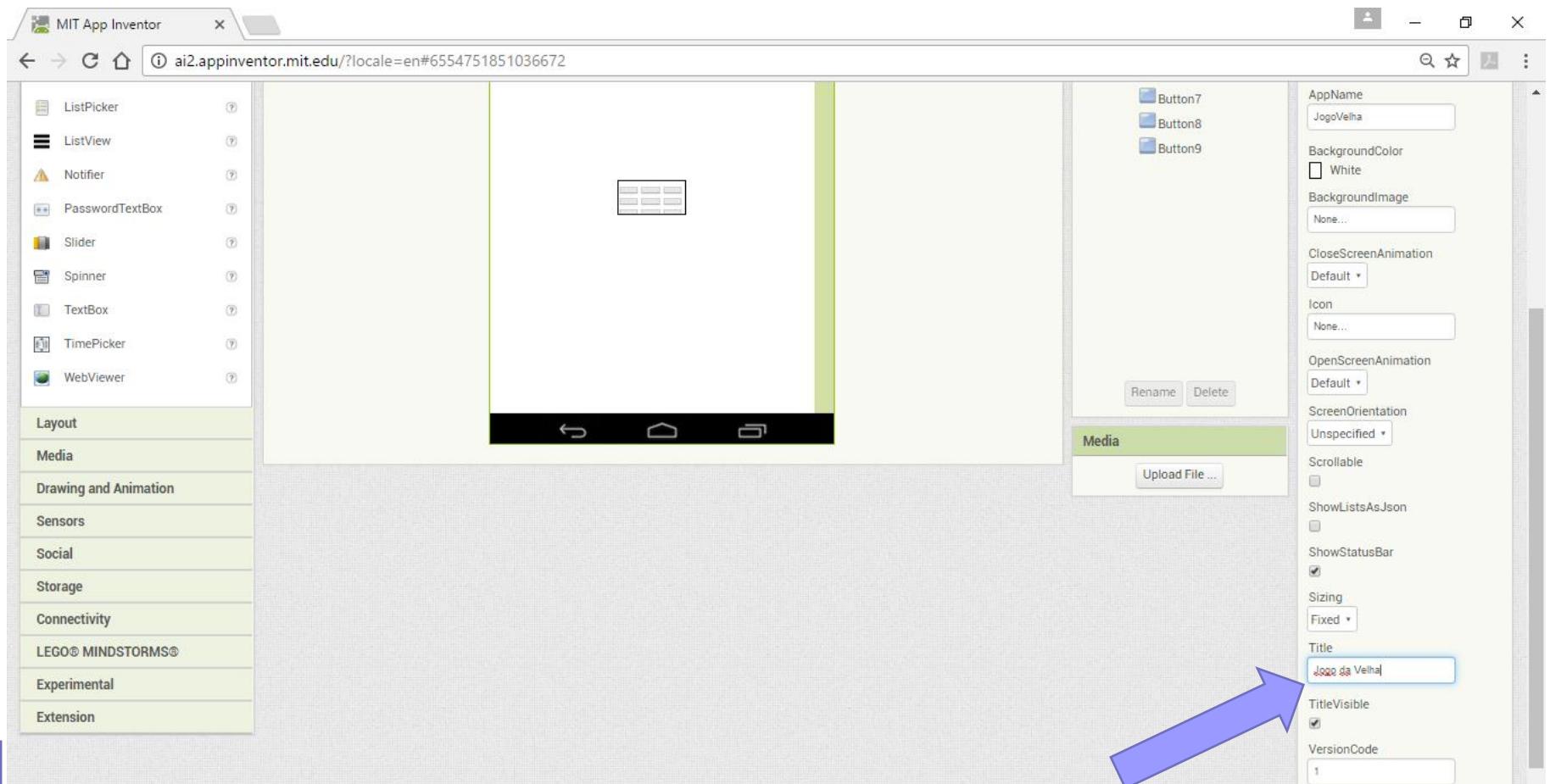


Search Windows

07:26 14/03/2017

MIT App Inventor

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The screenshot shows the MIT App Inventor development environment. On the left, a sidebar lists various components: ListPicker, ListView, Notifier, PasswordTextBox, Slider, Spinner, TextBox, TimePicker, and WebViewer. Below this, several categories are listed: Layout, Media, Drawing and Animation, Sensors, Social, Storage, Connectivity, LEGO® MINDSTORMS®, Experimental, and Extension. The main workspace displays a mobile application screen with a 3x3 grid button component in the center. To the right of the screen is a properties panel for the app. The properties panel includes fields for AppName (set to "Jogo da Velha"), BackgroundColor (set to "White"), BackgroundImage (set to "None..."), CloseScreenAnimation (set to "Default"), Icon (set to "None..."), OpenScreenAnimation (set to "Default"), ScreenOrientation (set to "Unspecified"), Scrollable (unchecked), ShowListsAsJson (unchecked), ShowStatusBar (checked), Sizing (set to "Fixed"), Title (set to "Jogo da Velha"), TitleVisible (checked), VersionCode (set to "1"), and VersionName (set to "1.0"). A blue arrow points from the bottom right towards the Title field in the properties panel.

MIT App Inventor

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Palette

User Interface

- Button
- CheckBox
- DatePicker
- Image
- Label
- ListView
- Notifier
- PasswordTextBox
- Slider
- Spinner
- TextBox
- TimePicker
- WebViewer

Layout

Media

Drawing and Animation

Sensors

Social

Storage

Components

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9
- Button10

Properties

Button10

BackgroundColor
Default

Enabled

FontBold

FontItalic

FontSize
14.0

FontTypeface
default

Height
Automatic...

Width
Automatic...

Image
None...

Shape
default

ShowFeedback

Text
Text for Button10

TextAlignment
center : 1

TextColor

Viewer

Display hidden components in Viewer

Check to see Preview on Tablet size.

Jogo da Velha

9:48

Text for Button10

Rename Component

Old name: Button10

New name:

Reset

Cancel

OK

Rename Delete

Search Windows

07:29 14/03/2017

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Palette

User Interface

- Button
- CheckBox
- DatePicker
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- Label
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- ListView
- Notifier
- PasswordTextBox
- Slider
- Spinner
- TextBox
- TimePicker
- WebViewer

Layout

Media

Drawing and Animation

Sensors

Social

Storage

Viewer

Display hidden components in Viewer

Check to see Preview on Tablet size

Jogo da Velha

9:48

Reset

Components

- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9
 - Reset

Properties

Reset

BackgroundColor
Default

Enabled

FontBold

FontItalic

FontSize
14.0

FontTypeface
default

Height
Automatic...

Width
Automatic...

Image
None...

Shape
default

ShowFeedback

Text
Reset

TextAlignment
center : 1

TextColor

Rename Delete

Upload File ...



MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#6554751851036672

Palette

User Interface

- Button
- CheckBox
- DatePicker
- Image
- Label
- ListPicker
- ListView
- Notifier**
- PasswordTextBox
- Slider
- Spinner
- TextBox
- TimePicker
- WebViewer

Layout

Media

Drawing and Animation

Sensors

Social

Storage

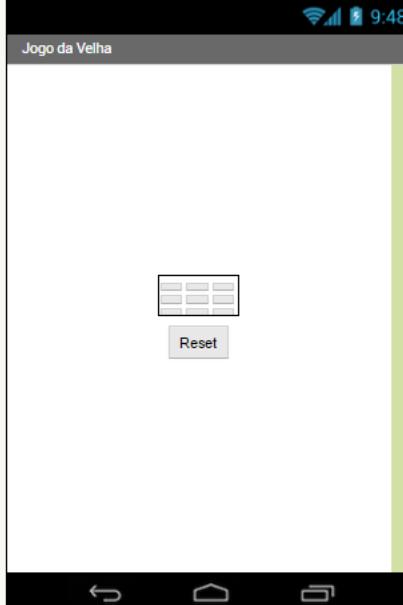
Viewer

Display hidden components in Viewer

Check to see Preview on Tablet size.

Jogo da Velha

9:48



Non-visible components

Notifier1

Components

- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9
 - Reset
 - Clock1
 - Notifier1**

Properties

Notifier1

- BackgroundColor
Dark Gray
- NotifierLength
Long
- TextColor
White

Rename Delete

Media

Upload File ...



Search Windows

07:32
14/03/2017

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JogoVelha Screen1 Add Screen... Remove Screen Designer Blocks

Palette

User Interface

- Button
- CheckBox
- DatePicker
- Image
- Label
- ListPicker
- ListView
- Notifier
- PasswordTextBox
- Slider
- Spinner
- TextBox
- TimePicker
- WebViewer

Viewer

Display hidden components in Viewer
Check to see Preview on Tablet size.

Jogo da Velha

9:48

Non-visible components

Components

- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9
 - Reset
 - Clock1
 - Notifier1

Properties

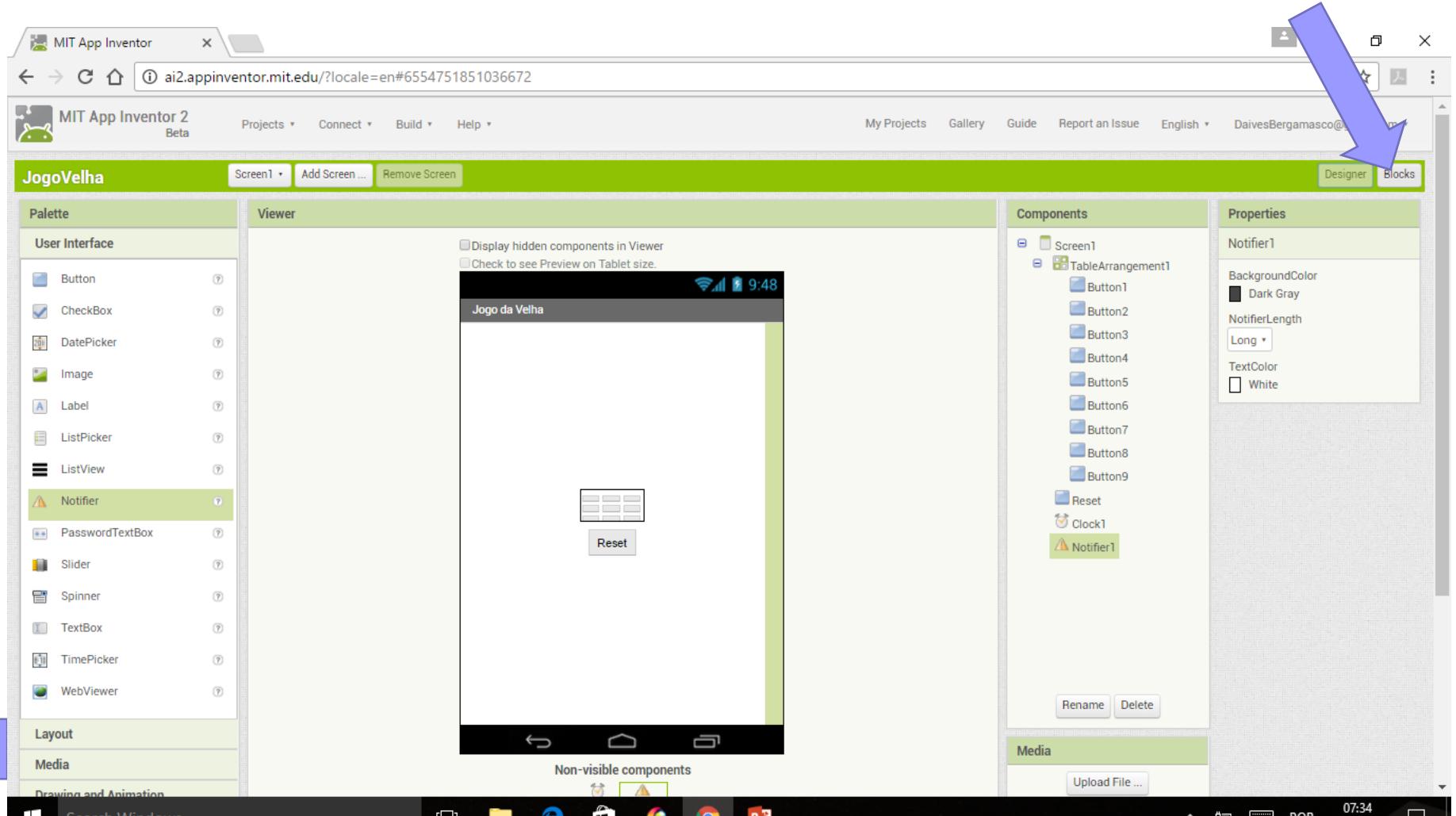
Notifier1

BackgroundColor Dark Gray
NotifierLength Long
TextColor White

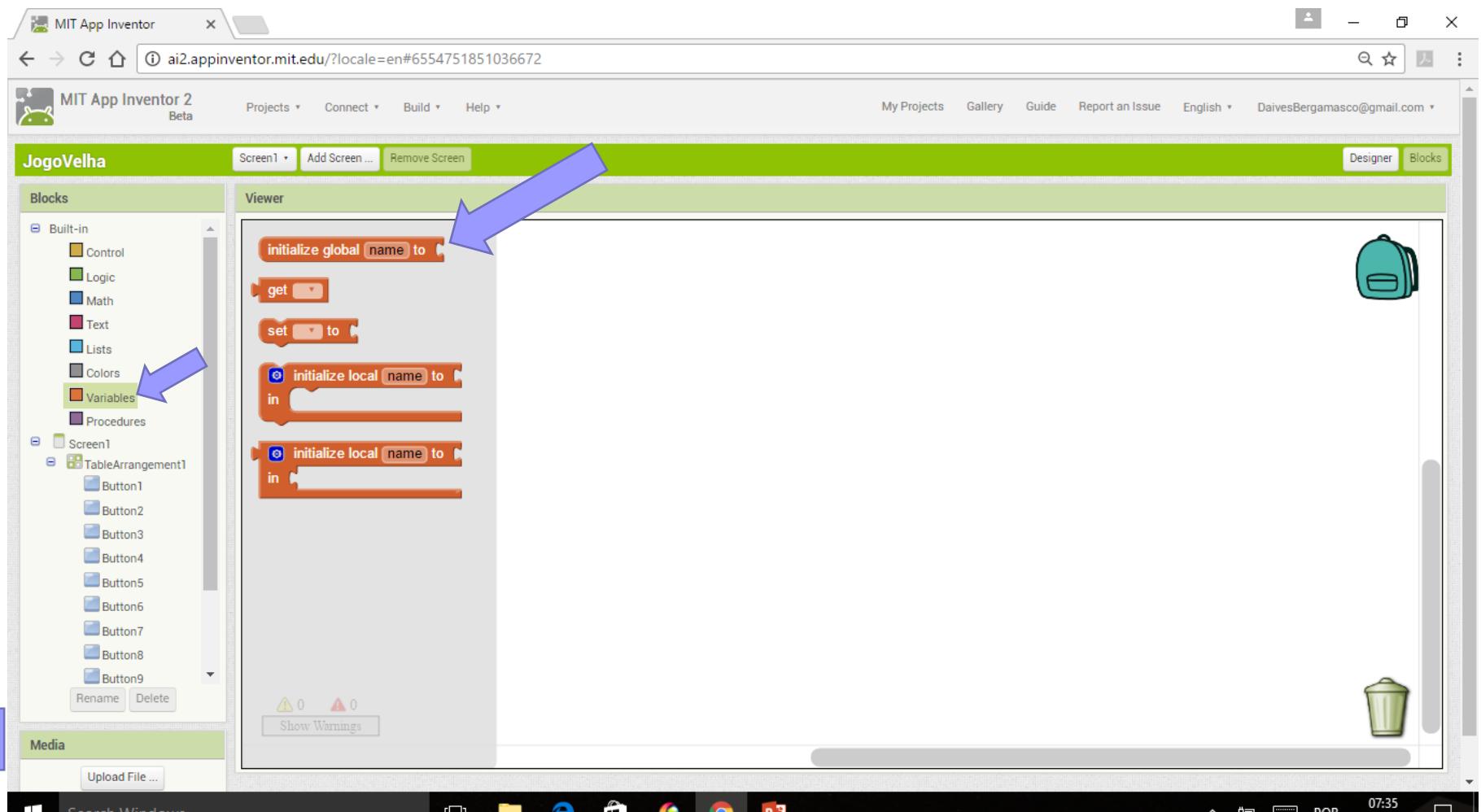
Rename Delete

Media

Upload File ...



Criar duas variáveis globais



The screenshot shows the MIT App Inventor 2 interface with a project titled "JogoVelha". The left sidebar lists categories under "Blocks": Built-in (Control, Logic, Math, Text, Lists, Colors), Variables (highlighted with a blue arrow), and Procedures. The "Variables" category contains blocks for initializing both global and local variables. In the "Viewer" pane, several blocks are visible, including "initialize global [name] to [value]" and two "initialize local [name] to [value]" blocks. A blue arrow points from the "Variables" category in the sidebar to the "initialize global" block in the viewer.

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

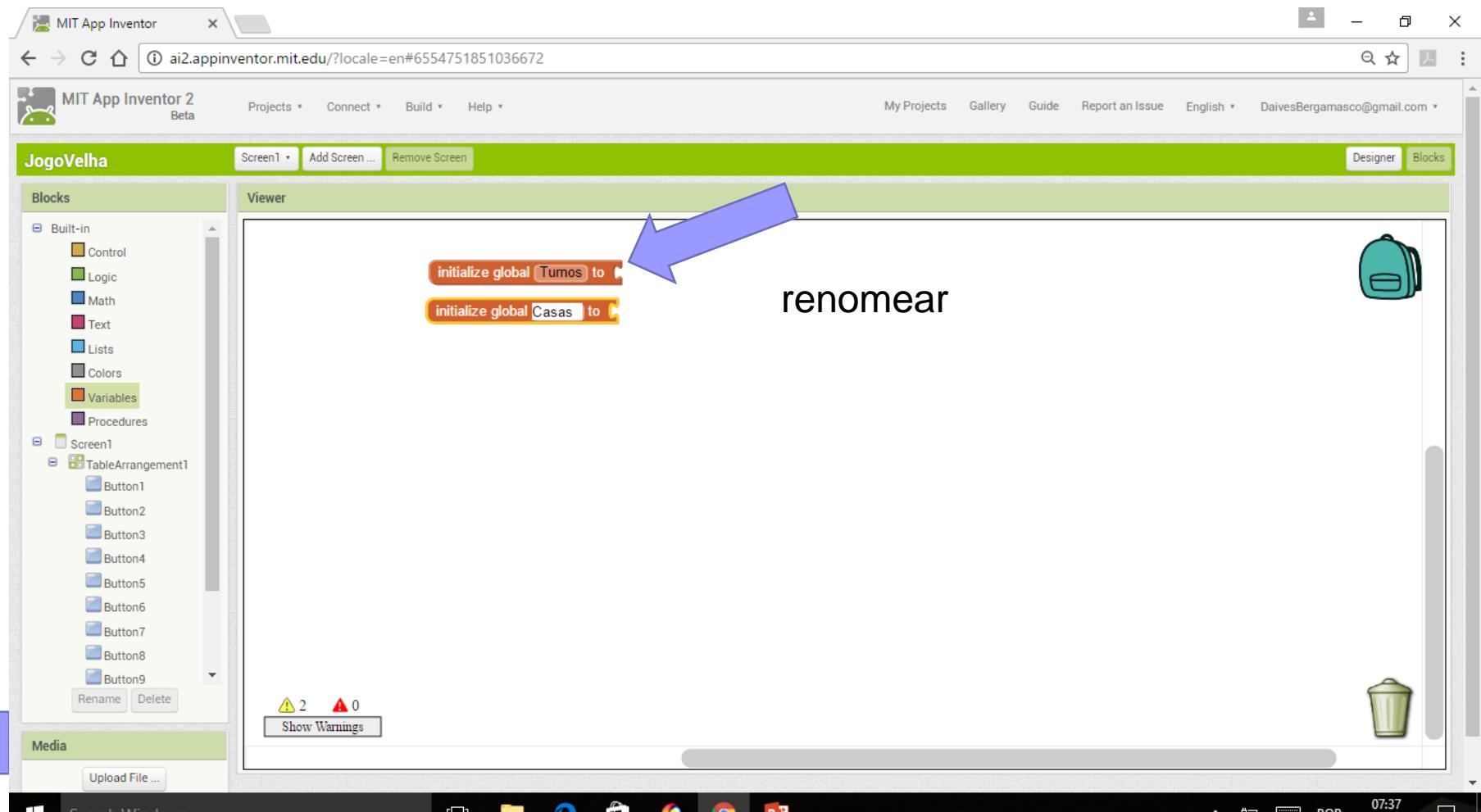
Viewer

initialize global Turnos to []

initialize global Casas to []

renomear

2 0 Show Warnings



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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer

0

initialize global **os** to

initialize global Casas to

= + - × / ^

random integer from [1] to [100]

random fraction

random set seed to

min

Designer

Blocks

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Media

Upload File ...

Viewer

create empty list

make a list

add items to list

is in list? thing

length of list

is list empty? list

pick a random item

index in list

select list item

insert list item

Turnos to 1

Casas to

initialize glob

initialize glob

item

list

Show Warnings

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Rename Delete

Media

Upload File ...

