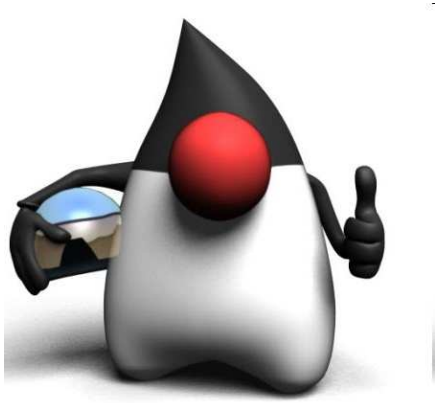


MIT Inventor

prvý dotyk aplikácie

Peter Borovanský
KAI, I-18

borovan 'at' ii.fmph.uniba.sk

Ako začať s App Inventor

http://appinventor.mit.edu/explore/ai2/setup-emulator.html

- potrebujete google-mail účet
- http://ai2.appinventor.mit.edu/

Počítač:

- platformy: MS-Windows, Mac OS X, Ubuntu, Debian
- browser: FF, Safari, Chrome, ~~IE~~
- setup page: http://appinventor.mit.edu/explore/ai2/setup.html
- pre MS-Windows treba pustiť **MIT Appinventor Tools 2.3.0 (~80 MB)**

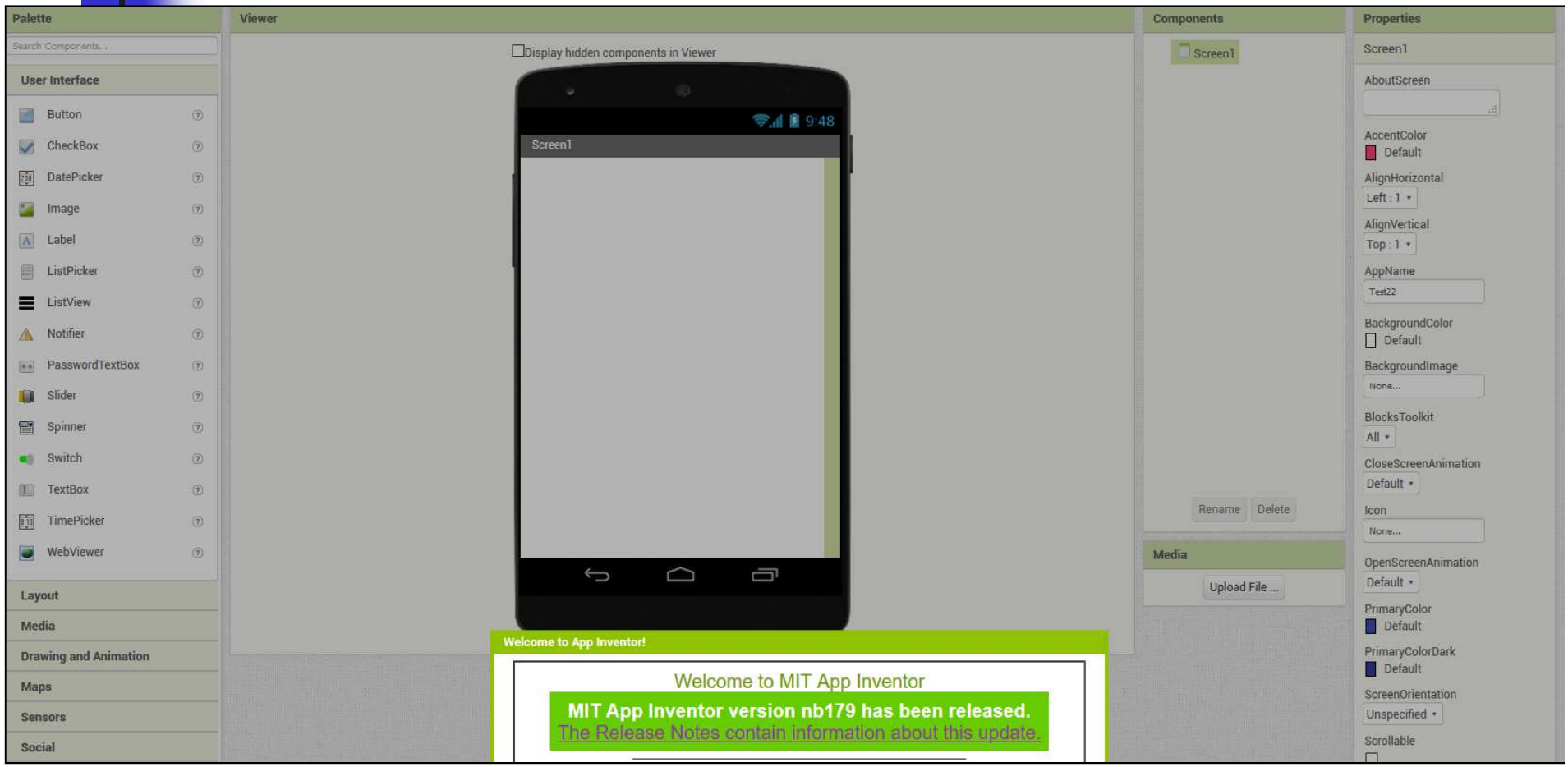
Na zariadení:

https://play.google.com/store/apps/details?id=edu.mit.appinventor.aicompanion3

Android Mobil (ale prežijete aj s emulátorom):

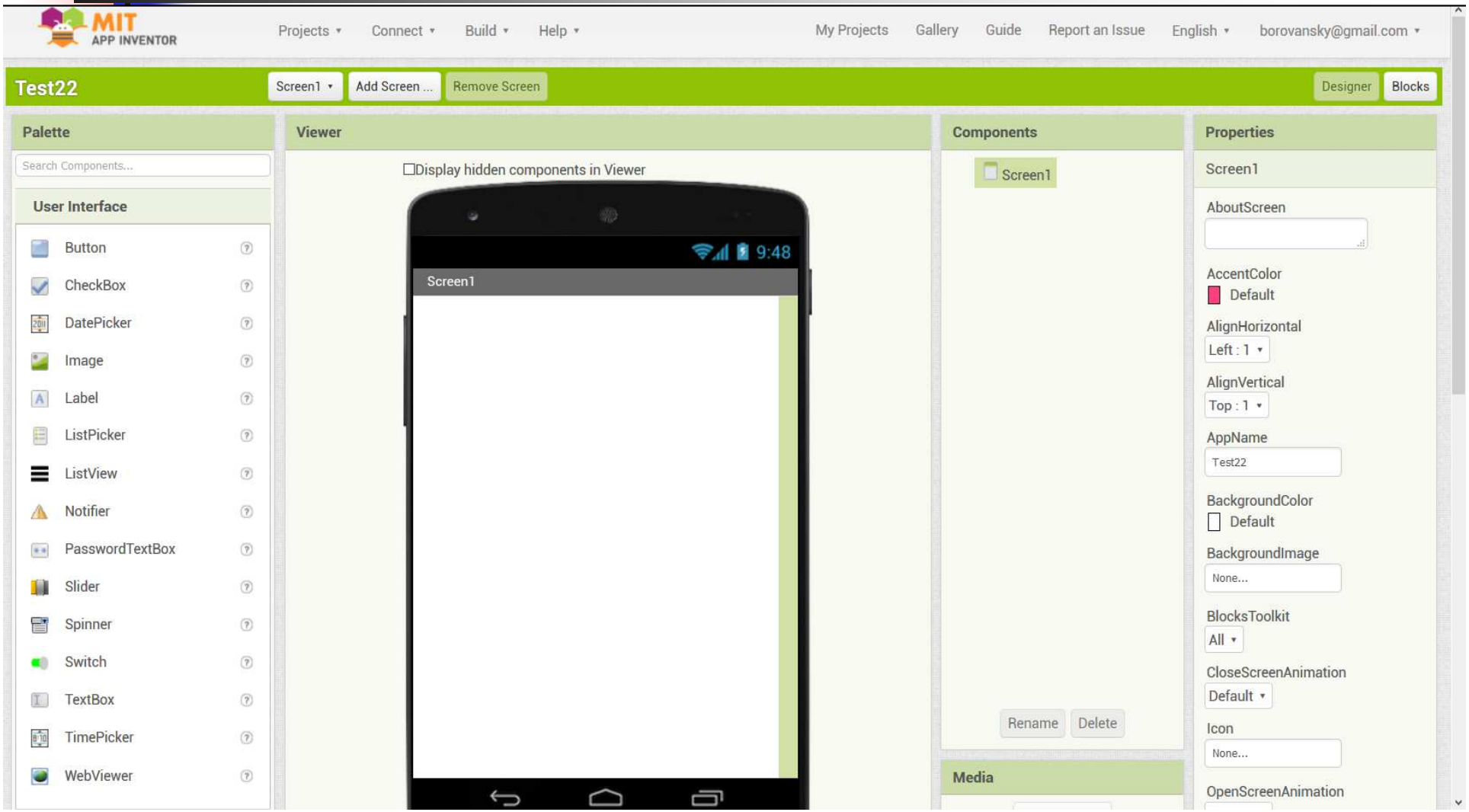
- v mobile: Setting/Application/Development/, 7xklik na Build Number
  USB Debugging = ON (môžete uploadovať vlastné aplikácie .apk)
  Stay awake = ON (nebude vám uspávať, kým ho máte na kábli)
  Allow mock location = ON (ak chcete používať nejaké fake GPS – neskôr)
  Sound & Display/Orientation = OFF