Viewer

```

when [Screen1] BackPressed
do [Initialize global Turnos to 1]
when [Screen1] ErrorOccurred
component functionName errorNumber message
do [Create empty list]
when [Screen1] Initialize
do []
when [Screen1] OtherScreenClosed
otherScreenName result
do []
when [Screen1] ScreenOrientationChanged
do []
call [Screen1] HideKeyboard
[Screen1] AboutScreen
set [Screen1] AboutScreen to
  
```

07:41 14/03/2017

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

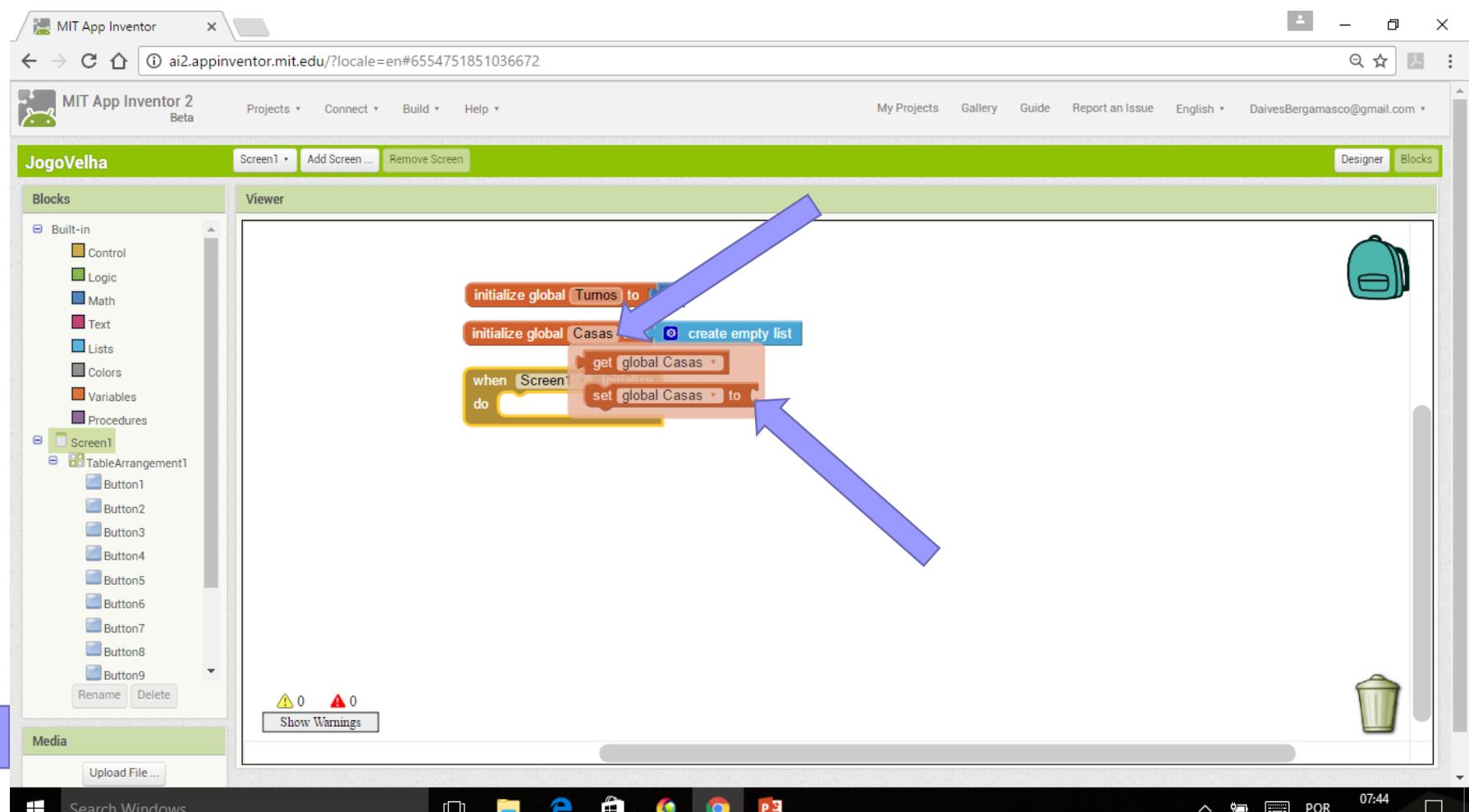
- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer

```
initialize global [Turnos] to [1]
initialize global [Casas] to [create empty list]
get global [Casas]
when [Screen1] [initialized]
do [set global [Casas] to [get global [Casas]]]
```

0 0 Show Warnings



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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer

create empty list

make a list

add items to list list item

is in list? thing list

length of list list

is list empty? list

pick a random item list

index in list thing list

select list item list index

insert list item list index

initialize local Turnos to 1

initialize local Casas to create empty list

when Screen1 .Initialize do set global Casas to






Media

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Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer

initialize global [Turnos] to 1
 initialize global [Casas] to create empty list
 when [Screen1 .Initialize]
 do set global Casas to make a list

Colocar 9 elementos

item
 list
 item
 item
 item
 item
 item
 item
 item
 item

1 0 Show Warnings

Search Windows

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in Control Logic Math Text Lists Colors Variables Procedures

Screen1 TableArrangement1 Button1 Button2 Button3 Button4 Button5 Button6 Button7 Button8 Button9

Rename Delete

Viewer

```

set Button1 . Image to
Button1 . ShowFeedback
initialize global variables
  Turnos to 1
  Casas to create empty list
when [Screen1 Start] do
  set global Casas to make a list
  Initialize
    set Button1 . Text to
    set Button1 . TextColor to
    set Button1 . TextColor to
    set Button1 . Visible to
    set Button1 . Visible to
    set Button1 . Width to
    set Button1 . Width to
    set Button1 . WidthPercent to
    show warning message
    Button1 . ShowFeedback
  end
end
  
```

Designer Blocks

Uploader

Upload File ...

Search Windows

Windows Taskbar: File Explorer, Edge, Chrome, File Manager, Power User

System Tray: Battery, Network, Volume, Date/Time (07:48, 14/03/2017)

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Blocks

Built-in

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

Screen1

TableArrangement1

Button1

Button2

Button3

Button4

Button5

Button6

Button7

Button8

Button9

Rename Delete

Viewer

initialize global Turnos to 1

initialize global Casas to [create empty list]

when Screen1 .Initialize do set global Casas to [make a list [Button1]]

Duplicar e renomear

1 0 Show Warnings

Search Windows

Upload File ...

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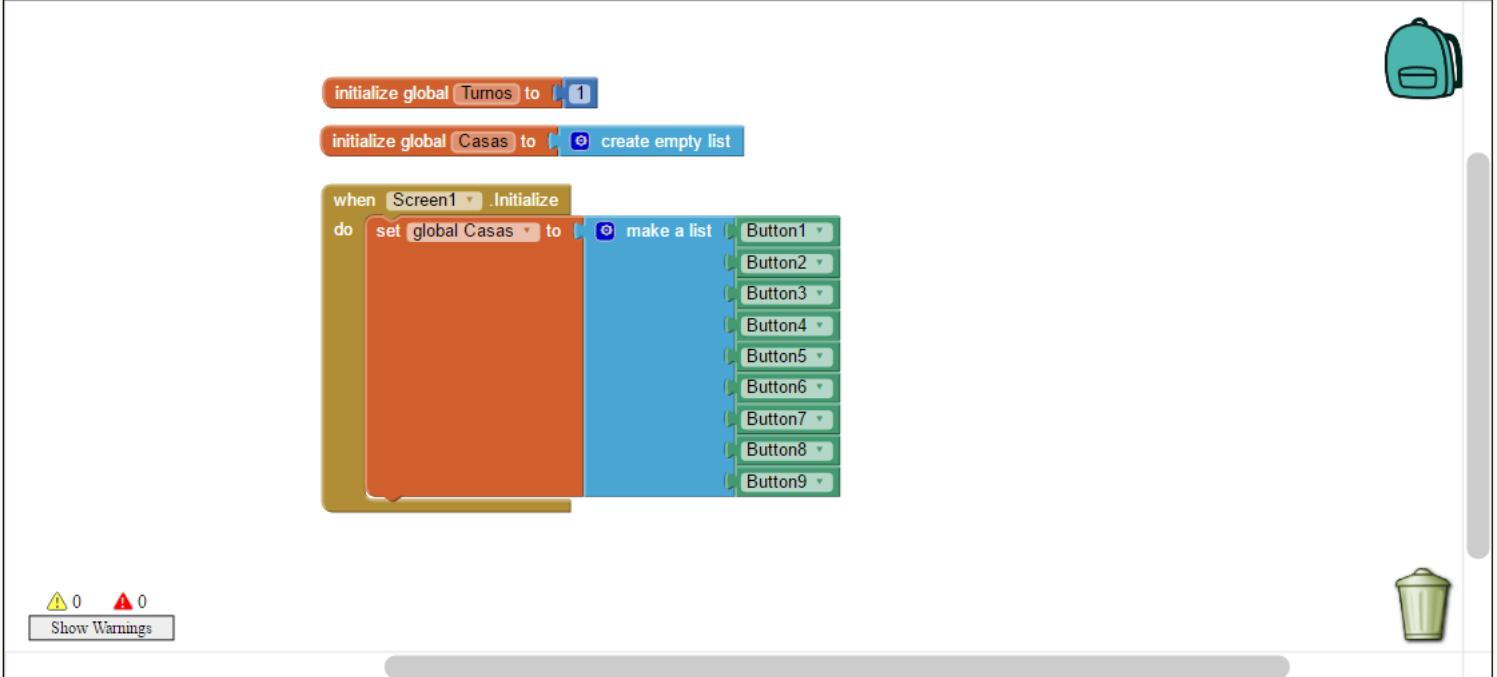
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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Viewer



```
initialize global Turnos to 1
initialize global Casas to create empty list
when Screen1 .Initialize
do
  set global Casas to make a list [Button1 ; Button2 ; Button3 ; Button4 ; Button5 ; Button6 ; Button7 ; Button8 ; Button9]
```

0 0 Show Warnings

Search Windows Upload File ...

File Explorer Internet Explorer Microsoft Edge Google Chrome Microsoft Word Microsoft Powerpoint

07:51 POR 14/03/2017

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JogoVelha

Screen1 Add Screen ... Remove Screen

Designer Blocks

Blocks

Built-in Control Logic Math Text Lists Colors Variables Procedures

Screen1

TableArrangement1

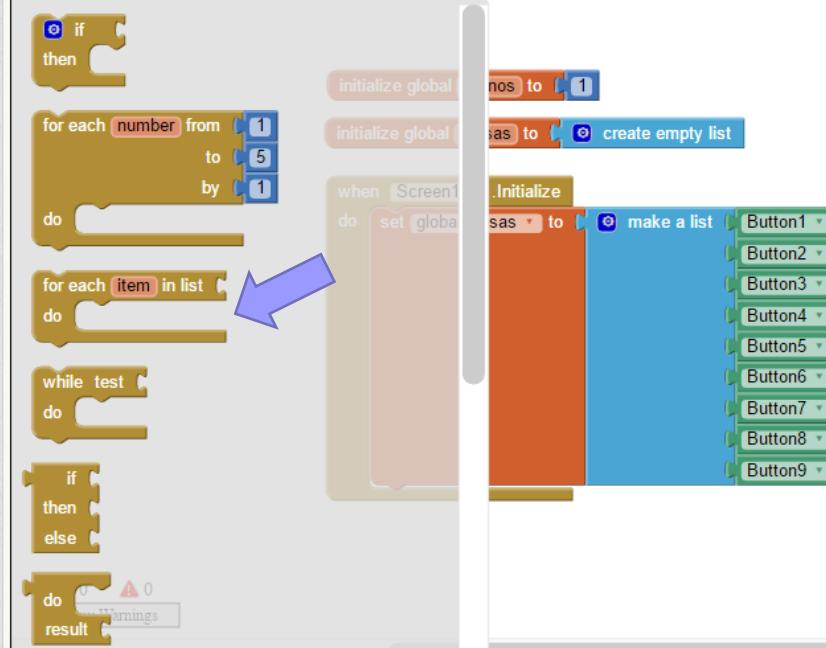
- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Media

Upload File ...

Viewer



```

if then
  for each number from 1 to 5 by 1
    do
      for each item in list
        do
          while test
            do
              if then else
                do result
  initialize global var1 to 1
  initialize global var2 to create empty list
  when [Screen1.Initialize] do
    set [var1] to 1
    make a list [var2]
    add [Button1] to [var2]
    add [Button2] to [var2]
    add [Button3] to [var2]
    add [Button4] to [var2]
    add [Button5] to [var2]
    add [Button6] to [var2]
    add [Button7] to [var2]
    add [Button8] to [var2]
    add [Button9] to [var2]
  end
end
  
```

Designer Blocks

Blocks

Control Logic Math Text Lists Colors Variables Procedures

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Media

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Search Windows

Windows Taskbar icons: File Explorer, Edge, Microsoft Store, Google Chrome, Microsoft Word.

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer

```

  initialize global Turnos to 1
  initialize global Casas to create empty list

  when Screen1.Initialize
    do set global Casas to make a list [Button1, Button2, Button3, Button4, Button5, Button6, Button7, Button8, Button9]
      for each item in list
        do
  
```

1 0 Show Warnings

Media Upload File ...

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Reset

Clock1

Notifier1

Any component

Any Button

Any Clock

Any Notifier

Any TableArrangement

Rename Delete

Media

Upload File ...

Viewer

set Button. **FontItalic** of component to

make a list

Button1

Button2

Button3

Button4

Button5

Button6

Button7

Button8

Button9

set Button. **FontSize** of component to

set Button. **Height** of component to

set Button. **Height** of component to

set Button. **HeightPercent** of component to

Button. **Image**

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9
 - Reset
 - Clock1
 - Notifier1
- Any component
 - Any Button
 - Any Clock
 - Any Notifier
 - Any TableArrangement

Viewer

```

  initialize global [turnos] to [1]
  initialize global [Casas] to [create empty list]

  when [Screen1.Initialize]
    do [set global Casas to [make a list [Button1, [Button2, [Button3, [Button4, [Button5, [Button6, [Button7, [Button8, [Button9, [Reset]]]]]]]]]]]
       for each [item] in list
         do [set Button. Height of component to [100]]
  
```

2 0 Show Warnings

Media

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9
- Reset
- Clock1
- Notifier1
- Any component
 - Any Button
 - Any Clock
 - Any Notifier
 - Any TableArrangement

Viewer

```

  initialize global turnos to 1
  initialize global Casas to create empty list
  get global Casas
when Screen1启动
do set global Casas to list [ ]
  set [Button1] to item 1
  set [Button2] to item 2
  set [Button3] to item 3
  set [Button4] to item 4
  set [Button5] to item 5
  set [Button6] to item 6
  set [Button7] to item 7
  set [Button8] to item 8
  set [Button9] to item 9
for each item in list
do set Button1 Height of component to
  
```

2 Warnings 0 Errors

Show Warnings

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9
- Reset
- Clock1
- Notifier1
- Any component
 - Any Button
 - Any Clock
 - Any Notifier
 - Any TableArrangement

Viewer

```

  initialize global Turnos to 1
  initialize global Casas to [ create empty list ]
  when Screen1.Initialize
    do
      set global Casas to [ make a list [ Button1, Button2, Button3, Button4, Button5, Button6, Button7, Button8, Button9 ] ]
      for each item in list get global Casas
        do
          set Button. Height of component to
  
```

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Screen1

- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9
- Reset
- Clock1
- Notifier1
- Any component
 - Any Button
 - Any Clock
 - Any Notifier
 - Any TableArrangement

Viewer

```

  initialize global Turnos to 1
  initialize global Casas to create empty list

  when Screen1.Initialize
    do
      set global Casas to make a list [Button1, Button2, Button3, Button4, Button5, Button6, Button7, Button8, Button9]
      for each item in list get global Casas
        do
          set get item to
          set item to
    end

  end
  
```

initialize global Turnos to 1
 initialize global Casas to create empty list

when Screen1.Initialize
 do
 set global Casas to make a list [Button1, Button2, Button3, Button4, Button5, Button6, Button7, Button8, Button9]

for each item in list get global Casas
 do
 set get item to
 set item to

Designer Blocks

Blocks

Screen1

TableArrangement1

Button1

Button2

Button3

Button4

Button5

Button6

Button7

Button8

Button9

Reset

Clock1

Notifier1

Any component

Any Button

Any Clock

Any Notifier

Any TableArrangement

Rename Delete

Media

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9
- Reset
- Clock1
- Notifier1
- Any component
 - Any Button
 - Any Clock
 - Any Notifier
 - Any TableArrangement

Viewer

```

  initialize global turns to 1
  initialize global Casas to create empty list

  when Screen1.Initialize
    do set global Casas to make a list [Button1, Button2, Button3, Button4, Button5, Button6, Button7, Button8, Button9]
    for each item in list get global Casas
      do set Button. Height of component get item to
  
```

1 0 Show Warnings

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

set Screen1 . OpenScreenAnimation to
Screen1 . ScreenOrientation
set Screen1 . ScreenOrientation to
Screen1 . Scrollable
set Screen1 . Scrollable to
Screen1 . ShowStatusBar
set Screen1 . ShowStatusBar to
Screen1 . Title
set Screen1 . Title to
Screen1 . TitleVisible component
set Screen1 . TitleVisible to
Screen1 . Width
Show Warnings
Screen1
  
```

Designer Blocks

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Viewer

```

  initialize global [turnos] to [1]
  initialize global [Casas] to [create empty list]

  when [Screen1.Initialize]
    do [set global Casas to [make a list [Button1, Button2, Button3, Button4, Button5, Button6, Button7, Button8, Button9]]]
    do [for each item in list [get global Casas]
      do [set Button. Height of component [get item] to [Screen1.Width / 3]]
    ]
  
```

Construir a conta Largura da tela / 3

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Viewer

```

  initialize global [turnos] to [1]
  initialize global [Casas] to [create empty list]

  when [Screen1.Initialize]
    do [set global Casas to [make a list [Button1, Button2, Button3, Button4, Button5, Button6, Button7, Button8, Button9]]]
    do [for each [item] in list [get global Casas]
      do [set Button. Height of component [get item] to [Screen1.Width / 3]]]
  
```

Duplicar este item

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math**
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Viewer

```

when [Screen1.Initialize]
do
  set [global Casas] to [make a list]
    [Button1]
    [Button2]
    [Button3]
    [Button4]
    [Button5]
    [Button6]
    [Button7]
    [Button8]
    [Button9]
  for each [item] in list [get [global Casas]]
    do
      set [Button1 Height] of component [get [item]] to [Screen1.Width / 3]
      set [Button1 Width] of component [get [item]] to [Screen1.Width / 3]
  
```

Trocar por altura por largura

Show Warnings

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks Viewer

```

when Screen1.Initialize
do
  set global Casas to make a list [Button1, Button2, Button3, Button4, Button5, Button6, Button7, Button8, Button9]
  for each item in list
    do
      set Button. Height of component get item to Screen1.Width / 3
      set Button. Width of component get item to Screen1.Width / 3
  end
end
  
```

Rename Delete Show Warnings

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duplicar

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in Control Logic Text Lists Colors Variables Procedures

Screen1 TableArrangement1 Button1 Button2 Button3 Button4 Button5 Button6 Button7 Button8

Viewer

```

for each item in list [get global Casas]
do [set Button. Height of component get item to Screen1 . Width / 3]
  [set Button. Width of component get item to Screen1 . Width / 3]
  [set Button. FontSize of component get item to Screen1 . Width / 5]
end
  
```

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Viewer

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

Button9

```

for each item in list get global Casas
do set Button. Height of component to get item
  set Button. Width of component to Screen1. Width / 3
  set Button. FontSize of component to get item
    set Button. Width of component to Screen1. Width / 5
  
```

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JogoVelha Screen1 Add Screen... Remove Screen Designer Blocks

Blocks

Viewer

for each item in list get global Casas do set Button. Height of component get item to Screen1 . Width / 3
 set Button. Width of component get item to Screen1 . Width / 3
 set Button. FontSize of component get item to Screen1 . Width / 5
 set Button. Enabled of component get item to Screen1 . Width / 5

lixeira

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

  true
  each item in list
    do
      set Button. Height of component to get item
      set Button. Width of component to Screen1.Width / 3
      set Button. Width of component to Screen1.Width / 3
      set Button. FontSize of component to get item
      set Button. Enabled of component to get item
  end
  false
  not
  = and or
  set Button. Enabled of component to get item
  
```

1 0 Show Warnings

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Viewer

```

for each item in list [get global Casas]
do
  set Button1. Height [of component get item to Screen1.Width / 3]
  set Button1.Width [of component get item to Screen1.Width / 3]
  set Button1.FontSize [of component get item to Screen1.Width / 5]
  set Button1.Enabled [of component get item to true]

```

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

Rename Delete

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Criação do procedimento Reset

Screenshot of the MIT App Inventor 2 interface showing the creation of a 'Reset' procedure.

The project is titled "JogoVelha".

The left sidebar shows the "Blocks" palette with categories: Built-in, Procedures, Screen1, and TableArrangement1. A blue arrow points from the "Procedures" category to the "to procedure" blocks in the viewer.

The "Viewer" pane displays the following code:

```

  (to procedure [item in list])
    do [set Button9. Height to (get global Casas * get item)]
    do [set Button9. Width to (Screen1. Width / 3)]
    do [set Button9. FontSize to (Screen1. Width / 5)]
    do [set Button9. Enabled to true]
  end
  (to procedure [result])
    result
  end

```

The code uses the `set Button9. [Property]` blocks to reset the properties of Button9 based on the value of the variable `Casas`.

Construir o seguinte procedimento de Reset

Screenshot of the MIT App Inventor 2 Designer interface showing a project titled "JogoVelha".

The project contains one screen, "Screen1", which includes a "TableArrangement1" component containing nine buttons labeled "Button1" through "Button9".

The "Blocks" panel on the left shows the following code for the "Reset" procedure:

```

  (to [Reset])
    do [set [global Casas] to <list>
      make a list [Button1
                   Button2
                   Button3
                   Button4
                   Button5
                   Button6
                   Button7
                   Button8
                   Button9]
      for each [item] in list [get [global Casas]
        do [set [Button1.Text] of component [get [item]] to <empty>
            set [Button1.Enabled] of component [get [item]] to true]
      ]
    ]
  
```

The code uses the "TableArrangement1" component's list of buttons to reset the text and enable status of each button.

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in Control Logic Math Text Lists Colors Variables Procedures

Screen1 TableArrangement1 Button1 Button2 Button3 Button4 Button5 Button6 Button7 Button8 Button9

Viewer

```

  to procedure [Reset]
    do [do [set global Casas to [make a list
      to procedure [result]
        call [Reset]
        Call a procedure with no return value.
      end
      for each item in list [get global Casas
        do [set Button1.Text to [of component [get item
          to [set Button1.Enabled to [true
        end
      end
    end
  end
  
```

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Viewer

for each [item] in list [get global Casas]
 do [set Button1.Text of component to " "]
 [set Button1.Enabled of component to true]

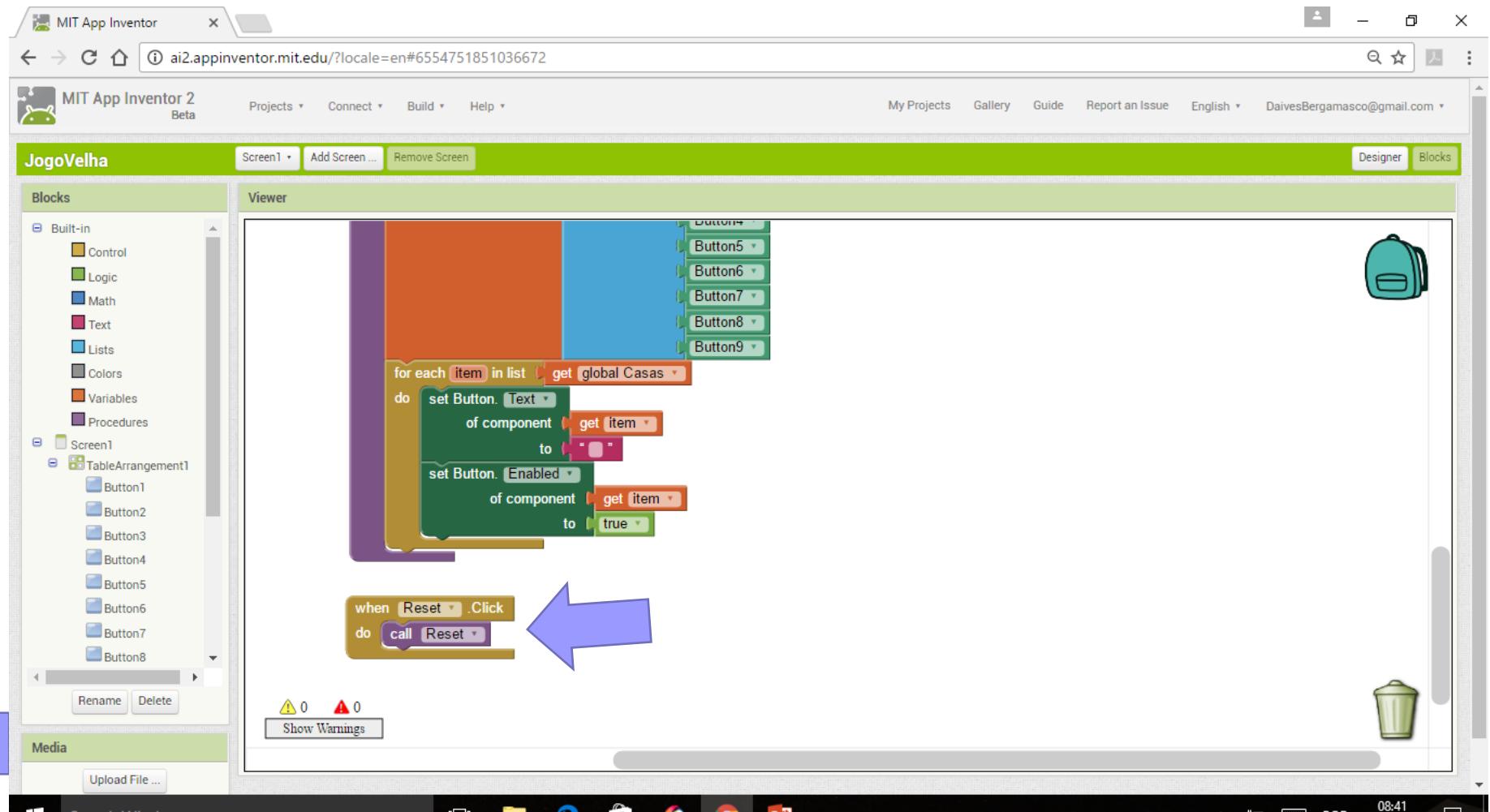
when [Reset].Click
 do [call Reset]

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Trabalhando com os botões

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrange
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

when [Button1].Click
do
  component [set item to]
    [get item true]

when [Button1].GotFocus
do
  component [set item to]
    [get item true]

when [Button1].LongClick
do

when [Reset].Click
when [Button1].LostFocus
do

when [Button1].TouchDown
do

when [Button1].TouchUp
do

[Button1].BackgroundColor
  set [Button1].BackgroundColor to

```

Rename Delete

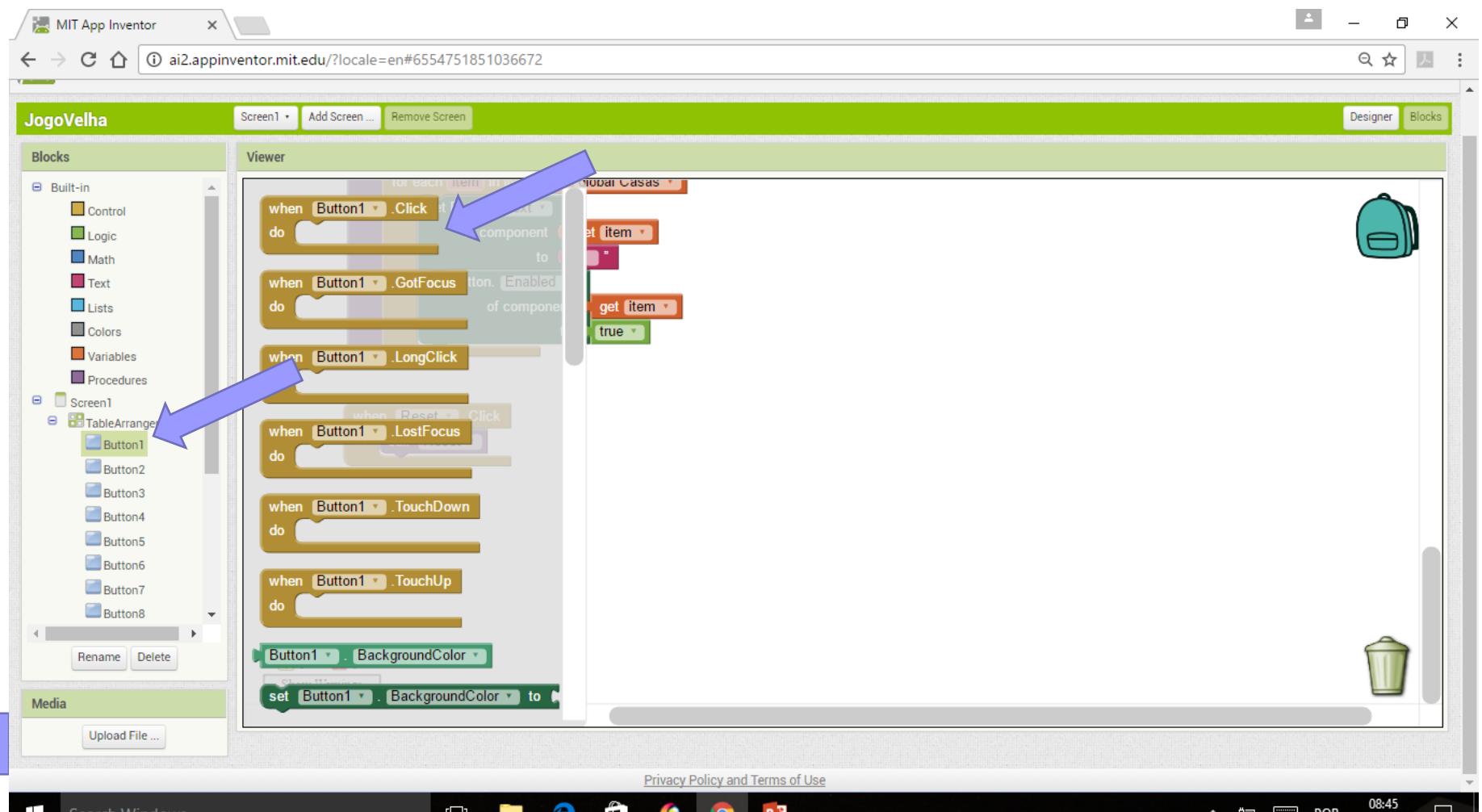
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JogoVelha Screen1 Add Screen... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

for each item in list [get global Casas]
do
  set Button1.Text of component to [get item]
  set Button1.Enabled of component to [true]

when [Reset].Click
do [call Reset]

when [Button1].Click
do
  set Button1.Enabled to [false]
  set Button1.Text to [X]

```

Abilitar a propriedade
Abilitado como falso e a
a propriedade texto
para um X

0 0 Show Warnings

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JogoVelha

Blocks Designer Blocks

Viewer

```

for each item in list [get global Casas]
do
  set Button1.Text of component [get item] to [item]
  set Button1.Enabled of component [get item] to [true]

when Reset.Click
do [call Reset]

when Button1.Click
do
  set Button1.Enabled to [false]
  set Button1.Text to [X]
  remove list item list [get global Casas] index [index in list thing Button1]
  list [get global Casas]

```

Retira a casa Escolhida da lista

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math**
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

when Reset .Click
do call Reset

when Button1 .Click
do set Button1 . Enabled to false
set Button1 . Text to "X"
remove list item list get global Casas
index index in list thing Button1
list get global Casas
set global Turnos to 2
  
```

Setar a varável turnos para 2

Media

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JogoVelha

Screen1 Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

when [Reset] .Click
do [call [Reset | ]]

when [Button1] .Click
do [set [Button1] . Enabled | to false | ]
[set [Button1] . Text | to "X" | ]
[remove list item [list | get [global Casas | ] | ] | index | index in list [thing | Button1 | ] | list | get [global Casas | ] | ]
[set [global Turnos | ] to 2 | ]

```

Criar um procedimento jogo
Que será usado na programação da máquina

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

when [Reset].Click
do call [Reset]

when [Button1].Click
do
  set [Button1].Enabled to false
  set [Button1].Text to "X"
  remove list item list [get global Casas]
  index [index in list thing [Button1] list [get global Casas]]
  set global Turnos to 2
  call [Jogo]

  [to Jogo]
  do
    [Show Warnings]
  
```

Inserir no clic do botão 1

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

when Button1 Click
do
  set [Button1 . Enabled] to [false]
  set [Button1 . Text] to [X]
  remove list item list [get global Casas] at [index] [index in list thing [Button1 . list]]
  set [global Turnos] to [2]
  call [Jogo]

```

```

when Button2 Click
do
  set [Button2 . Enabled] to [false]
  set [Button2 . Text] to [X]
  remove list item list [get global Casas] at [index] [index in list thing [Button2 . list]]
  set [global Turnos] to [2]
  call [Jogo]

```

Criar procedimentos para Cada botão. Deve-se Alterar o número dos Botões.

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

when [Button3].Click
do
  set [Button3].Enabled to false
  set [Button3].Text to "X"
  remove list item list [get global Casas]
    index [index in list thing [Button3]]
    list [get global Casas]
  set [global Turnos] to 2
  call [Jogo]

```

Criar o procedimento clic
Para todos os botões.

Sempre lembrar de
Renomear todos os botoes

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Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

set global Turnos to 2
call Jogo

when Button9 .Click
do
  set Button9 .Enabled to false
  set Button9 .Text to "X"
  remove list item list get global Casas
  index index in list thing Button9
  list get global Casas
  set global Turnos to 2
  call Jogo

```

Finalizar todos os botões

0 0 Show Warnings

Programação da lógica artificial do jogo

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Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer

```
set Button9 . Text to "X"
remove list item list [get global Casas]
    index [index in list thing Button9]
    list [get global Casas]
set global Turnos to 2
call Jogo
```

to Jogo

do

⚠ 0 ⚡ 0 Show Warnings

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JogoVelha

Scenes Add Screen ... Remove Screen

Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer

if then
for each number from 1 to 5 by 1 do
for each item in list do
while test do
if then else
do result

index in list thing list
Button9 get global Casas

Scissors icon

Backpack icon

Trash icon

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Blocks

Built-in Control Logic Math Text Lists Colors Variables Procedures

Screen1 TableArrangement1 Button1 Button2 Button3 Button4 Button5 Button6 Button7 Button8 Button9

TableArrangement1

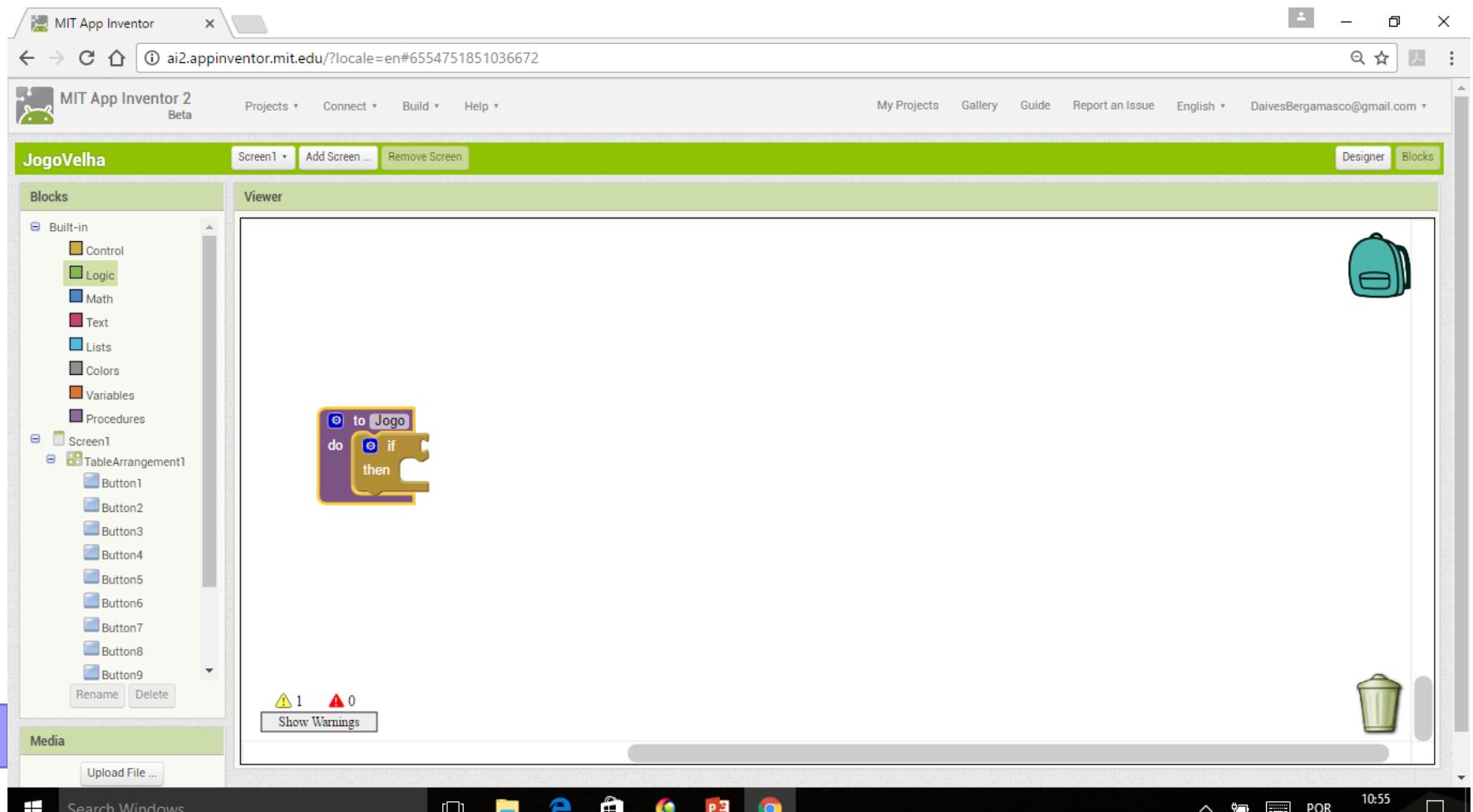
to Jogo do if then

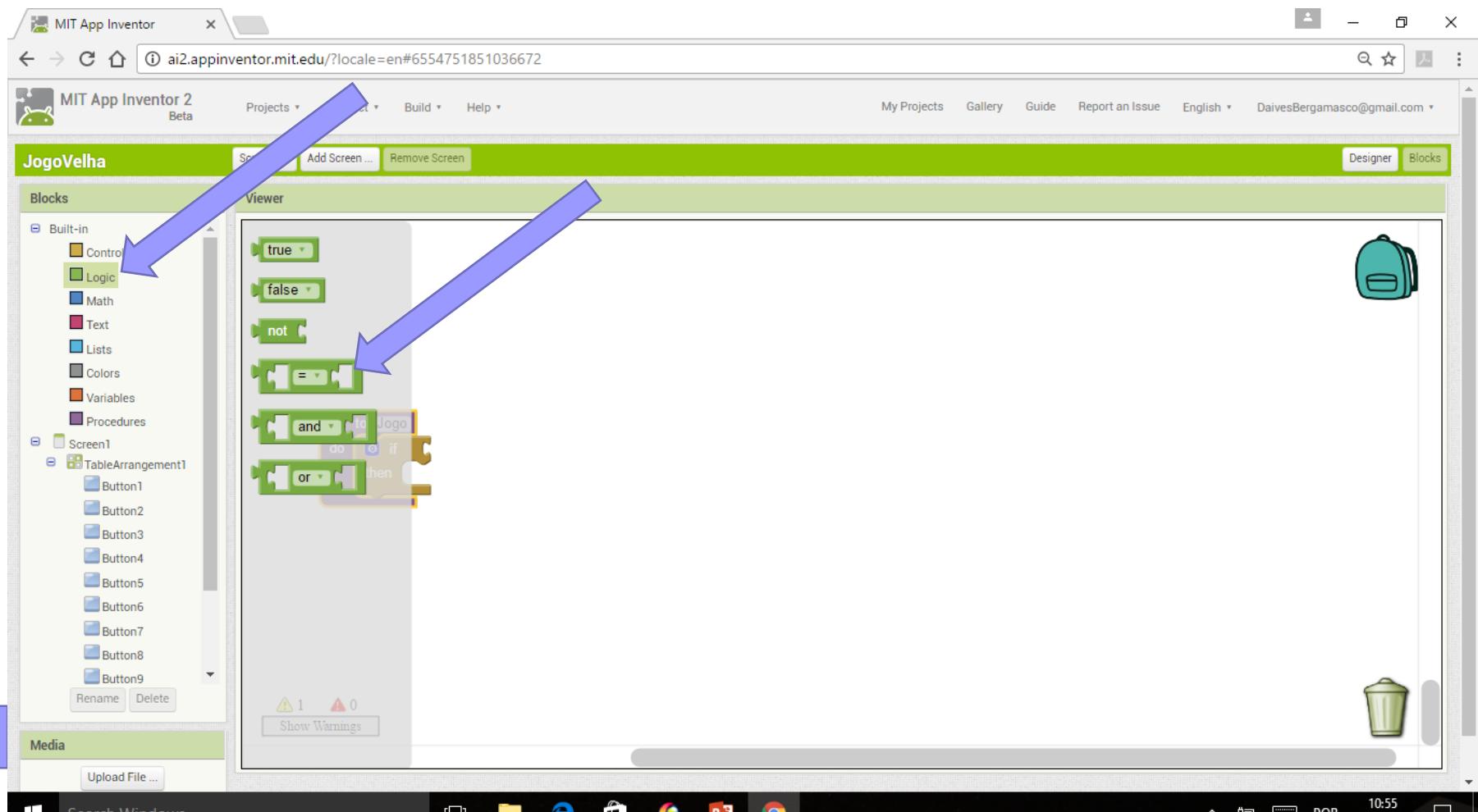
Viewer

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JogoVelha

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Designer Blocks

Viewer

true

false

not

=

and

or

if

then

do

Show Warnings

1 0

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

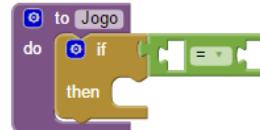
TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer





⚠ 1 ⚡ 0 Show Warnings 

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JogoVelha

Screen1 Add Screen Remove Screen

Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer

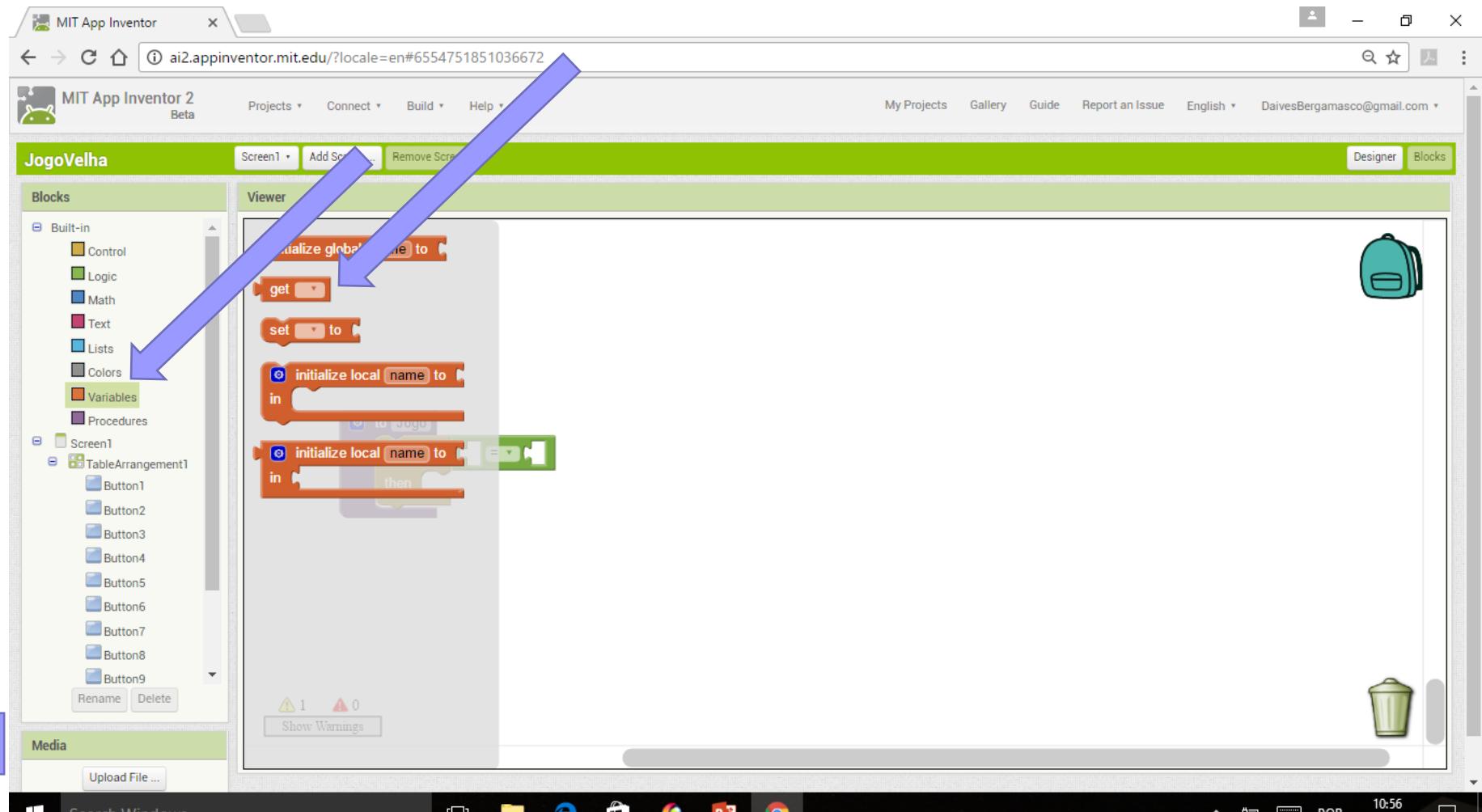
```
initialize global name to
get [name] of [TableArrangement1]
set [name] to [get]
initialize local [name] to [in]
in [do something]
initialize local [name] to [in]
in [do something]
then [do something]
```