MIT Inventor – prvý pohľad

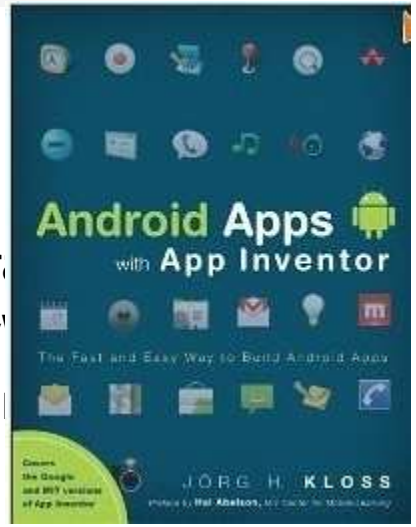


http://ai2.appinventor.mit.edu/

MIT Inventor – hlavný panel



Android Apps with App Inventor:
The Fast and Easy Way to Build Android Apps



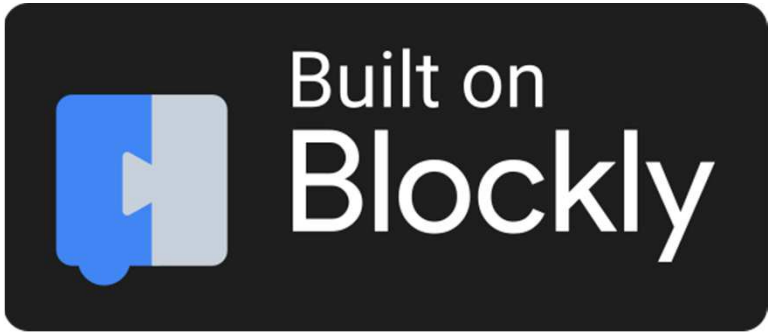
J.H.Kloss, Amazon: 4.4/5

1. Installing and configuring App Inventor
2. Building modern, attractive mobile user interfaces
3. Controlling Android media hardware, including the camer
4. Saving data locally with TinyDB, or in the cloud with Tiny
5. Streamlining and automating phone, text, and email com
6. Tracking orientation, acceleration, and geoposition
7. Integrating text-to-speech and speech-to-text in your apps
8. Controlling other apps and Web services with ActivityStarter
9. Building mobile mashups by exchanging data with Web APIs
10. Testing your apps for diverse hardware with the Android Emulator
11. Example apps

http://books.google.sk/books?id=rfKyt6TRLIoC&pg=SA4-PA7&lpg=SA4-PA7&dq=laughter+android+kloss&source=bl&ots=Kht9zKTIyK&sig=YqHJbc8v77VtR28RmpZccyV2ScY&hl=sk&sa=X&ei=bGOZUMmqDMbesgbA64HIBg&ved=0CCkQ6AEwAQ#v=onepage&q&f=true