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Blocks

Built-in Control Logic Math Text Lists Colors Variables Procedures

Screen1 TableArrangement1 Button1 Button2 Button3 Button4 Button5 Button6 Button7 Button8 Button9 Rename Delete

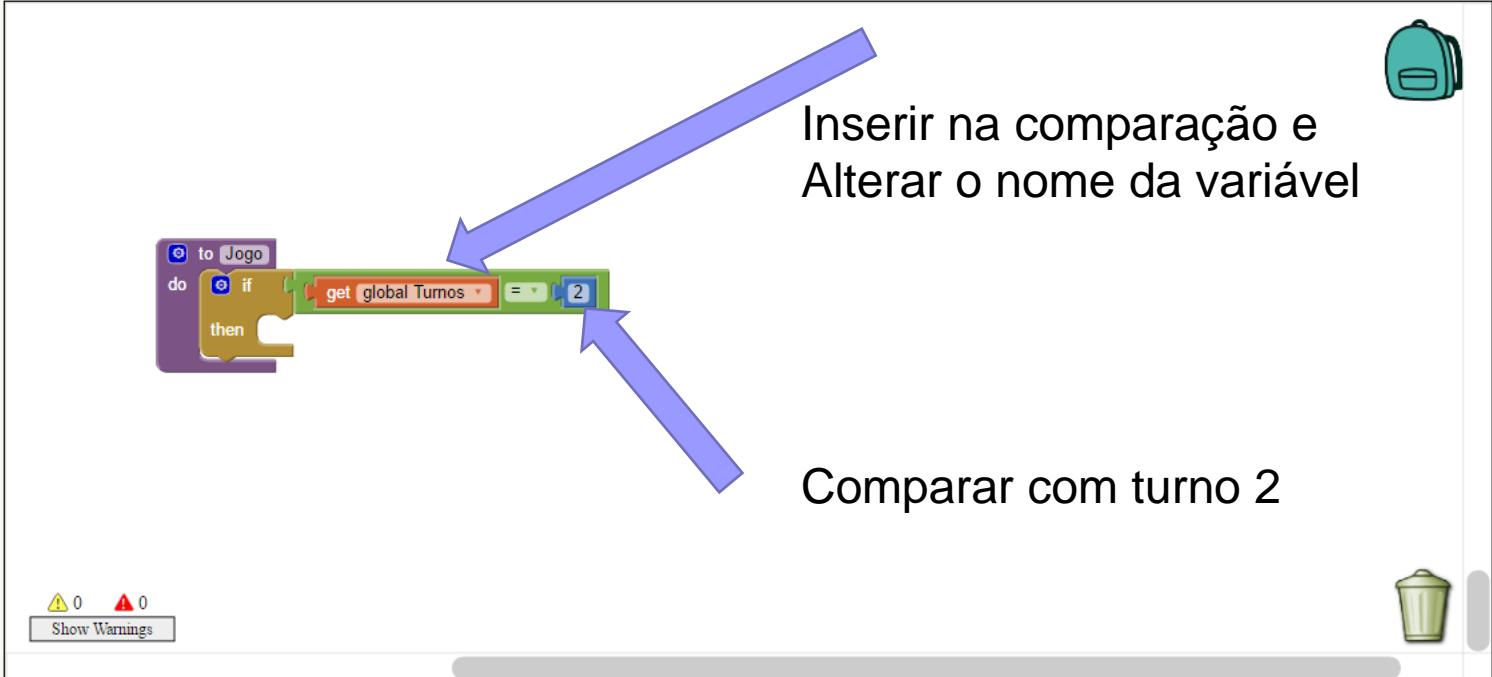
Viewer

Inserir na comparação e Alterar o nome da variável

Comparar com turno 2

to Jogo do if then get global Turnos = 2

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Rename Delete

Viewer

```
initialize global [name] to [ ]  
get [ ]  
set [ ] to [ ]  
initialize local [name] to [ ]  
in [ ]  
initialize local [name] to [ ]  
get [global Turnos] = [2]  
then [ ]
```

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in Control Logic Math Text Lists Colors Variables Procedures

Screen1 TableArrangement1 Button1 Button2 Button3 Button4 Button5 Button6 Button7 Button8 Button9

Rename Delete

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Viewer

create empty list

make a list

add items to list list item

is in list? thing list to Jogo

length of list list

is list empty? list

pick a random item list

index in list thing list

select list item list index

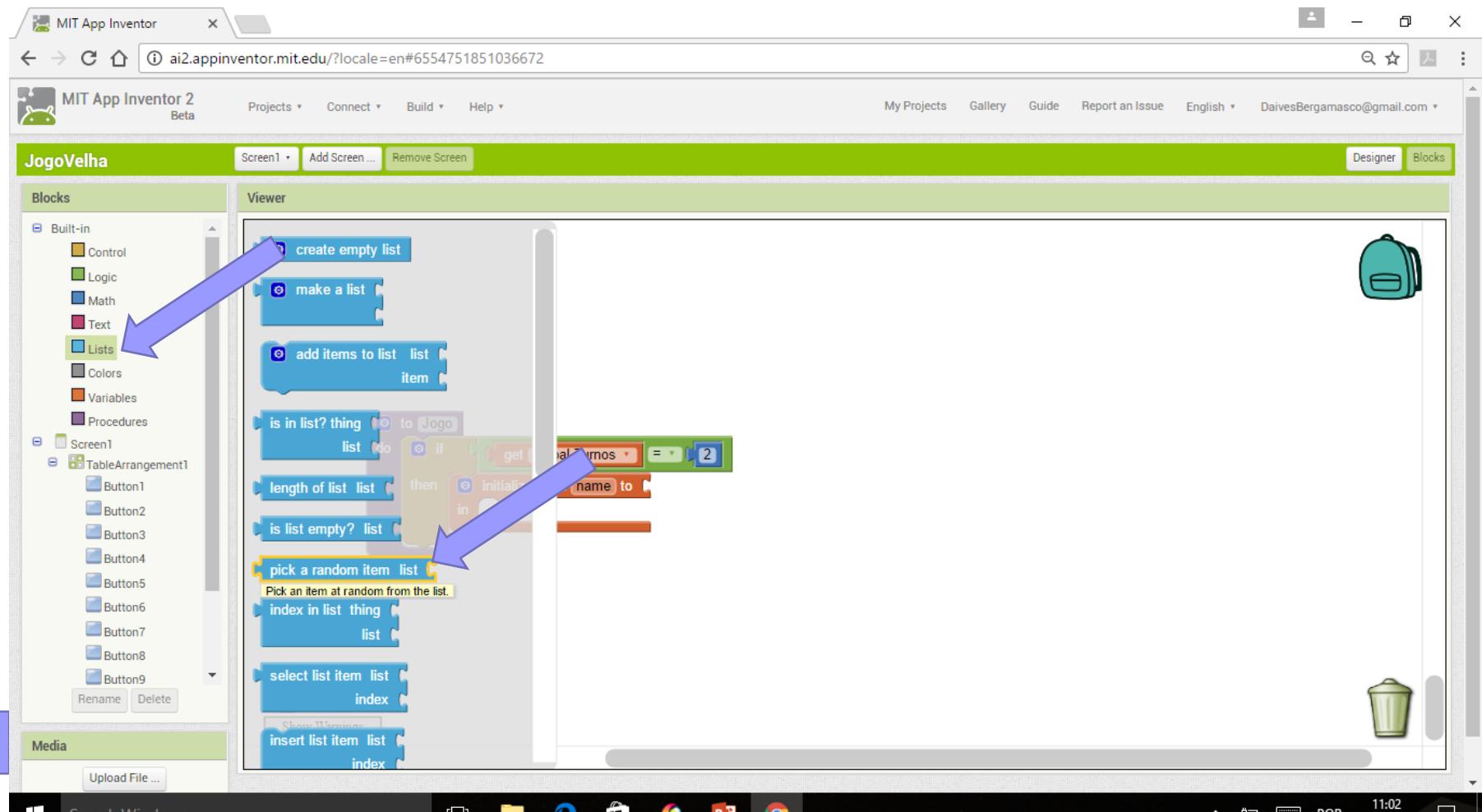
insert list item list index

initializ name to

if then else

val Tornos = 2

Checa Vencedor



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MIT App Inventor 2 Beta

Projects Connect Build Help

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Viewer



```
to Jogo
do
  if (get global Turnos) = 2 then
    initialize local name to pick a random item from list [get global Casas v]
  end
end
```

Pegar variável global casas

Media

Upload File ...

Search Windows

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11:03 14/03/2017

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Viewer

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9
- Reset
- Clock1
- Notifier1
- Any component
- Any Button
- Any Clock
- Any Notifier
- Any TableArrangement

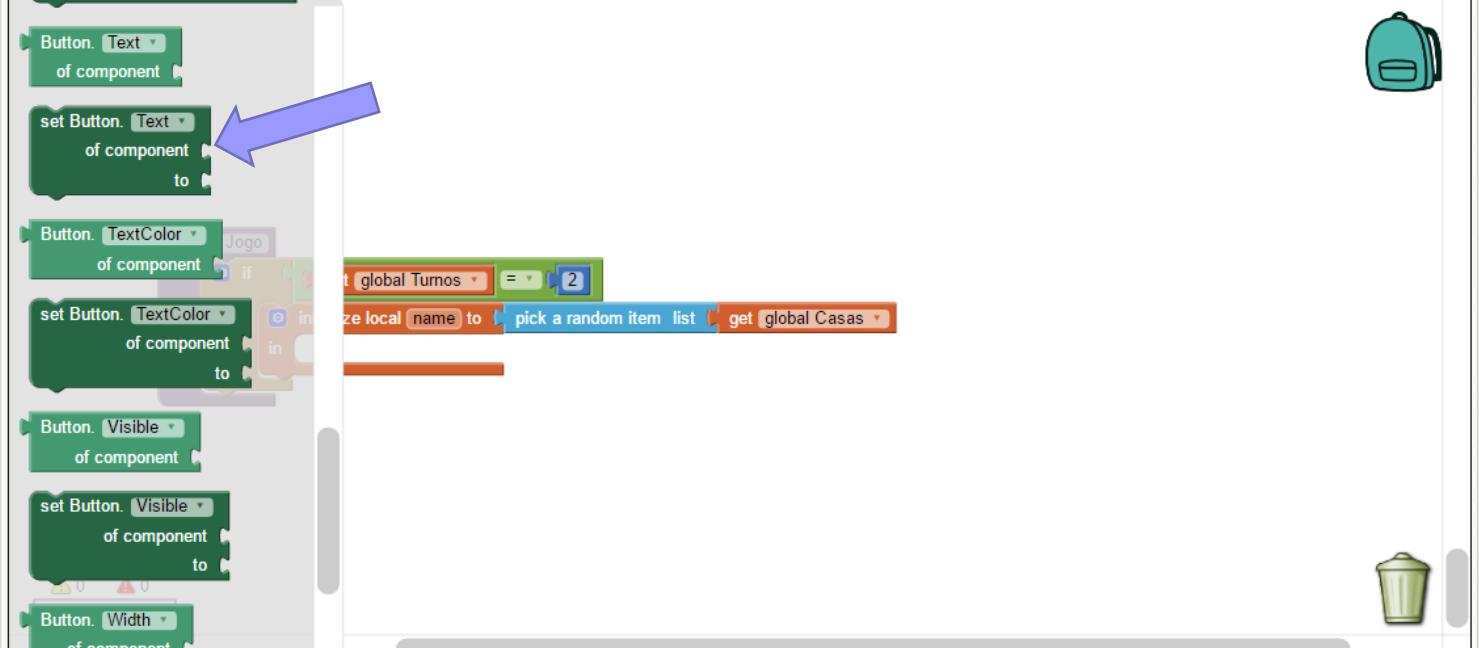
Rename Delete

Media

Upload File ...

Search Windows

11:05
14/03/2017



```

set global Turnos to 2
if size local name to pick a random item list get global Casas then
  set Button1.Text to "X"
  set Button2.Text to "O"
  set Button3.Text to "X"
  set Button4.Text to "O"
  set Button5.Text to "X"
  set Button6.Text to "O"
  set Button7.Text to "X"
  set Button8.Text to "O"
  set Button9.Text to "X"
end

```

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JogoVelha Screen1 Add Screen... Remove Screen Designer Blocks

Blocks

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9
- Reset
- Clock1
- Notifier1

Any component

- Any Button
- Any Clock
- Any Notifier
- Any TableArrangement

Rename Delete

Viewer

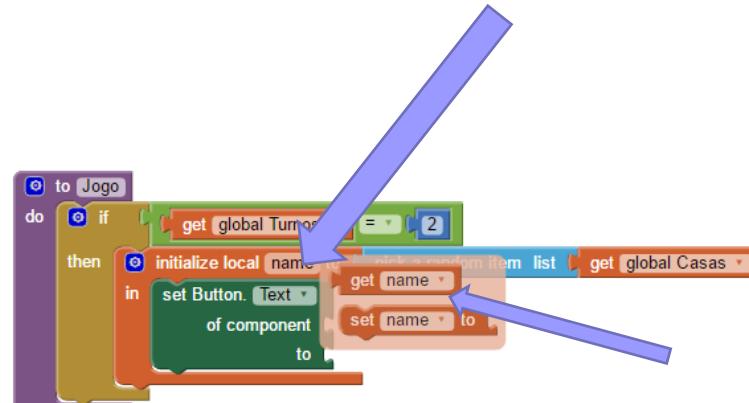
to Jogo

do if get global Turno = 2 then initialize local name in set Button. Text of component to

get name from item list get global Casas

set name to

1 0 Show Warnings



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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

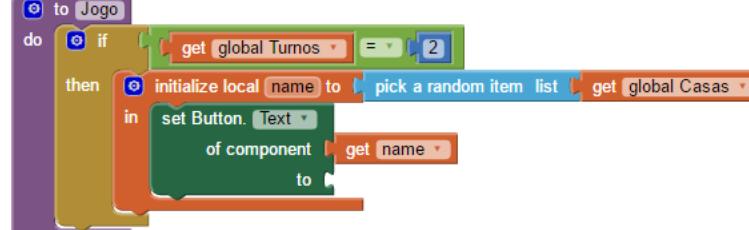
Reset Clock1 Notifier1

Any component

- Any Button
- Any Clock
- Any Notifier
- Any TableArrangement

Rename Delete

Viewer



```
to Jogo
do
  if get global Turnos = 2 then
    initialize local name to pick a random item from list get global Casas
    in
      set Button. Text of component to get name
end

```

1 0 Show Warnings

Media

Upload File ...

Search Windows

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

Rename Delete

Media

Upload File ...

Viewer

to Jogo do if get global Turnos = 2 then initialize local name to pick a random item list get global Casas in set Button. Text of component to get name to "O"

Colocar um O maiusculo

0 0 Show Warnings

Search Windows

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9
- Reset
- Clock1
- Notifier1
- Any component
- Any Button
- Any Clock
- Any Notifier
- Any TableArrangement

Viewer

Designer

Blocks

Button. BackgroundColor of component

set Button. BackgroundColor of component to

Button. Enabled of component

set Button. Enabled of component to

Button. FontBold of component

set Button. FontBold of component to

Button. FontItalic of component

global Turnos = 2

size local name to pick a random item list get global Casas

Button. Text of component get name to "O"

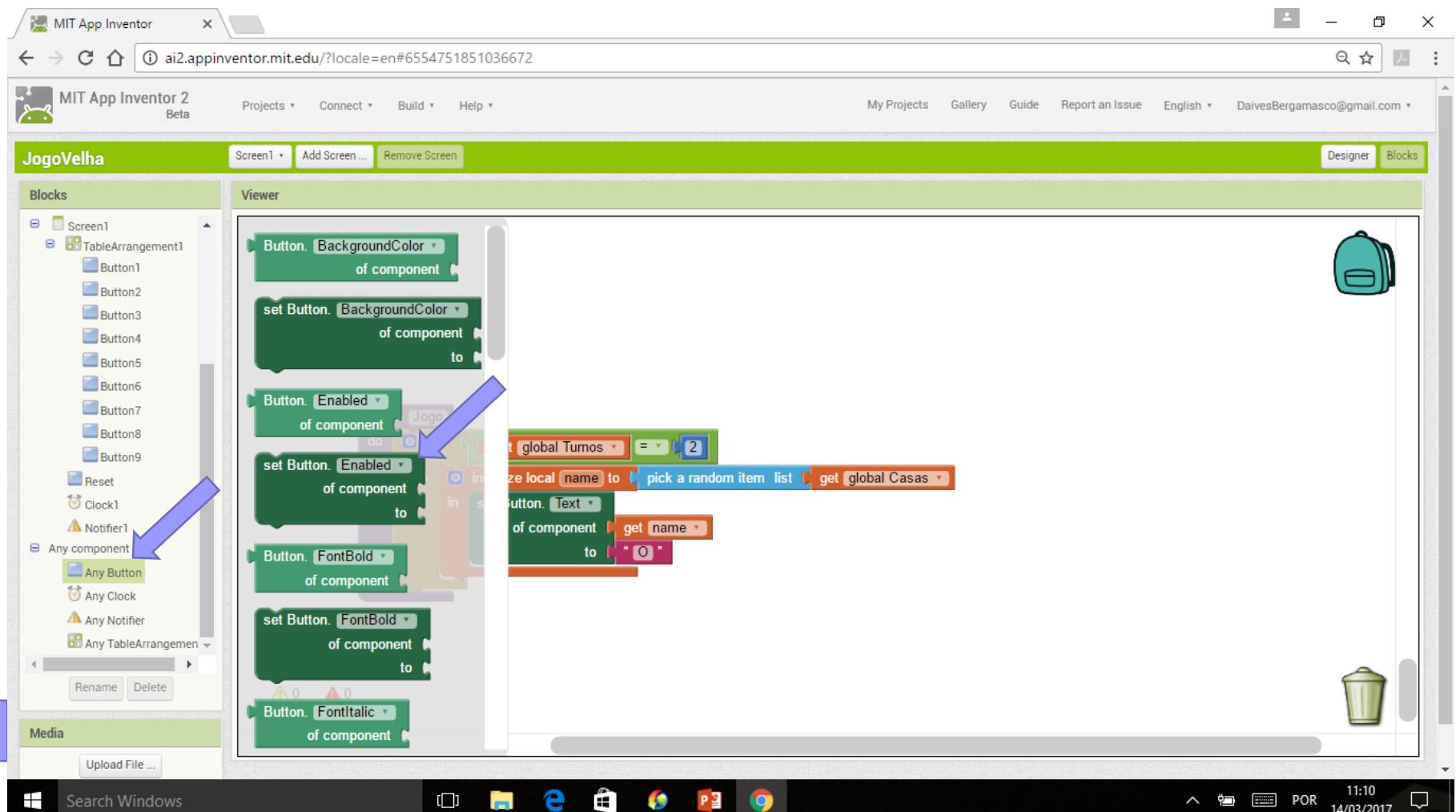
Rename Delete

Media

Upload File ...

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Viewer

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

Rename Delete Show Warnings

to Jogo do if get global Turnos = 2 then initialize local name to pick a random item list get global Casas in set Button. Text of component get name to "O" set Button. Enabled of component get name to false

Completar

Upload File ...

Search Windows

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
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 - Text
 - Lists** (highlighted)
 - Colors
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 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewers

index in list using list
 select list item list index
 insert list item list index item
 do if replace list item list index replacement
 remove list item list index
 append to list list1 list2
 copy list list
 is a list? thing
 list to csv row list

= 2
 pick a random item list get global Casas
 get name O
 get name false

Media

Upload File ...

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The screenshot shows the MIT App Inventor Designer interface for a project titled "JogoVelha". The interface is divided into several sections:

- Header:** Shows the title "MIT App Inventor" and the URL "ai2.appinventor.mit.edu/?locale=en#6554751851036672".
- Toolbar:** Includes buttons for "Designer" and "Blocks".
- Project Title:** "JogoVelha".
- Screen List:** Shows "Screen1" and options to "Add Screen..." or "Remove Screen".
- Blocks Palette:** On the left, under "Blocks", there are categories: Built-in (Control, Logic, Math, Text, Lists, Colors, Variables, Procedures), Screen1 (TableArrangement1, Button1-8), and Media.
- Viewer:** The main area displays a Scratch-style script for the "Jogo" sprite:

```
when green flag is shown
do [if (get global Turnos) = 2 then
  initialize local name to (pick a random item from list [get global Casas v])
  set [Button1 Text v] of component [name v]
  set [Button1 Enabled v] of component [false v]
  remove list item [list [get global Casas v]] by [index v]
end]
```
- Right Side:** Includes icons for a backpack (User icon) and a trash can (Media icon).

MIT App Inventor X

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JogoVelha Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```

is list empty? list
pick a random item list
index in list thing
list
select list item list
index
do |e| if
get global Turnos
insert list item list
index
item
replace list item list
index
replacement
remove list item list
index
append to list list1
list2
  
```

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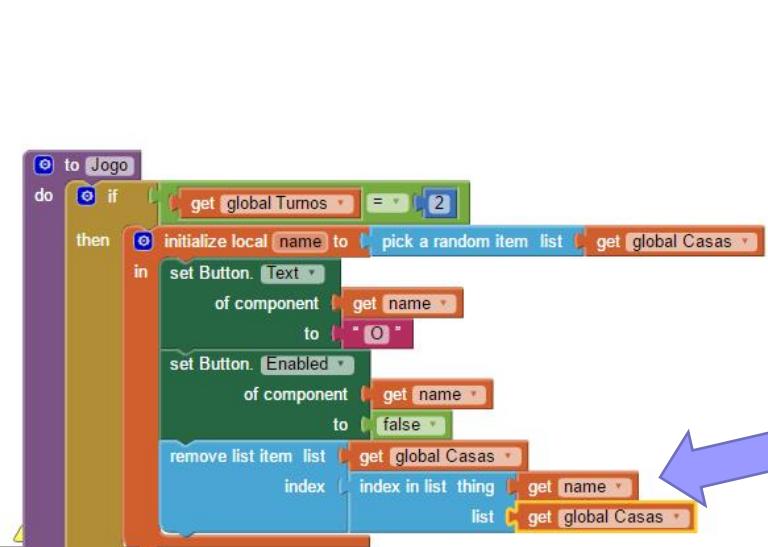
JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```

when green flag clicked
  [do
    if (get global Turnos) = 2 then
      initialize local name to pick a random item from list [get global Casas v]
      set Button1.Text to (get name v)
      set Button1.Enabled to false
      remove list item from list [get global Casas v] at position (index in list thing (get name v) list (get global Casas v))
    end
  end]
  
```

completar

Melhorando a logica de jogadas

MIT App Inventor

JogoVelha

Blocks

Viewer

```

  true
  false
  not
  = to
  and if
  get global Turnos = 2
  initialize local name to pick a random item list get global Casas
  in set Button. Text of component get name to "O"
  set Button. Enabled of component get name to false
  remove list item list get global Casas
  index index in list thing get name
  list get global Casas

```

Designer Blocks

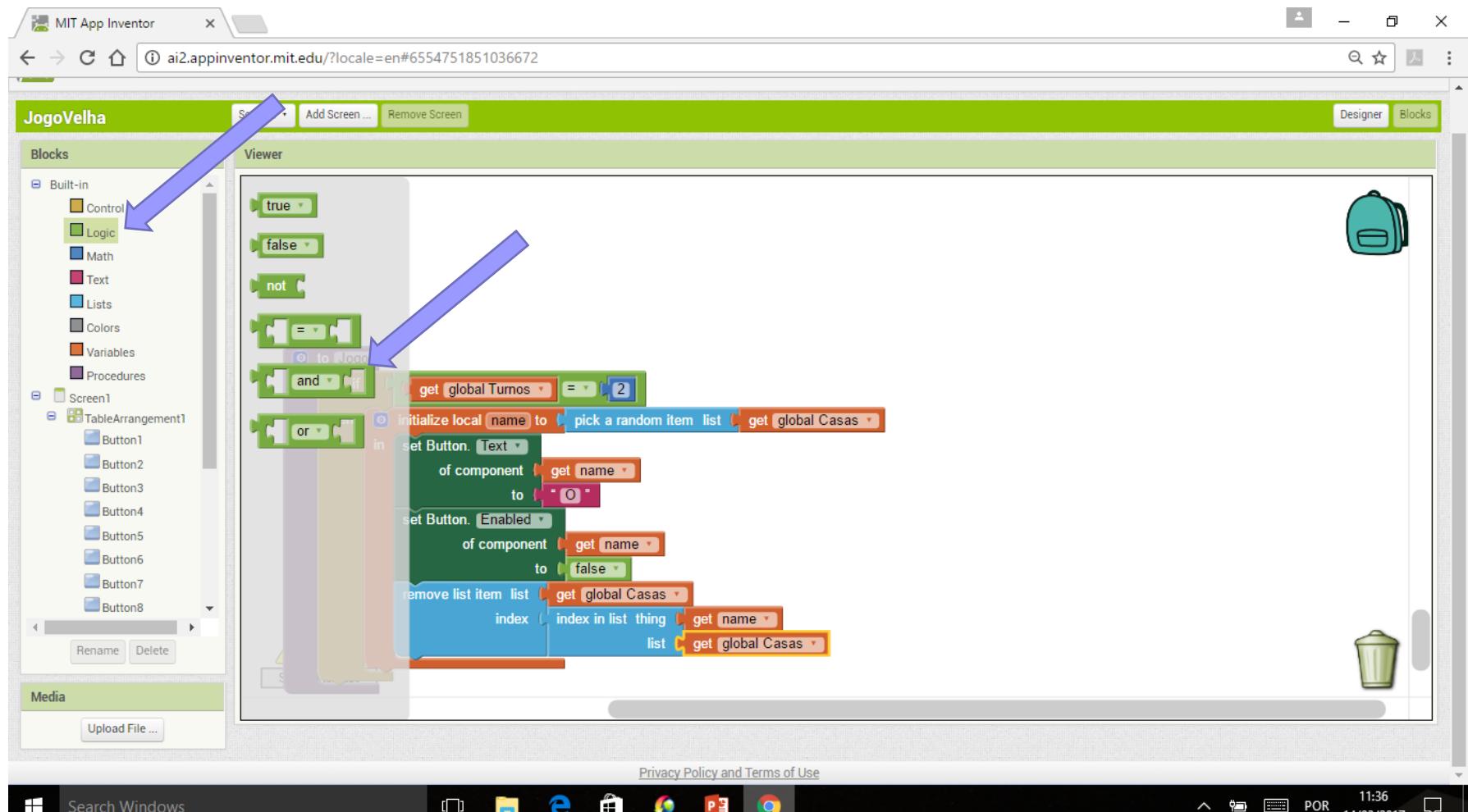
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11:36 POR 14/03/2017



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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Viewer

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

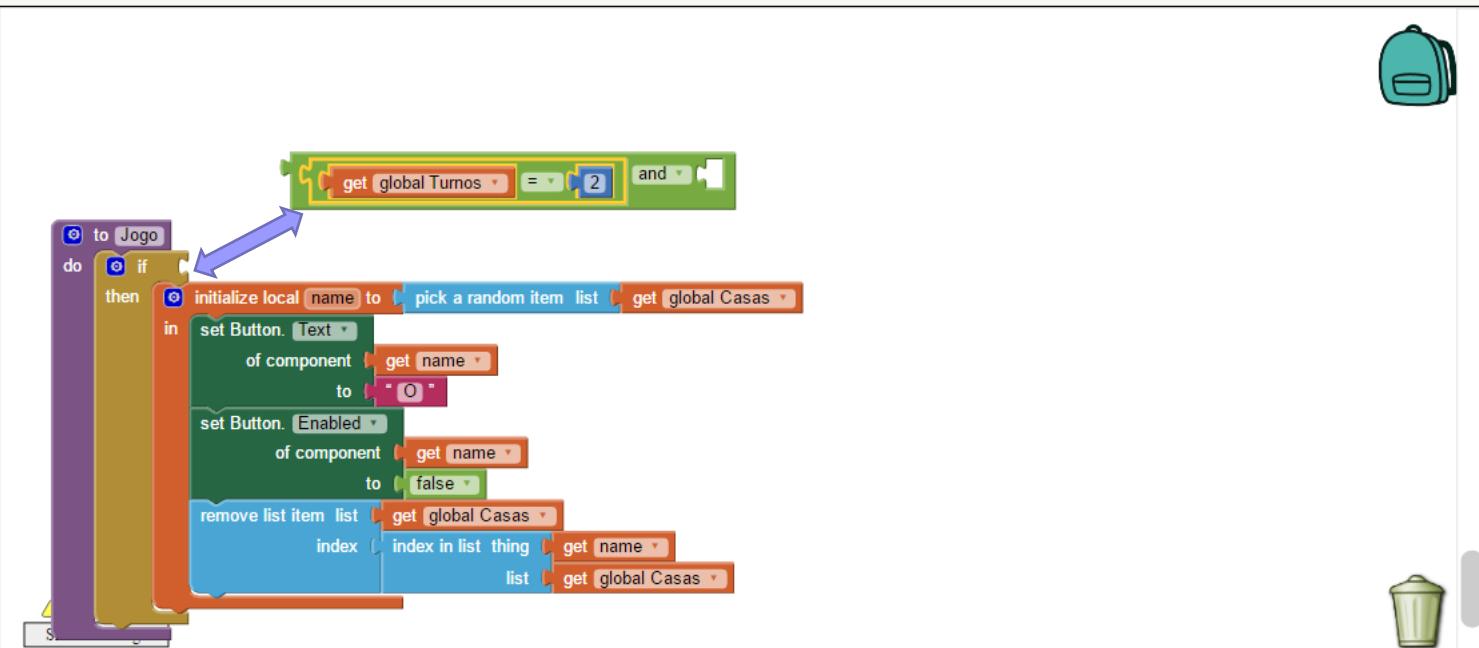
Rename Delete

Media

Upload File ...

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11:38 14/03/2017



```

when green flag clicked
  [do forever v]
    if (get global Turnos) = 2 then
      [initialize local name to pick a random item list get global Casas
        set Button1.Text of component get name to "O"
        set Button1.Enabled of component get name to false
        remove list item list get global Casas index index in list thing get name list get global Casas]
    end
  end
end
  
```

The screenshot shows the MIT App Inventor interface for a project titled "JogoVelha". The "Blocks" tab is selected. A blue arrow points from the "get global Turnos" block in the main script to the "if" condition of the "do forever" loop.

MIT App Inventor User icon

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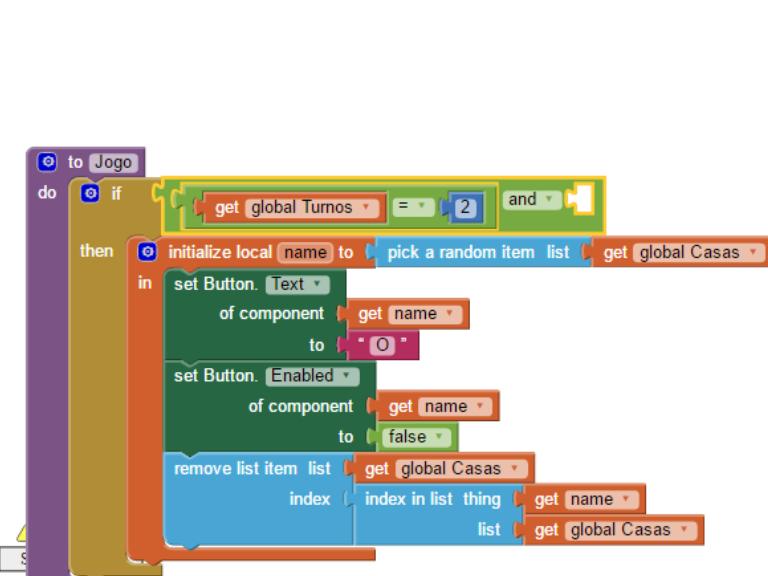
JogoVelha Screen1 Add Screen ... Remove Screen

Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```
when green flag clicked
    [do (if (get global Turnos = 2) [then
        initialize local [name] to (pick a random item from [get global Casas v])
        set [name] of component [set Button1 Text v] to "O"
        set [name] of component [set Button1 Enabled v] to false
        remove list item [get global Casas v] by [index in list [get name v] of [get global Casas v]]]) v]
end
```

Media

Upload File ...

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MIT App Inventor tradutor - Pesquisa Goog X

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math**
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

View

0

= + - × / ^ random integer from 1 to 100 random fraction random set seed to min

get global Turno initialize local name in set Button. Text of component then set Button Enabled random integer from 1 to 100 random fraction remove list item list index get global Casas pick a random item list get global Casas set name O get name false get global Casas index in list thing get name list get global Casas

Rename Delete

Media Upload File ...

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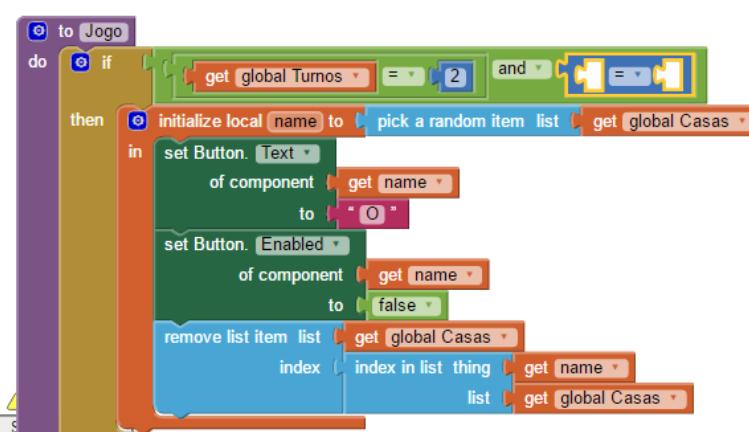
MIT App Inventor tradutor - Pesquisa Google

JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```
to Jogo
do
  if (get global Turnos = 2) and (get global Casas = 0)
    then
      initialize local name to (pick a random item from list get global Casas)
      in
        set Button1.Text to (name)
        set Button1.Enabled to (false)
        remove list item index (index in list thing get name) from list get global Casas
    end
end
```

Media

Upload File ...

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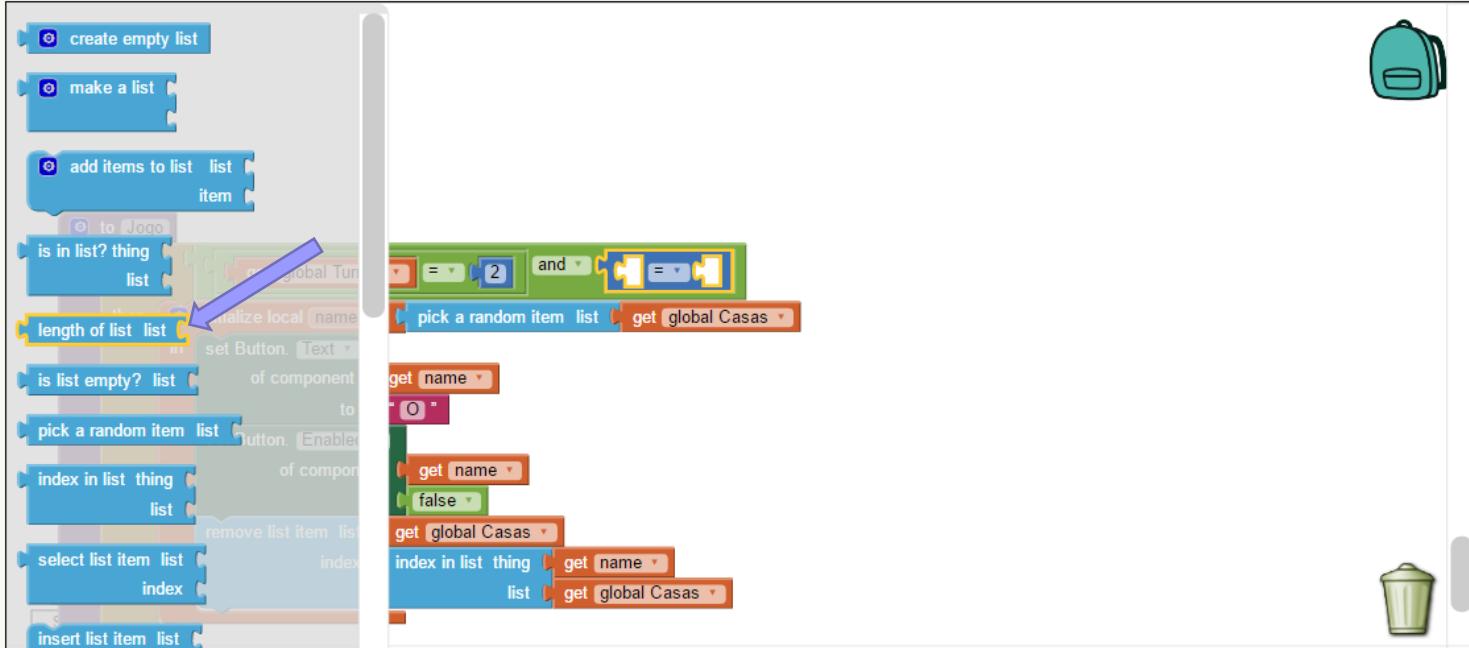
JogoVelha

Screen1 Add Screen... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists** (highlighted)
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```

when button1 pressed
  set [list1 v] to [ ]
  add [global Casas] to [list1]
  if [list1 > 0 v] then
    set [name1 v] to [pick a random item from list1]
    say [name1 v]
  end
end
  
```

MIT App Inventor X tradutor - Pesquisa Google X

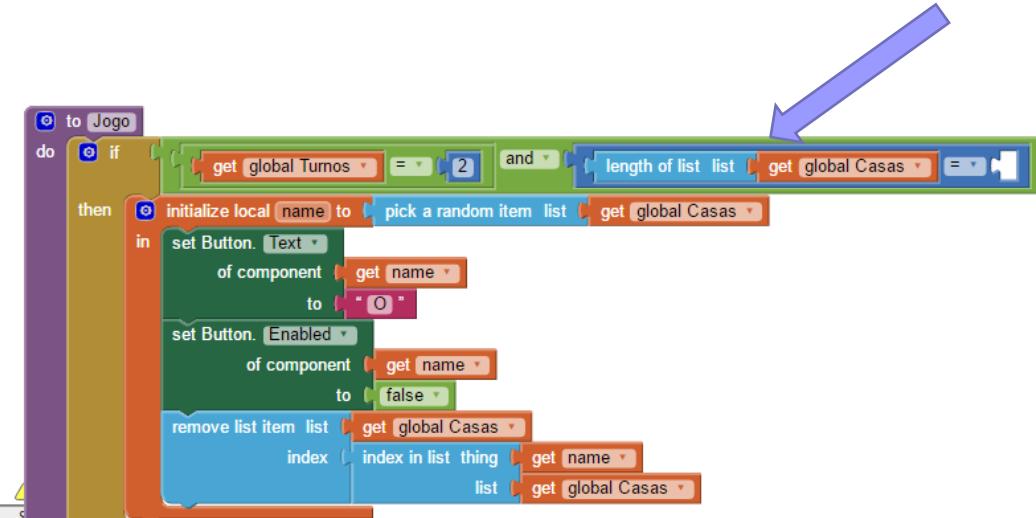
ai2.appinventor.mit.edu/?locale=en#6554751851036672

JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```

  do [if (get global Turnos = 2) and (length of list list = get global Casas) then
    initialize local (name) to (pick a random item list)
    set Button1.Text of component to (name)
    set Button1.Enabled of component to (false)
    remove list item index from list
    index = index in list
    list = get global Casas
  ]

```

A blue arrow points to the second condition in the 'if' block: 'length of list list = get global Casas'.

MIT App Inventor tradutor - Pesquisa Goog

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

  (to Jogo
    do (if (get global Turnos = 2) and (length of list list > 1)
        then (initialize local name to (pick a random item list get global Casas))
              (set Button1.Text of component name to "O")
              (set Button1.Enabled of component name to false)
              (remove list item list get global Casas index (index in list thing get name) list get global Casas)
        )
    )
  )
  
```

inserir
trocar

Designer Blocks

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Implantação da lógica “GANHAR”

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JogoVelha

Screen1 Add Screen... Remove Screen Designer Blocks

Blocks

Viewer

Built-in

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

Screen1

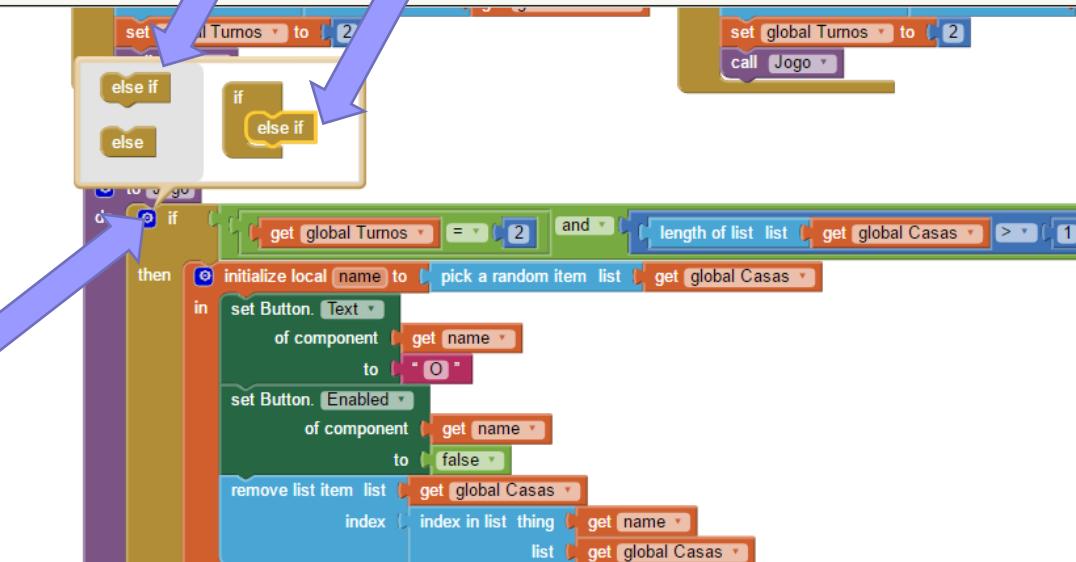
TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

Rename Delete Show Warnings

Media

Upload File ...