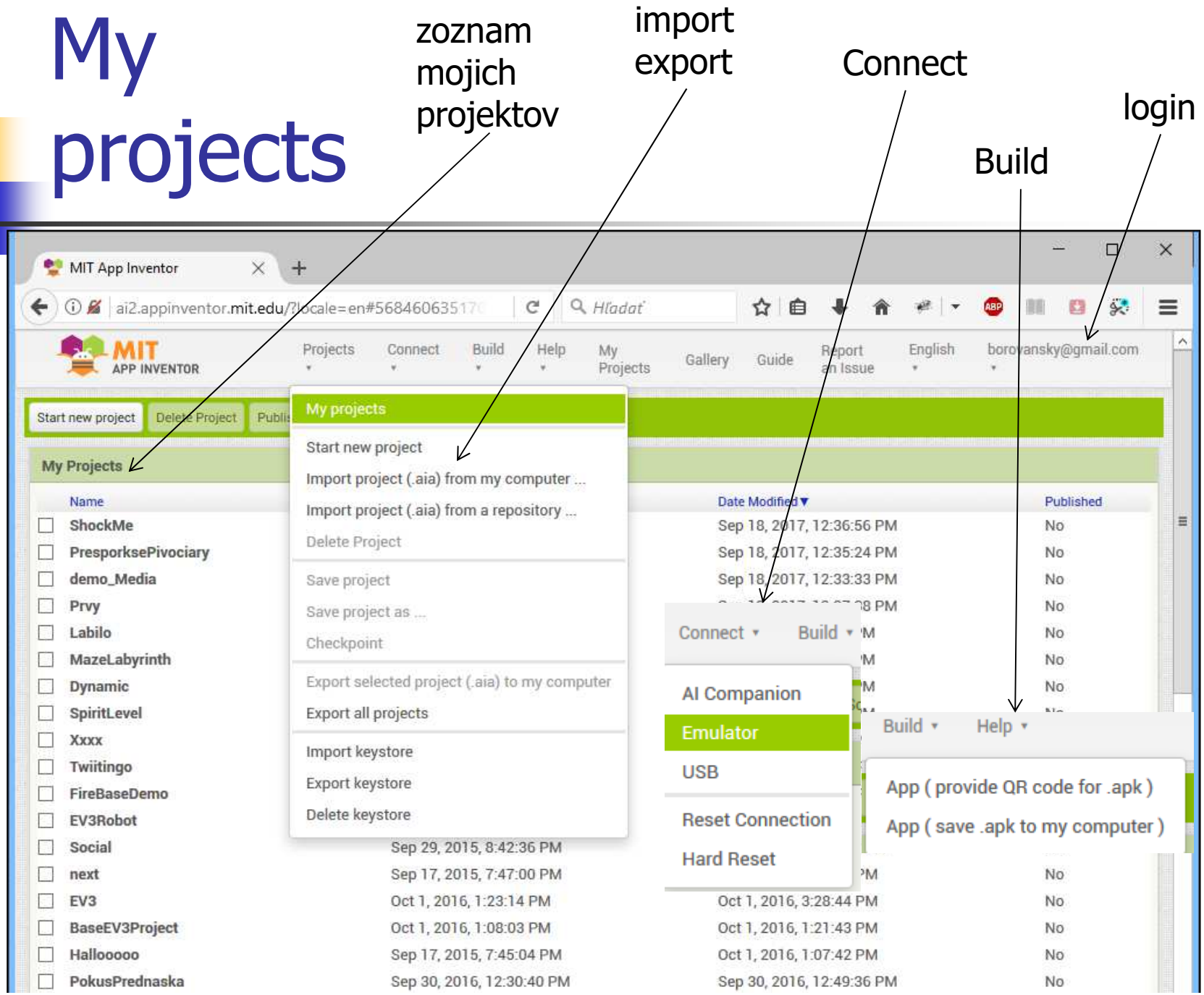
http://www.amazon.com/Android-Apps-App-Inventor-Build/dp/0321812700/ref=sr_1_7?s=books&ie=UTF8&qid=1322522259&sr=1-7