```

when green flag clicked
repeat (2)
  if (global Turnos = 2) and (length of list global Casas > 1) then
    initialize local name to pick a random item from global Casas
    set Button1.Text of component to name
    set Button1.Enabled of component to false
    remove list item global Casas at index index in list global Casas
  end
end
  
```

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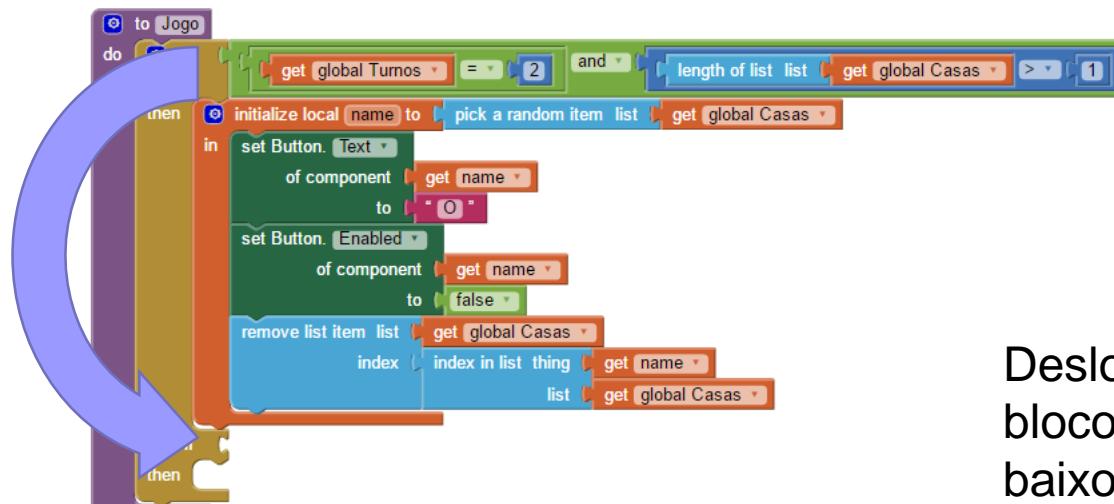
JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
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 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```

  (to Jogo)
  do
    if then
      initialize local [name v]
      of component [set Button1.Text v]
      to [get name]
      set Button1.Enabled v
      to [false]
      remove list item [list get global Casas v]
      index [index in list thing get name v]
      list [get global Casas v]
    end
  end

```

Deslocar os blocos para baixo

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JogoVelha

Screen1 Designer Blocks

Blocks

- Built-in
 - Control
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 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

  (to [Jogo])
  do
    if
      then
        initialize local [name] to [pick a random item list [get [global Casas]]]
        in [set [Button1.Text] of component [get [name]] to ["O"]]
        set [Button1.Enabled] of component [get [name]] to [false]
        remove list item [list [get [global Casas]] index [index in list [thing [get [name]] list [get [global Casas]]]]]
      else if
        then
          [get [global Turnos] = [2]] and [length of list [list [get [global Casas]]] > [1]]
    end
  end

```

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
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- Screen1
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 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

  ( to [Jogo]
    do ( if ( then
        ( initialize local [name] to ( pick a random item [list get [global Casas]
          in [set Button1.Text of component [get name] to ["O"]]
          set Button1.Enabled of component [get name] to [false]
          remove list item [list get [global Casas]
            index [index in list thing get name]
            list get [global Casas]
        ) else if ( get [global Turnos] = [2] and ( length of list [list get [global Casas] > [1]
      )
    )
  )
  
```

1 0 Show Warnings

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JogoVelha

Screen1 Add Screen... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
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 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

  ( to [Jogo]
    do ( if ( = ( get [global Turnos v] ) 2 ) ( and ( > ( length of list [list] ) ( get [global Casas v] ) 1 )
      then ( initialize local [name] to ( pick a random item [list] ( get [global Casas v] )
        in ( set [Button1.Text v] ( of component [get [name v]] to "O" )
              set [Button1.Enabled v] ( of component [get [name v]] to false )
              remove list item [list] ( get [global Casas v] )
              index ( index in list [thing] ( get [name v] )
              list ( get [global Casas v] )
        )
      )
    )
  )
  
```

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JogoVelha

Blocks Designer Blocks

Viewer

```

  to Jogo
    do
      if
        then
        else if
        then
          initialize local [name] to [pick a random item list [get global Casas]]
          in
            set Button1.Text [of component [get name] to "O"]
            set Button1.Enabled [of component [get name] to false]
            remove list item list [get global Casas] index [index in list thing [get name] list [get global Casas]]
      end
    end
  end

```

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

Rename Delete

Media

Upload File ...

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#6554751851036672

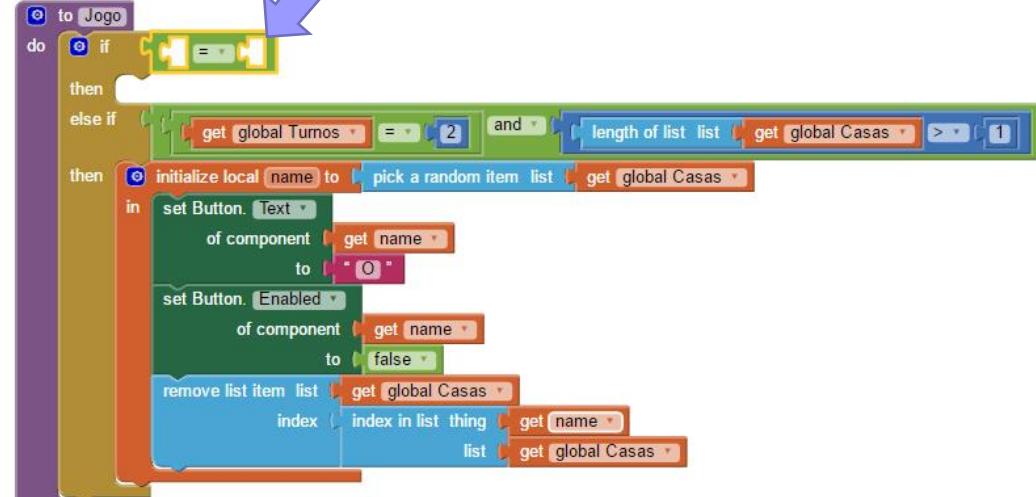
JogoVelha

Screen1 Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```

  (to Jogo)
    do
      if (get [global Turnos v] = 2) and (length of list [list1 v] > 1)
        then
          initialize local [name v] to (pick a random item [list1 v])
          set [Button1.Text v] to ("O")
          set [Button1.Enabled v] to (false)
          remove list item [list1 v] by (index)
          index in list [list1 v] get [name v]
          list [list1 v] get [global Casas v]
      end
    end
  end

```

1 0 Show Warnings

MIT App Inventor

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JogoVelha

Screen1 Add Screen ... move Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text**
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

join

length

is empty

compare texts

trim

upcase

starts at text piece

contains text piece

split text at

split at spaces

if
then
else if
then

do
to Jogo
then
else if
then

=

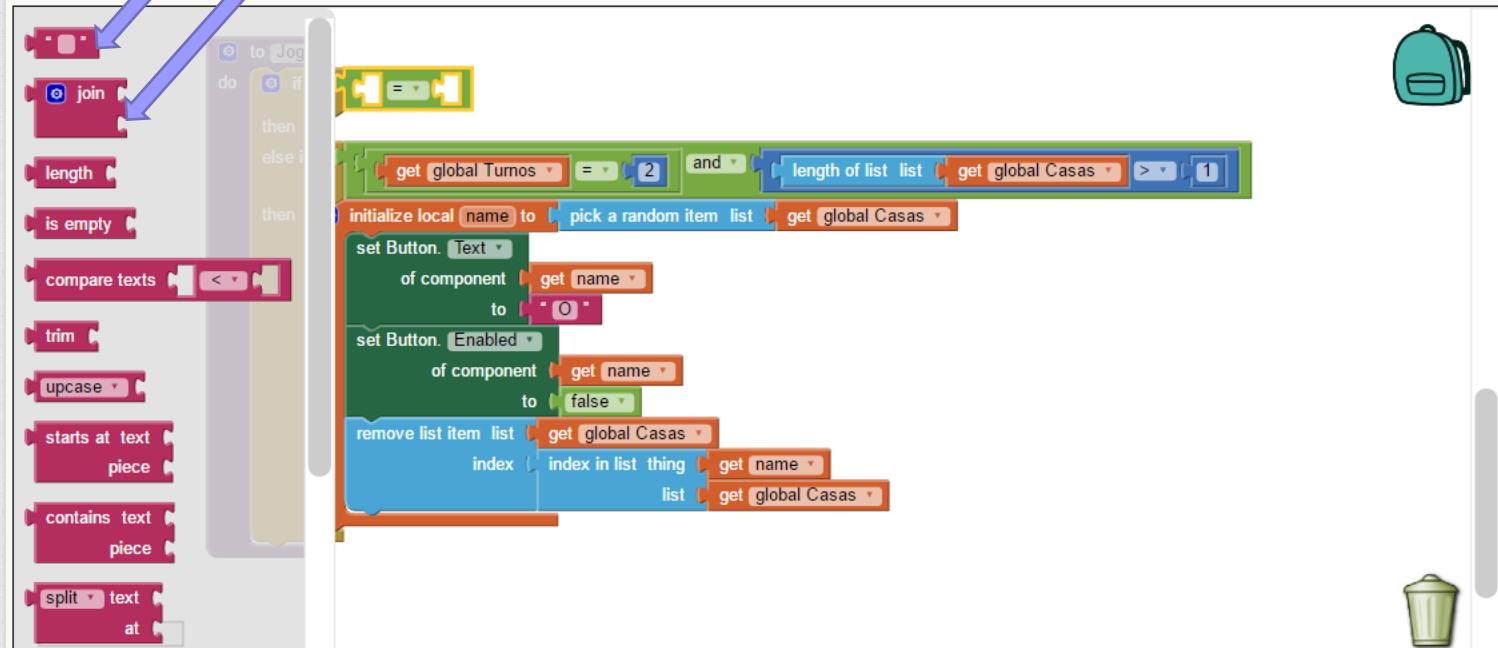
get global Turnos = 2 and length of list list > 1

initialize local name to pick a random item list get global Casas

set Button. Text of component to "O"

set Button. Enabled of component to false

remove list item list index index in list thing list get global Casas


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MIT App Inventor

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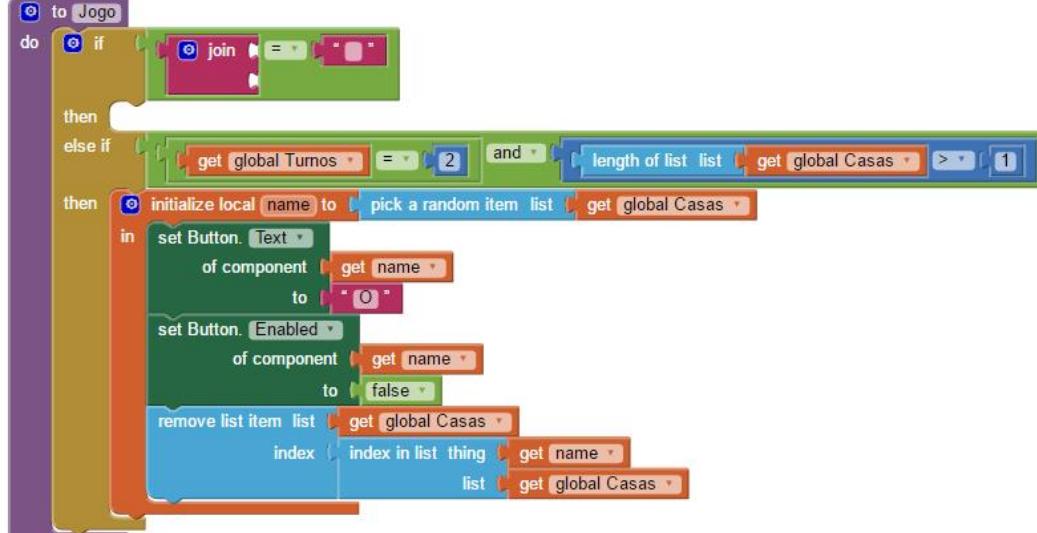
JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text**
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```

  when green flag clicked
    [do
      if (join = "O") then
        if (get [global Turnos v] = 2) and (length of list [list1] > 1) then
          initialize local [name] to pick a random item [list1] of [get [global Casas v]]
          set [Button1.Text v] to [name]
          set [Button1.Enabled v] to [false]
          remove list item [list1] by [get [global Casas v]] at [index [index in list [list1] get [name v]]]
        end
      end
    end]
  end

```

1 0 Show Warnings

MIT App Inventor X

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JogoVelha Designer Blocks

Screen1 Add Screen ... Remove Screen

Blocks Viewer

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

Inserir “XXX” maiúsculos!! 

do **to Jogo**
 if **join** = **XXX**
 then
 else if **get global Turnos** = **2** and **length of list list** **get global Casas** > **1**
 then **initialize local name to pick a random item list get global Casas**
 in **set Button. Text** of component **get name** to **O**
set Button. Enabled of component **get name** to **false**
remove list item list **get global Casas** index **index in list thing** **get name** list **get global Casas**

1 0 Show Warnings

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JogoVelha Screen1 Add Screen ... Remove Screen

Blocks Designer Blocks

Viewer

Adicionar mais uma string



```

  to Jogo
    do [if (join ([string v1], [string v2], [string v3])) = "XXX" then
      set Button1.Enabled [get name] to [false]
      remove list item [list get global Casas] [index index in list [thing get name] [list get global Casas]]]
    end
  end

```

Blocks List:

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Media

Upload File ...

Show Warnings

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

  (to Jogo)
  do
    if join = "XXX"
    then
    else if get global Turnos = 2 and length of list list > 1
    then
      initialize local name to pick a random item list get global Casas
      in
        set Button1.Text of component to "O"
        set Button1.Enabled of component to false
        remove list item list get global Casas index index in list thing get name list get global Casas
    end
  end
  
```

Show Warnings

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Search Windows

07:58
16/03/2017

MIT App Inventor

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JogoVelha

Screen1 Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```

when green flag clicked
  set [Button1 v] . Height to (height of screen)
  set [Button1 v] . HeightPercent to (100)
  set [Button1 v] . Image to (image of screen)
  if (global Turnos = 2) and (length of list [list1 v] > 1) then
    local name to pick a random item from (list [get [global Casas v]])
    component [get [name v]] to [O]
    if component [get [name v]] to [false] then
      item [get [global Casas v]] index [index in list [thing] [get [name v]]] list [get [global Casas v]]
    end
  end
  set [Button1 v] . ShowFeedback to (true)
  set [Button1 v] . Text to ("")
  set [Button1 v] . TextColor to (black)
  set [Button1 v] . Visible to (true)
end
  
```

Media

Upload File ...

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JogoVelha

Screen1 Add Screen ... Remove Screen

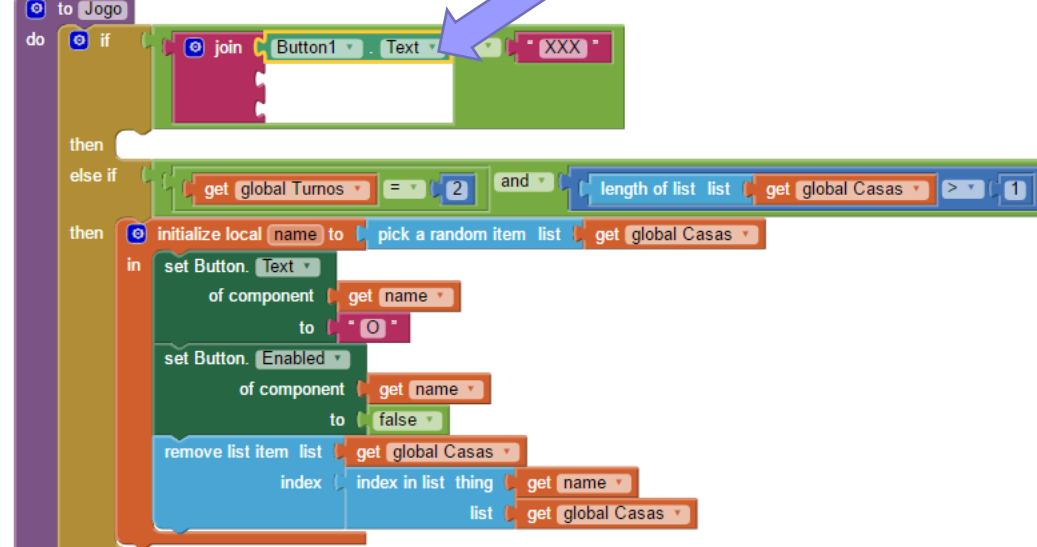
Duplicar 2X

Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



```


  (to Jogo)
    do
      if (join [Button1 Text] [XXX]) then
        if (get [global Turnos] = 2) and (length of list list > 1) then
          initialize local [name] to (pick a random item list [get [global Casas]])
          in
            set [Button1 Text] of component [get [name]] to "O"
            set [Button1 Enabled] of component [get [name]] to false
            remove list item [list [get [global Casas]]] index [index in list [thing [get [name]]] list [get [global Casas]]]
      end
    end
  end


```

1 Warnings 0 Errors

Show Warnings

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JogoVelha

Screen1 Designer Blocks

Blocks

Viewer

```

  ( to [Jogo]
    do
      ( if
        ( join [Button1 . Text] [=] ["XXX"])
        then
        ( else if
          ( get [global Turnos] [=] [2]) and ( length of list [list] [get [global Casas]] > [1])
        then
          ( initialize local [name] to [pick a random item [list [get [global Casas]]])
          in
            ( set [Button . Text] [of component [get [name]] to ["O"])
            ( set [Button . Enabled] [of component [get [name]] to [false])
            ( remove list item [list [get [global Casas]] index [index in list [thing [get [name]] list [get [global Casas]]]
        end)
      end)
    end)
  end)

```

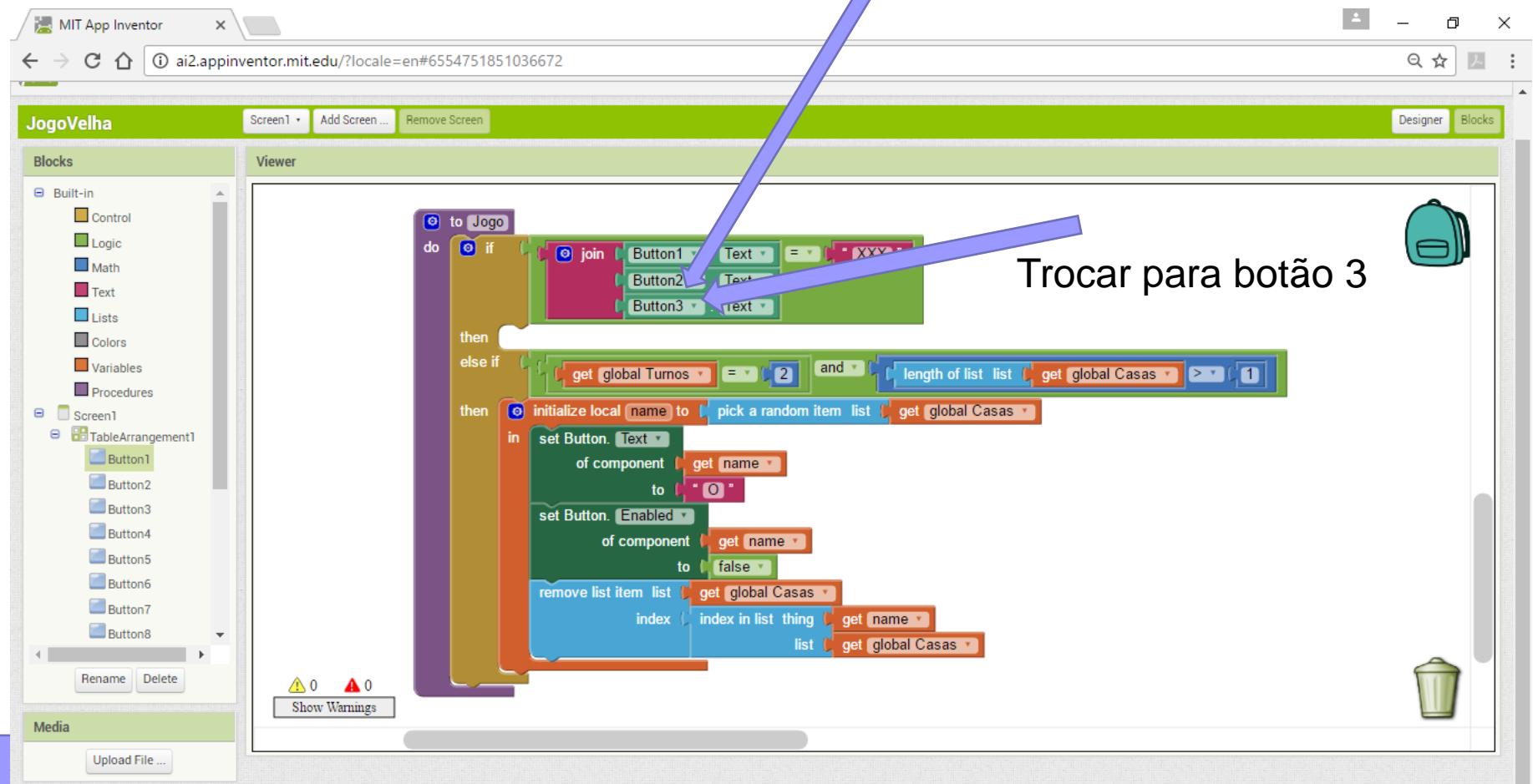
0 0 Show Warnings

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Search Windows


 08:00
 16/03/2017

Trocar para botão 2



The screenshot shows the MIT App Inventor Designer interface for a project titled "JogoVelha". The left sidebar lists blocks categorized under "Built-in" (Control, Logic, Math, Text, Lists, Colors, Variables, Procedures) and "Screen1" (TableArrangement1 containing components Button1 through Button8). The main "Viewer" area displays a Scratch-style script:

```
when green flag is shown
    [do
        if [join] of [Button1, Button2, Button3] = [XXX]
        then
        else if [get global Turnos = 2 and length of list list > 1]
        then
            initialize local [name] to [pick a random item from list [get global Casas]]
            in
                set [Button1 Text v] of component [get name] to [O]
                set [Button1 Enabled v] of component [get name] to [false]
                remove list item [list [get global Casas]] by [index [index in list [thing] [get name] in [list [get global Casas]]]]
```

A large blue arrow points from the text "Trocar para botão 2" to the "Button1" block in the script. Another blue arrow points from the text "Trocar para botão 3" to the "Button3" block in the script.

Trocar para botão 3

MIT App Inventor User Guide

ai2.appinventor.mit.edu/?locale=en#6554751851036672

JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

```

  ( to Jogo
    do ( if ( join ( Button1 . Text = "XXX" )
      then
      else if ( get global Turnos = 2 and length of list list > 1 )
        then
          initialize local name to pick a random item list get global Casas
          in
            set Button. Text of component get name to "O"
            set Button. Enabled of component get name to false
            remove list item list get global Casas index index in list thing get name list get global Casas
    )
  )

```

0 0 Show Warnings

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MIT App Inventor X

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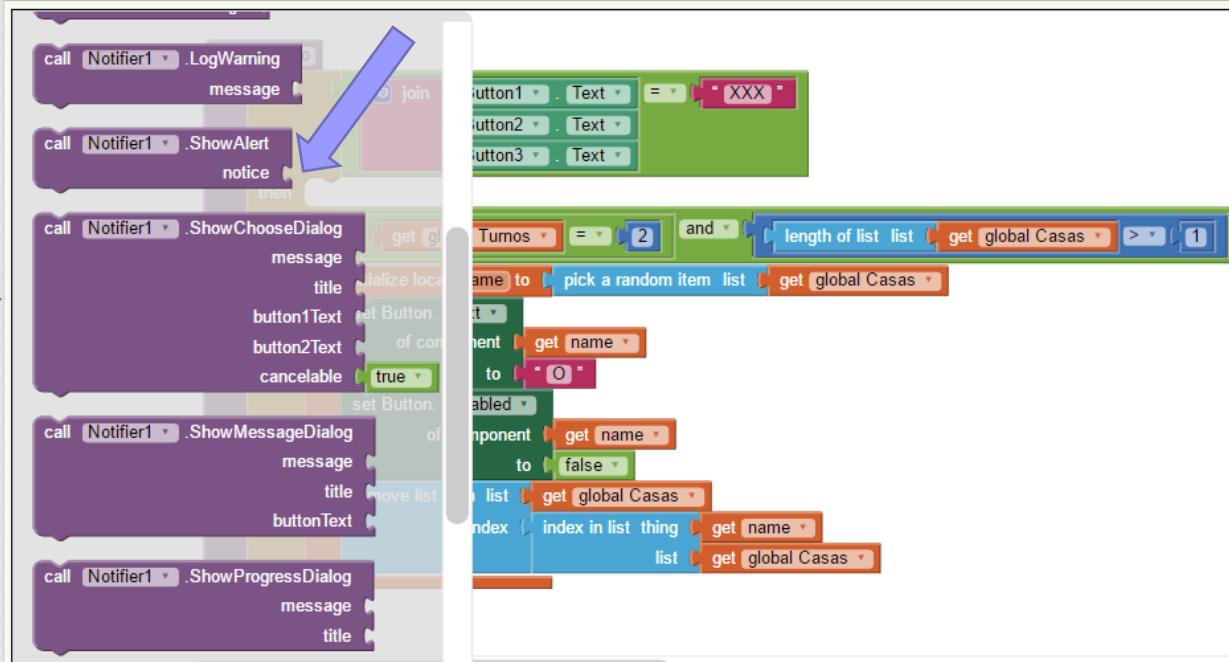
JogoVelha Designer Blocks

Screen1 Add Screen ... Remove Screen

Blocks

- Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9
- Reset
- Clock1
- Notifier1**
- Any component
 - Any Button
 - Any Clock
 - Any Notifier

Viewer