Iné zdroje

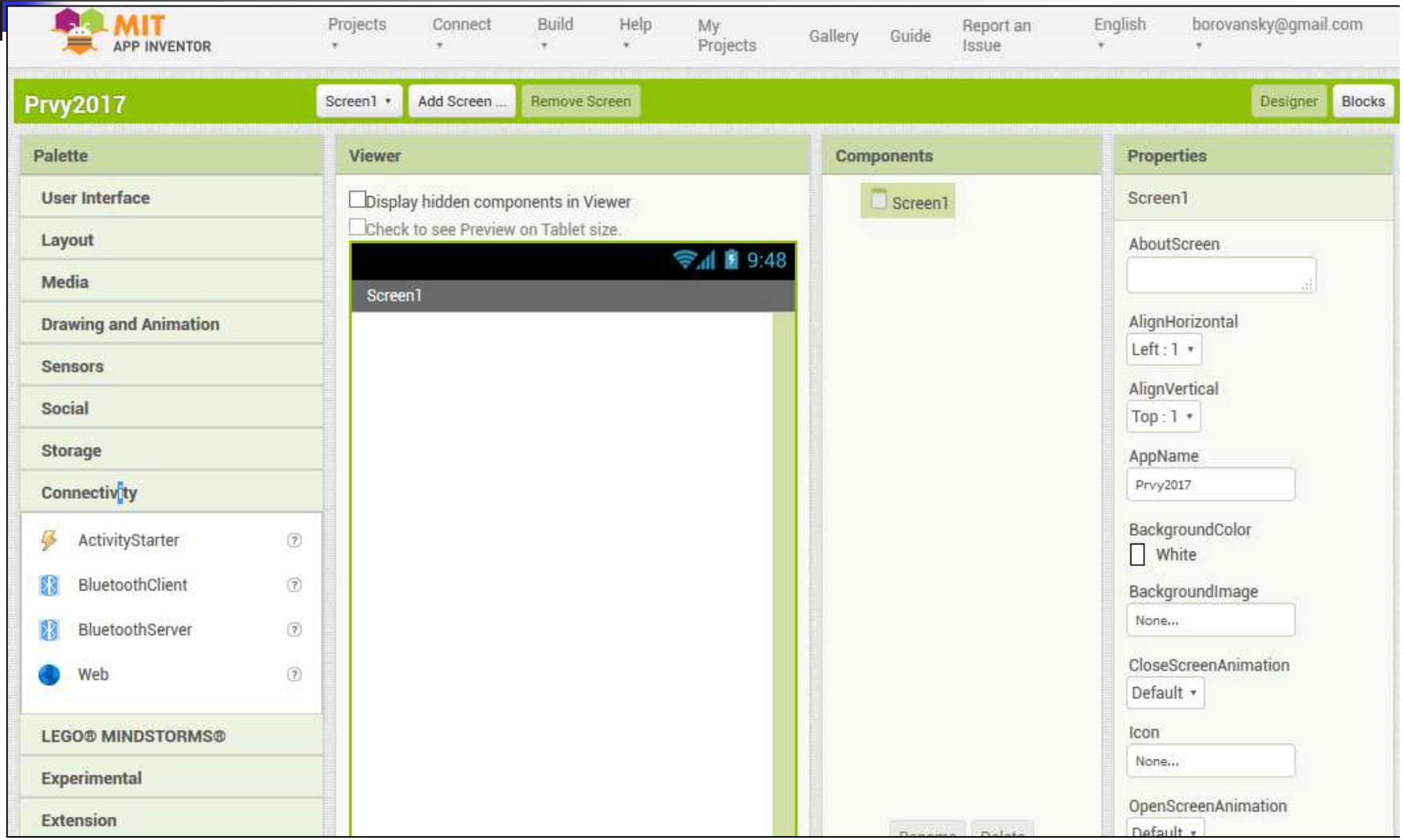


- AppInventor at MIT (http://appinventor.mit.edu/)
- Kurz edX: Mobile Computing with App Inventor - CS Principles (english) (https://courses.edx.org/courses/course-v1:TrinityX+T007x+1T2017/course/)
- Kurz Learn2Code: MIT Inventor (slovensky) (https://www.learn2code.sk/kurzy/mit-app-inventor)
- príklady hotových projektov, ak radšej čítate hotové projekty: App Inventor Snippets (http://puravidaapps.com/snippets.php)
- App Inventor Teach – pre učiteľov (http://appinventor.mit.edu/explore/teach.html)
- MIT Inventor Tutorials – Hour of Code (http://appinventor.mit.edu/explore/hour-of-code.html)
- MIT Inventor Public Open Source (http://appinventor.mit.edu/appinventor-sources/)
- Dlho očakávané MIT Inventor for iOS (http://doesappinventorrunonios.com/)

My projects


zoznam mojich projektov
import export
Connect
Build
login
MIT App Inventor
ai2.appinventor.mit.edu/?locale=en#5684606351
Hľadať
MIT APP INVENTOR
Projects
Connect
Build
Help
My Projects
Gallery
Guide
Report an Issue
English
borovansky@gmail.com
Start new project
Delete Project
My projects
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
My Projects
Name
Date Modified
Published
ShockMe
Sep 18, 2017, 12:36:56 PM
No
PresporksePivociary
Sep 18, 2017, 12:35:24 PM
No
demo_Media
Sep 18, 2017, 12:33:33 PM
No
Prvy
No
Labilo
No
MazeLabyrinth
No
Dynamic
No
SpiritLevel
Xxxx
Twiitingo
FireBaseDemo
EV3Robot
Social
Sep 29, 2015, 8:42:36 PM
next
Sep 17, 2015, 7:47:00 PM
EV3
Oct 1, 2016, 1:23:14 PM
Oct 1, 2016, 3:28:44 PM
No
BaseEV3Project
Oct 1, 2016, 1:08:03 PM
Oct 1, 2016, 1:21:43 PM
No
Halloooo
Sep 17, 2015, 7:45:04 PM
Oct 1, 2016, 1:07:42 PM
No
PokusPrednaska
Sep 30, 2016, 12:30:40 PM
Sep 30, 2016, 12:49:36 PM
No
Connect
Build
AI Companion
Emulator
USB
Reset Connection
Hard Reset
Build
Help
App (provide QR code for .apk)
App (save .apk to my computer)