```

call Notifier1 .LogWarning
  message [join ...]
  then
    call Notifier1 .ShowAlert
      notice [then]
        call Notifier1 .ShowChooseDialog
          message [get global Casas > 1]
          title [Initialize local variables]
          button1Text [set Button1 text]
          button2Text [set Button2 text]
          cancelable [true]
          set Button1 enabled [true]
          component [get name]
          to [O]
          enabled [true]
          component [get name]
          to [false]
          list [get global Casas]
          index [index in list thing]
          get name
          list [get global Casas]
        then
          call Notifier1 .ShowMessageDialog
            message [move list]
            title [Jogar]
            buttonText [button1Text]
          then
            call Notifier1 .ShowProgressDialog
              message [list]
              title [Jogando]
    end
  end
end
  
```

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MIT App Inventor X

ai2.appinventor.mit.edu/?locale=en#6551751851036672

JogoVelha Designer Blocks

Screen1 Add Screen ... Remove Screen

Blocks

Built-in

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

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

Rename Delete

Media

Upload File ...

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Blocks View

do [to Jog] if [then [join [Button1 . Text = XXX], [Button2 . Text = XXX], [Button3 . Text = XXX]]]

Notifier1 . ShowAlert notice

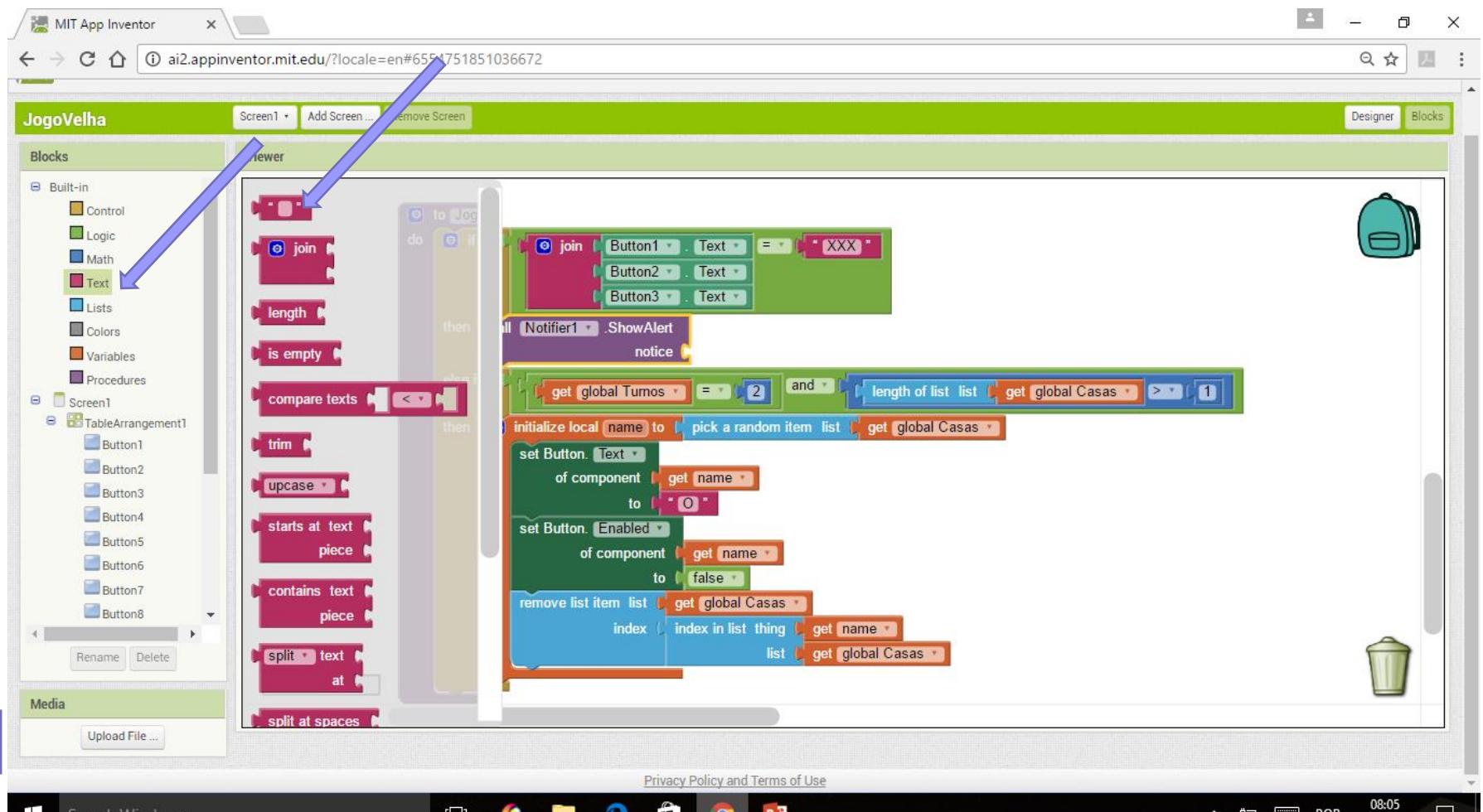
[get global Turnos = 2 and length of list list > 1]

initialize local name to pick a random item list get global Casas

set Button. Text of component to "O"

set Button. Enabled of component to false

remove list item list get global Casas index index in list thing get name list get global Casas



Search Windows


 08:05
 16/03/2017

MIT App Inventor User icon

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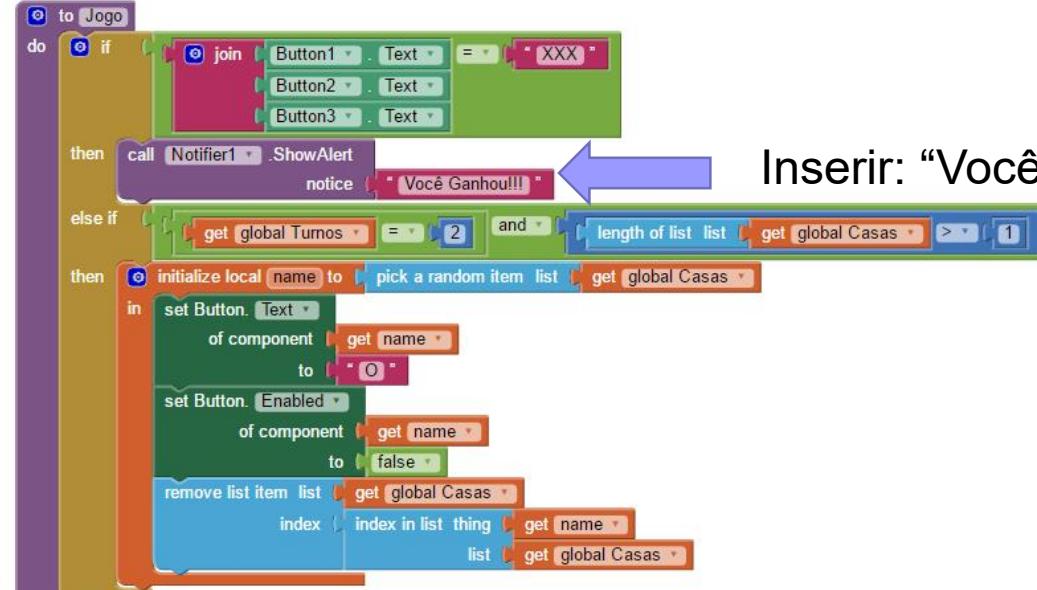
JogoVelha Screen1 | Add Screen ... | Remove Screen

Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer



Inserir: “Você Ganhou!!!”

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MIT App Inventor

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MIT App Inventor 2 Beta

Projects Connect Build Help

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JogoVelha Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

Viewer

```

  (to Jogo
    do (if (join (Button1.Text = "XXX")
                  (Button2.Text = "XXX")
                  (Button3.Text = "XXX"))
        then (call Notifier1.ShowAlert
              notice "Você Ganhou!!")
              (for each item in list (get global Casas)
                do (set Button.Enabled of component get item to false))
        else if ((get global Turnos = 2) and (length of list list (get global Casas) > 1))
        then (initialize local name to pick a random item list (get global Casas)
              (set Button.Text of component get name to "O")
              (set Button.Enabled of component get name to false)
              (remove list item list (get global Casas)))
      )
    )
  )

```

inserir

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8

Rename Delete

Media

Upload File ...

Search Windows

08:13 16/03/2017 POR

Agora, construir a lógica ganhar para todas as combinações possíveis!!!!

MIT App Inventor

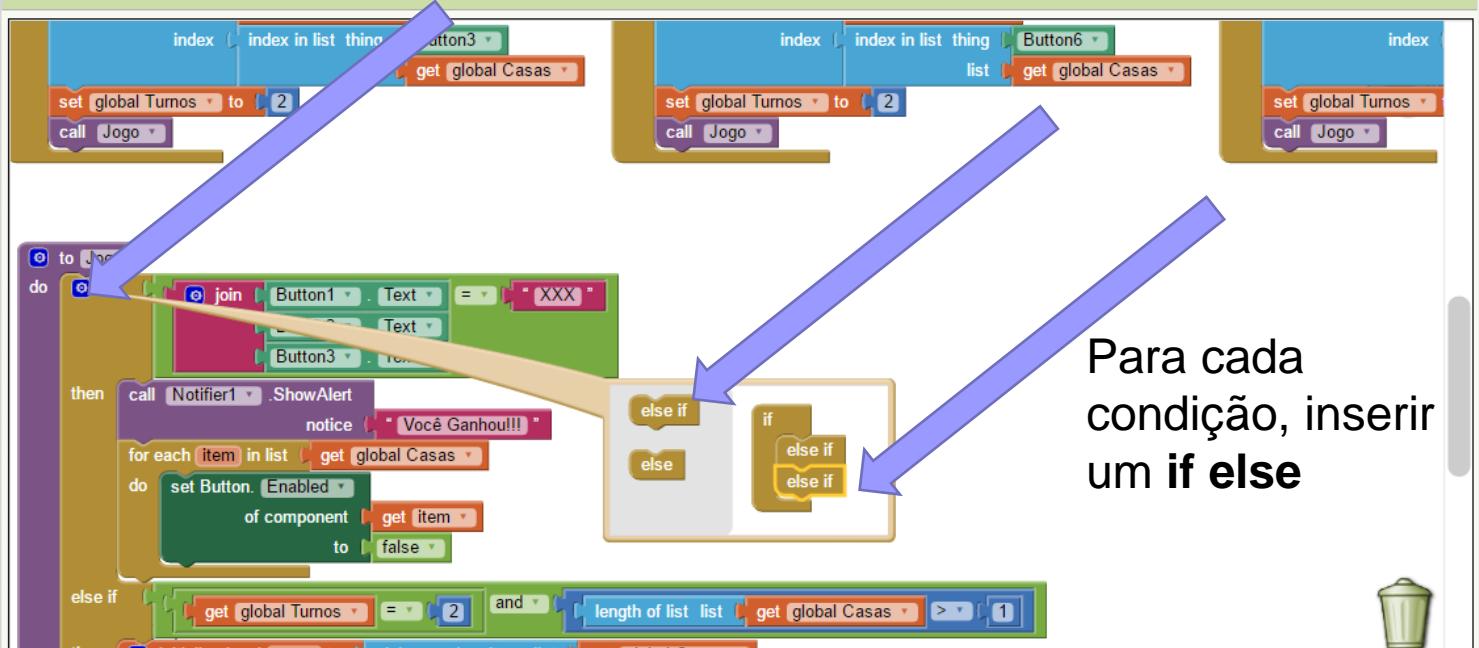
ai2.appinventor.mit.edu/?locale=en#6554751851036672

JogoVelha

Screen1 Add Screen... Remove Screen Designer Blocks

Blocks

Viewer



```

  index [index in list thing] [Button3]
    set [global Turnos] to [2]
    get [global Casas]
    call [Jogo]
  end

  index [index in list thing] [Button6]
    set [global Turnos] to [2]
    get [global Casas]
    call [Jogo]
  end

  index [index in list thing] [list get [global Casas]]
    set [global Turnos] to [2]
    call [Jogo]
  end

  [to Jogo do]
    [do]
      [join]
        [Button1 . Text = "XXX"]
        [Text]
        [Text]
      end
      [call Notifier1 ShowAlert notice "Você Ganhou!!!"]
      [for each item in list get global Casas]
        [do]
          [set Button Enabled of component get item to false]
        end
      end
    end
    [else if]
      [get global Turnos = 2 and length of list list get global Casas > 1]
        [then]
          [initialize local name to pick a random item list get global Casas]
        end
      end
    end
  end
end

```

Para cada condição, inserir um if else

MIT App Inventor User icon

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JogoVelha Screen1 Add Screen ... Remove Screen

Blocks Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8

Viewer

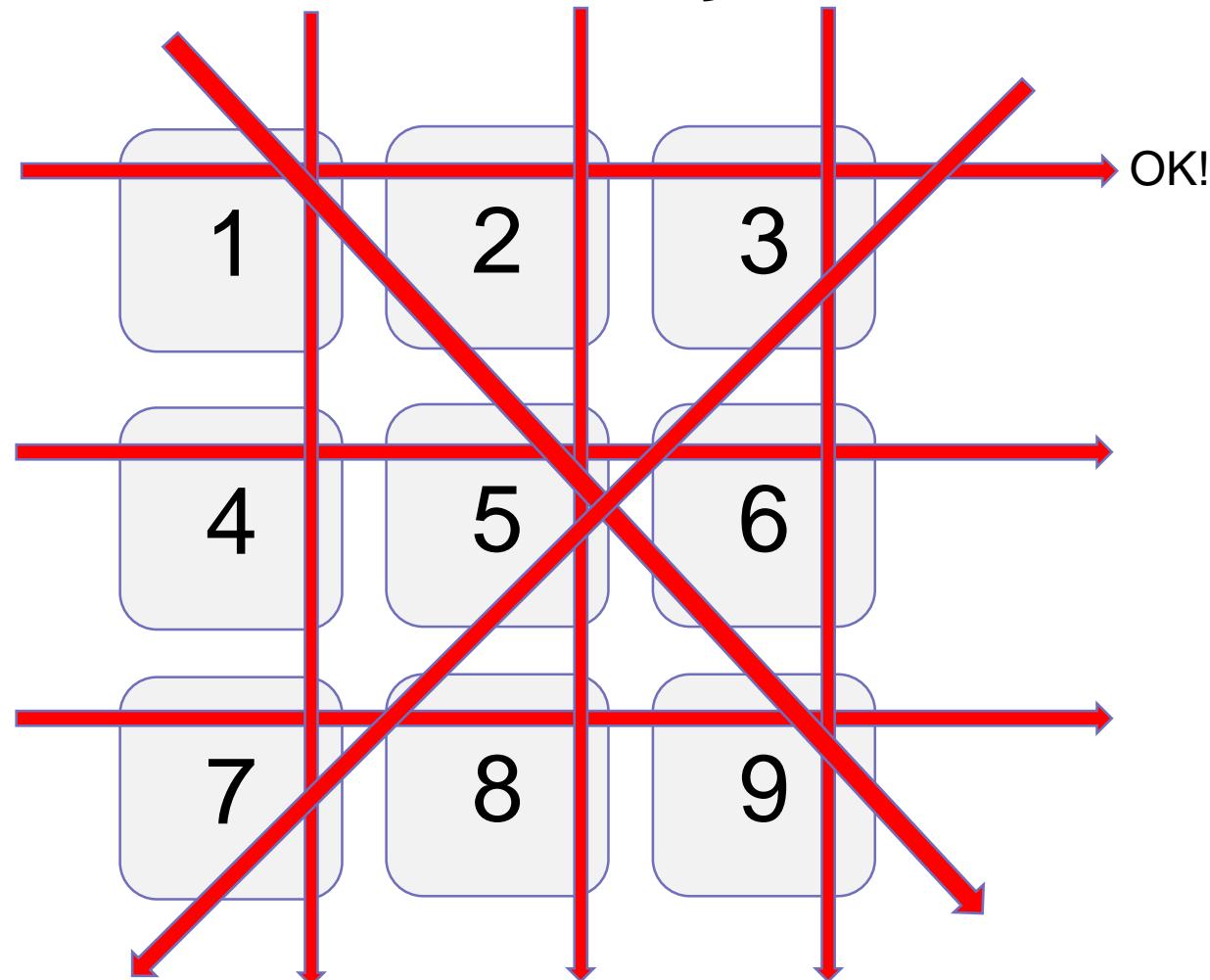
```

  (to Jogo
    do (if (join (Text of Button1) = "XXX")
        then (call Notifier1 .ShowAlert notice "Você Ganhou!!")
            (for each item in list (get global Casas)
                do (set Button. Enabled of component get item to false)
            )
        else if
        then
        else if
            (get global Turnos = 2 and (length of list list (get global Casas) > 1))
        then (initialize local name to pick a random item list (get global Casas)
            in (set Button. Text of component get name to "O")
            (set Button. Enabled of component get name to true)
        )
    )
  )
  
```

Inserir nova condição

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Quais são as condições?????



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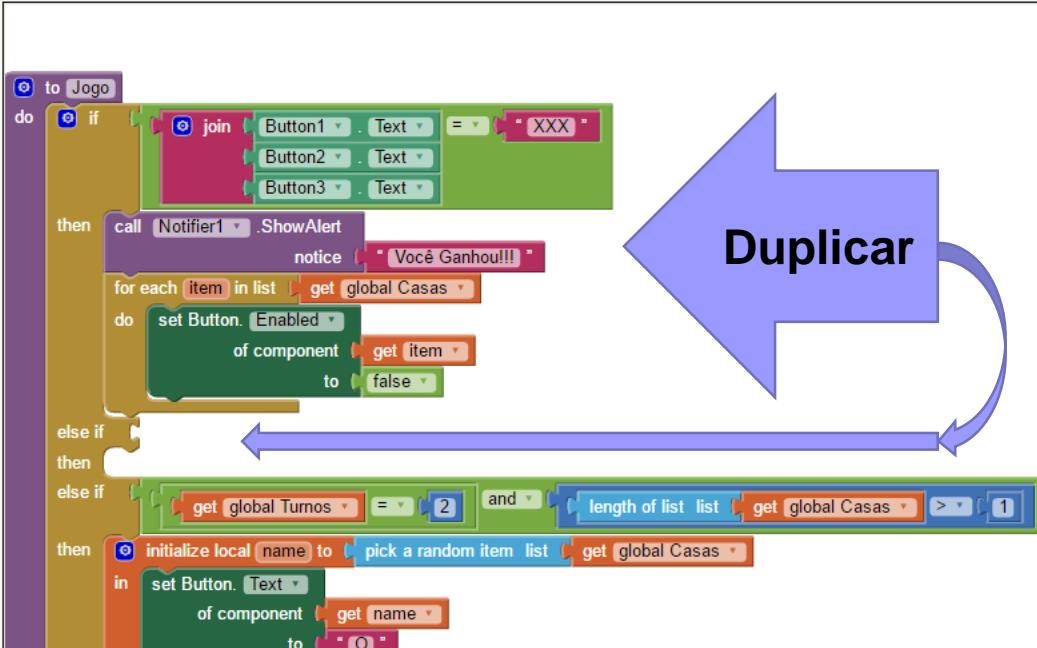
JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

Viewer



```

@ to Jogo
do
  if join(Button1.Text, Button2.Text, Button3.Text) = "XXX" then
    call Notifier1.ShowAlert("notice", "Você Ganhou!!!")
    for each item in list get global Casas do
      set Button.Enabled of component get item to false
  else if get global Turnos = 2 and length of list list > 1 then
    initialize local name to pick a random item list get global Casas
    in set Button.Text of component get name to "O"
  end
end
  
```

Duplicar

MIT App Inventor Designer Blocks

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JogoVelha

Blocks

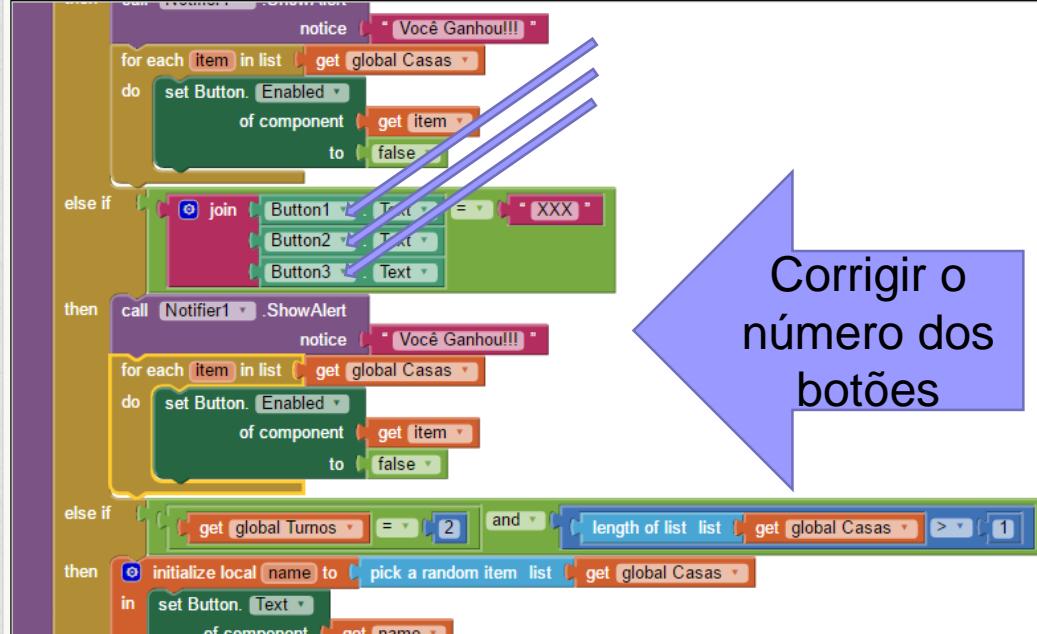
- Built-in
- Control
- Logic
- Math
- Text
- Lists
- Colors
- Variables
- Procedures

Screen1

TableArrangement1

- Button1
- Button2
- Button3
- Button4
- Button5
- Button6
- Button7
- Button8
- Button9

Viewer



The code consists of several nested loops and conditional statements. It includes:

- A main loop "for each item in list get global Casas" with a "do" block.
- Inside the loop, there's a "set Button. Enabled" block for components "Button1", "Button2", and "Button3" to false.
- An "else if" block with a "join" block connecting three text inputs: "Button1", "Button2", and "Button3". The output of this join block is set to "XXX".
- Another "then" block with a "call Notifier1 .ShowAlert" block, followed by a "notice" message "Você Ganhou!!!".
- Inside the "call" block, there's another "for each item in list get global Casas" loop and a "do" block to set buttons to false.
- A third "else if" block with a condition involving "get global Turnos" (set to 2) and "length of list list > 1".
- A final "then" block with a "initialize local name to pick a random item list get global Casas" block, followed by a "set Button. Text" block for component "Button1" to "name".

Corrigir o número dos botões

MIT App Inventor

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JogoVelha

Screen1 Add Screen ... Remove Screen Designer Blocks

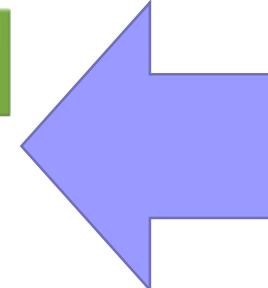
Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
- TableArrangement1
 - Button1
 - Button2
 - Button3
 - Button4
 - Button5
 - Button6
 - Button7
 - Button8
 - Button9

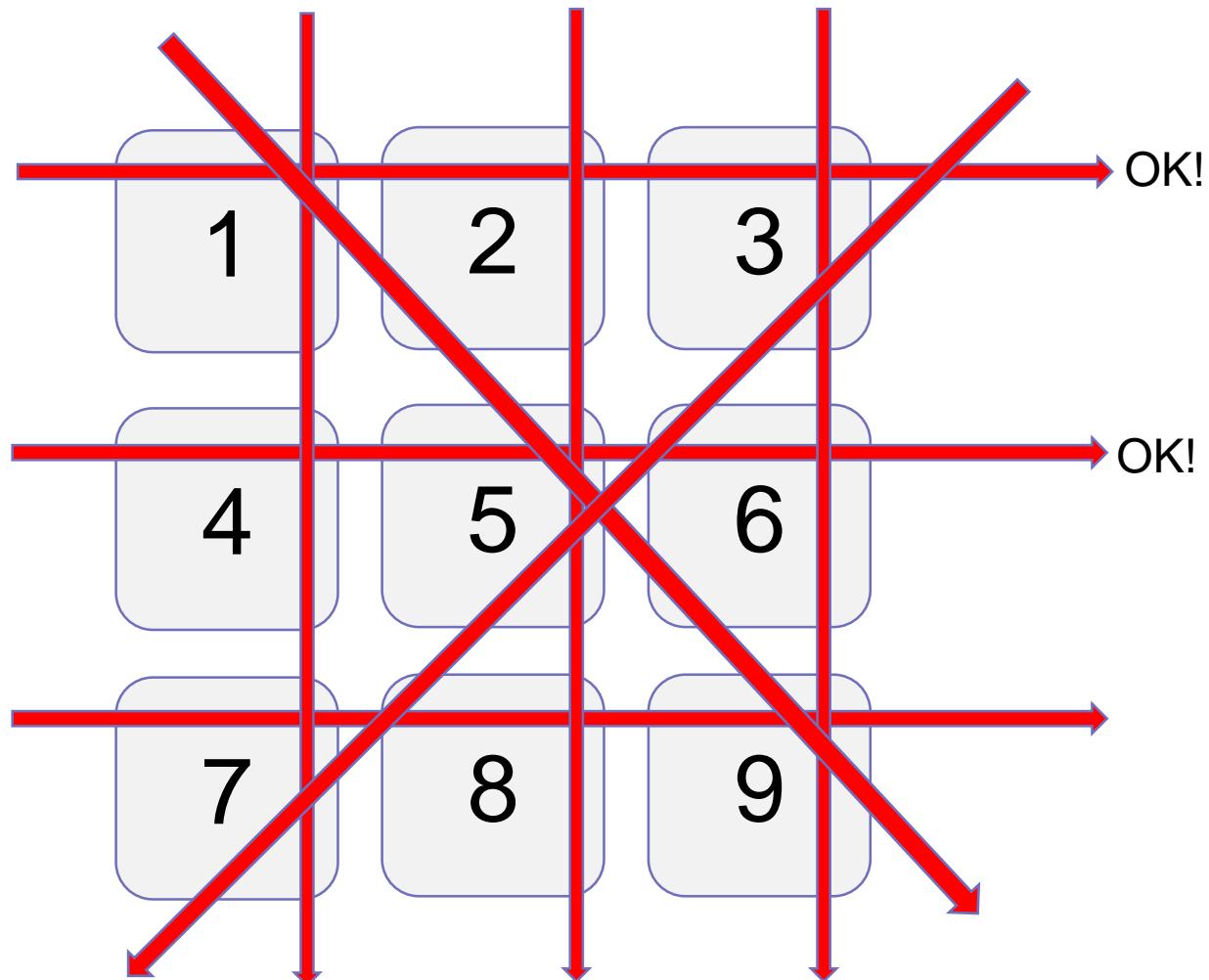
Viewer

```

then call Notifier1 .ShowAlert
  notice "Você Ganhou!!!"
  for each item in list get global Casas
    do set Button. Enabled
      of component get item
      to false
else if
  then call Notifier1 .ShowAlert
    notice "Você Ganhou!!!"
    for each item in list get global Casas
      do set Button. Enabled
        of component get item
        to false
else if
  then get global Turnos = 2 and length of list > 1
    then initialize local name to pick a random item list get global Casas
  end
end
  
```




Fazer o mesmo procedimento para as demais condições
onde se pode ganhar o jogo



Jogo Caça Níquel

Criar um novo projeto

Screenshot of the MIT App Inventor 2 Beta interface showing the creation of a new project.

The browser address bar shows: `ai2.appinventor.mit.edu/?locale=en#5303856182067200`

The interface includes:

- Header: MIT App Inventor 2 Beta, Projects, Connect, Build, Help, My Projects, Gallery, Guide, Report an Issue, English, DaisesBergamasco@gmail.com
- Toolbar: Start new project, Delete Project, Publish to Gallery
- Left sidebar: List of existing projects (e.g., AgendaContatos, FusionTabletestelD, FusionTable, Cad_clientes, Gatinho, Calculadoraaula3, Equacaoaula4, Aula05PaintPro, Aula6BlocoAnotacoes, Aula07AplicacaoSMS, Aula08aplicacaologinicial, Aula09Navegadorbasico, Aula10Caixadialogosealerta, Aula11Agendadecompromissos, Aula12Cadastrodeclientes, Aula13AplicacaoGPS, Fusontable2, MoleMash, BDinternofam, PizzaParty_MIT_2016, VideoWall, GetTheGold, Contadores).
- Main area: "Create new App Inventor project" dialog with "Project name:" field containing "CacaNiquel" and "OK" button.
- Table view of "My Projects" showing columns: Date Created, Date Modified, Published. The table lists numerous projects from March 2017 down to September 2016.
- Bottom navigation: Search Windows, taskbar icons (File Explorer, Edge, File, Chrome, Powerpoint), system tray (Wi-Fi, battery, date/time).

A large blue arrow points from the "OK" button in the dialog to the "OK" button in the table header.

Construir uma interface com os seguintes componentes:

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#5303856182067200

MIT App Inventor 2 Beta

Projects Connect Build Help My Projects Gallery Guide Report an Issue English DavesBergamasco@gmail.com

p5_tres_iguales Screen1 Add Screen ... Remove Screen Designer Blocks

Palette

User Interface

- Button
- CheckBox
- DatePicker
- Image
- Label
- ListPicker
- ListView
- Notifier
- PasswordTextBox
- Slider
- Spinner
- TextBox
- TimePicker
- WebViewer

Layout

Media

Drawing and Animation

Viewer

Display hidden components in Viewer

Check to see Preview on Tablet size.

Caça Niquel

Para Continua

0 número de jogadas

0 acertos

Iniciar

Non-visible components

Components

- Screen1
 - DisposiçãoHorizontal1
 - Imagen1
 - Imagen2
 - Imagen3
 - DisposiçãoHorizontal2
 - BtnPara
 - BtnContinua
 - HorizontalArrangement1
 - Label1
 - Label3
 - HorizontalArrangement2
 - label2
 - label4
 - BtnIniciar
 - clock1

Properties

Screen1

AboutScreen

AlignHorizontal Left : 1

AlignVertical Top : 1

AppName p5_tres_iguales

BackgroundColor White

BackgroundImage None...

CloseScreenAnimation Default

Icon None...

OpenScreenAnimation Default

ScreenOrientation Unspecified

Scrollable

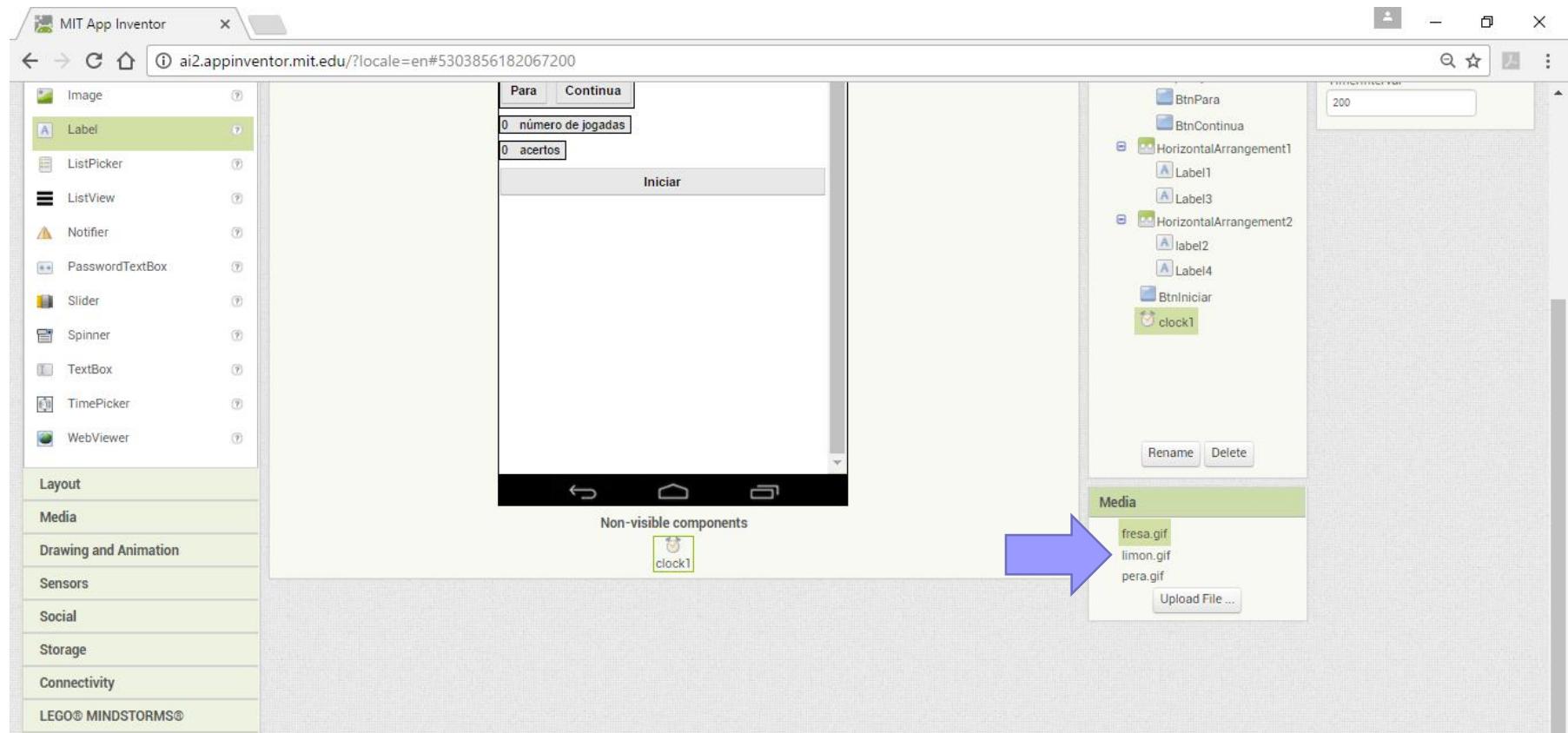
Media fresa.gif

Rename Delete

Search Windows

07:34 20/03/2017

Subir as figuras:



The screenshot shows the MIT App Inventor interface. On the left, the component palette lists various UI components like Image, Label, ListPicker, ListView, Notifier, PasswordTextBox, Slider, Spinner, TextBox, TimePicker, and WebViewer. Below the palette are several categories: Media, Drawing and Animation, Sensors, Social, Storage, Connectivity, LEGO® MINDSTORMS®, Experimental, and Extension. The main workspace displays a game screen with a title bar containing "Para" and "Continua", two labels ("0 número de jogadas" and "0 acertos"), a button labeled "Iniciar", and a footer with navigation icons. To the right of the workspace is the component tree, which shows the structure of the UI elements. A blue arrow points from the workspace towards the media section on the right. The media section contains a "Media" category with three files listed: "fresa.gif", "limon.gif", and "pera.gif". There is also a "Upload File ..." button.

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Programação: iniciar as variáveis

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#5303856182067200

MIT App Inventor 2 Beta

Projects Connect Build Help My Projects Gallery Guide Report an Issue English DelvesBergamasco@gmail.com

p5_tres_iguales

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - DisposiçãoHorizontal1
 - Imagen1
 - Imagen2
 - Imagen3
 - DisposiçãoHorizontal2
 - BtnPara
 - BtnContinua
 - HorizontalArrangement
 - Label1
 - Label3

Viewer

initialize global **x** to 0
 initialize global **y** to 0
 initialize global **z** to 0
 initialize global **acertos** to 0
 initialize global **jogadas** to 0

1 0 Show Warnings

fresa.gif

Search Windows

07:42 20/03/2017

Programação: relógio parte 1

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#5303856182067200

MIT App Inventor 2 Beta

Projects Connect Build Help My Projects Gallery Guide Report an Issue English DavesBergamasco@gmail.com

p5_tres_iguales

Screen1 Add Screen... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - DisposiçãoHorizontal1
 - Imagen1
 - Imagen2
 - Imagen3
 - DisposiçãoHorizontal2
 - BtnPara
 - BtnContinua
 - HorizontalArrangement
 - Label1
 - Label3

Viewer

when **clock1**.Timer
do set [global x] to random integer from [1] to [3]
 set [global y] to random integer from [1] to [3]
 set [global z] to random integer from [1] to [3]

if get [global x] = [1]
 then set [Imagen1].Picture to "fresa.gif"

if get [global x] = [2]
 then set [Imagen1].Picture to "limon.gif"

if get [global x] = [3]
 then set [Imagen1].Picture to "pera.gif"

if get [global y] = [1]
 then set [Imagen2].Picture to "fresa.gif"

1 0 Show Warnings

Media

fresa.gif

Search Windows

07:43 20/03/2017

Programação: relógio parte 2

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#5303856182067200

MIT App Inventor 2 Beta

Projects Connect Build Help My Projects Gallery Guide Report an Issue English DelvesBergamasco@gmail.com

p5_tres_iguales Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - DisposiçãoHorizontal1
 - Imagen1
 - Imagen2
 - Imagen3
 - DisposiçãoHorizontal2
 - BtnPara
 - BtnContinua
 - HorizontalArrangement
 - Label1
 - Label3

Viewer

```

if (get global y = 2) then set Imagen2 . Picture to "limon.gif"
if (get global y = 3) then set Imagen2 . Picture to "pera.gif"
if (get global z = 1) then set Imagen3 . Picture to "fresa.gif"
if (get global z = 2) then set Imagen3 . Picture to "limon.gif"
if (get global z = 3) then set Imagen3 . Picture to "pera.gif"
  
```

1 0 Show Warnings

Media fresa.gif

Search Windows

07:44 20/03/2017

Total de 9 if

Programação: botão <<para>>

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#5303856182067200

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - DisposiçãoHorizontal1
 - Imagen1
 - Imagen2
 - Imagen3
 - DisposiçãoHorizontal2
 - BtnPara
 - BtnContinua
 - HorizontalArrangement
 - Label1
 - Label3

Viewer

```

when BtnPara .Click
do
  set [global jogadas] to [get [global jogadas] + 1]
  set [Label1] .Text to [get [global jogadas]]
  set [clock1] .TimerEnabled to [false]
  if [get [global x] = [get [global y]] and [get [global y] = [get [global z]]]
  then
    set [global acertos] to [get [global acertos] + 1]
    set [label2] .Text to [get [global acertos]]
  end
end
  
```

1 0 Show Warnings

Media

- fresa.gif
- limon.gif
- pera.gif

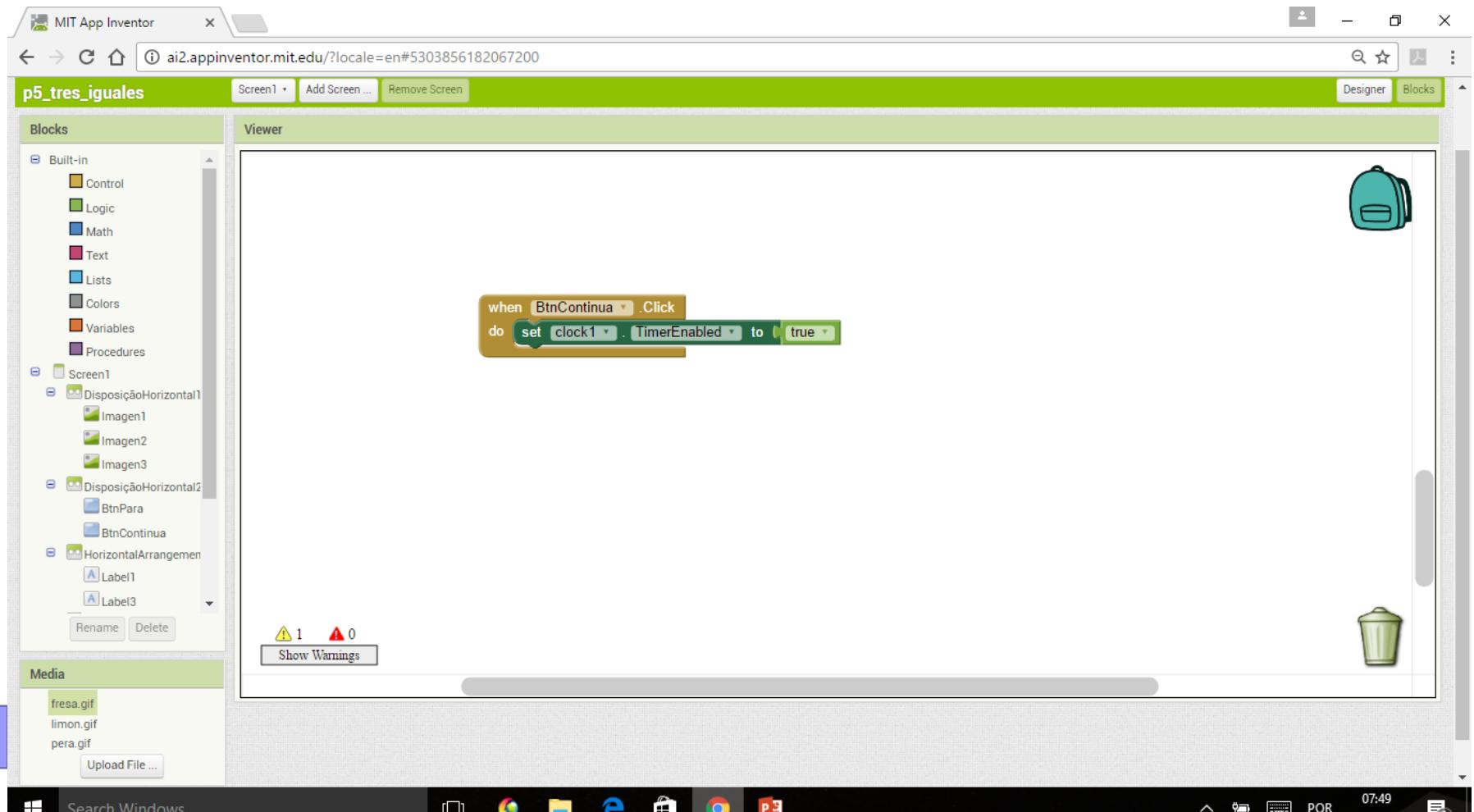
Upload File ...

Privacy Policy and Terms of Use

Search Windows

07:46
20/03/2017

Programação: botão <<Continua>>



The screenshot shows the MIT App Inventor Designer interface. The title bar says "MIT App Inventor". The URL in the address bar is "ai2.appinventor.mit.edu/?locale=en#5303856182067200". The project name is "p5_tres_iguales". The screen is "Screen1". The "Blocks" tab is selected.

The "Blocks" panel on the left lists categories: Built-in (Control, Logic, Math, Text, Lists, Colors, Variables, Procedures), Screen1 (DisposiçãoHorizontal1, DisposiçãoHorizontal2, HorizontalArrangement), and Media (fresa.gif, limon.gif, pera.gif). The "Viewer" panel on the right shows a script:

```
when BtnContinua .Click
do set clock1 .TimerEnabled to true
```

Below the script, there are warning icons: 1 yellow warning and 0 red errors, with a "Show Warnings" button. The interface includes standard Windows-style icons for file operations and a taskbar at the bottom.

Programação: botão <<Iniciar>>

MIT App Inventor

ai2.appinventor.mit.edu/?locale=en#5303856182067200

p5_tres_iguales

Screen1 Add Screen ... Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Colors
 - Variables
 - Procedures
- Screen1
 - DisposiçãoHorizontal1
 - Imagen1
 - Imagen2
 - Imagen3
 - DisposiçãoHorizontal2
 - BtnPara
 - BtnContinua
 - HorizontalArrangement
 - Label1
 - Label3

Viewer

when BtnIniciar .Click

```

do set global acertos to 0
set Label1 . Text to 0
set global jogadas to 0
set label2 . Text to 0
set clock1 . TimerEnabled to true
  
```

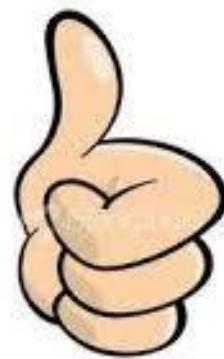
1 0 Show Warnings

fresa.gif limon.gif pera.gif Upload File ...

Minicurso App Inventor Games.ppt [Modo de Compatibilidade] - PowerPoint

Search Windows

07:49 20/03/2017



**VALEU
GALERA!**