Prvý projekt

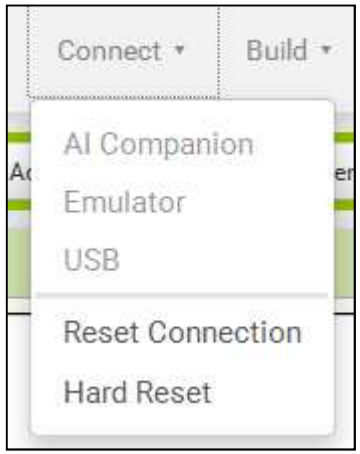


Connect WiFi

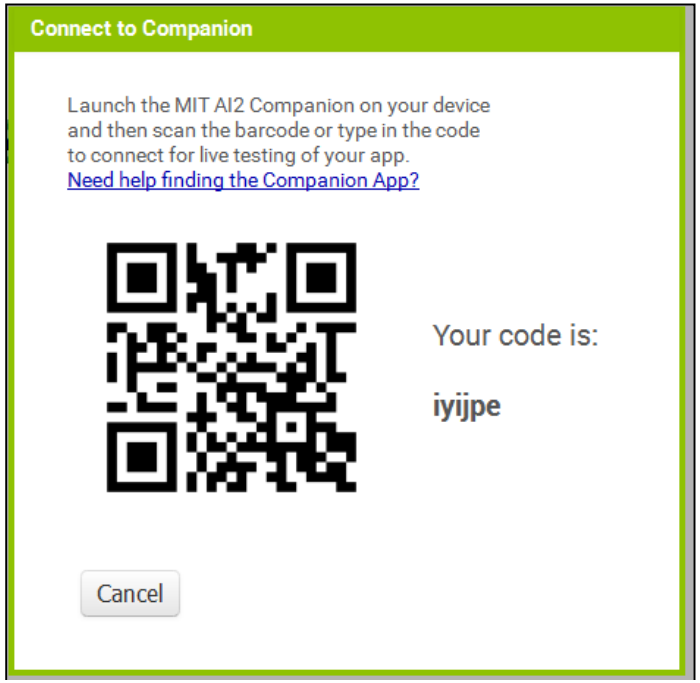
- Nainštalujte MIT AI2 Companion App cez Google Play Store

https://play.google.com/store/apps/details?id=edu.mit.appinventor.aicompanion3

Connect to Device



- spusti MIT AI2 Companion App



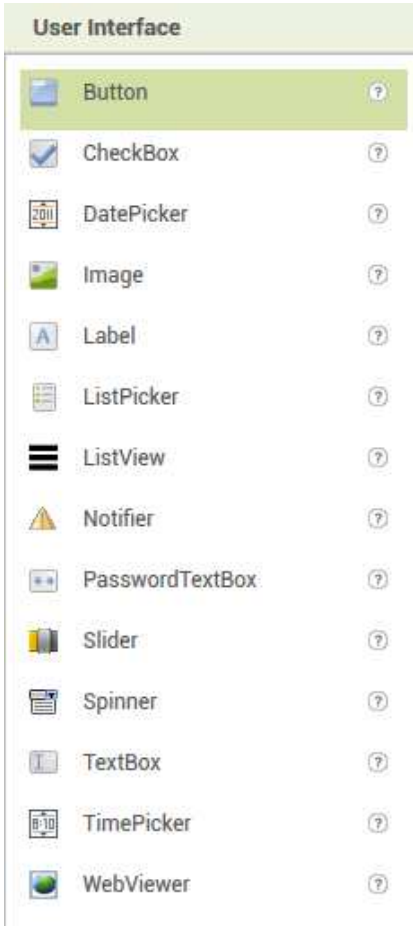
Palety komponentov

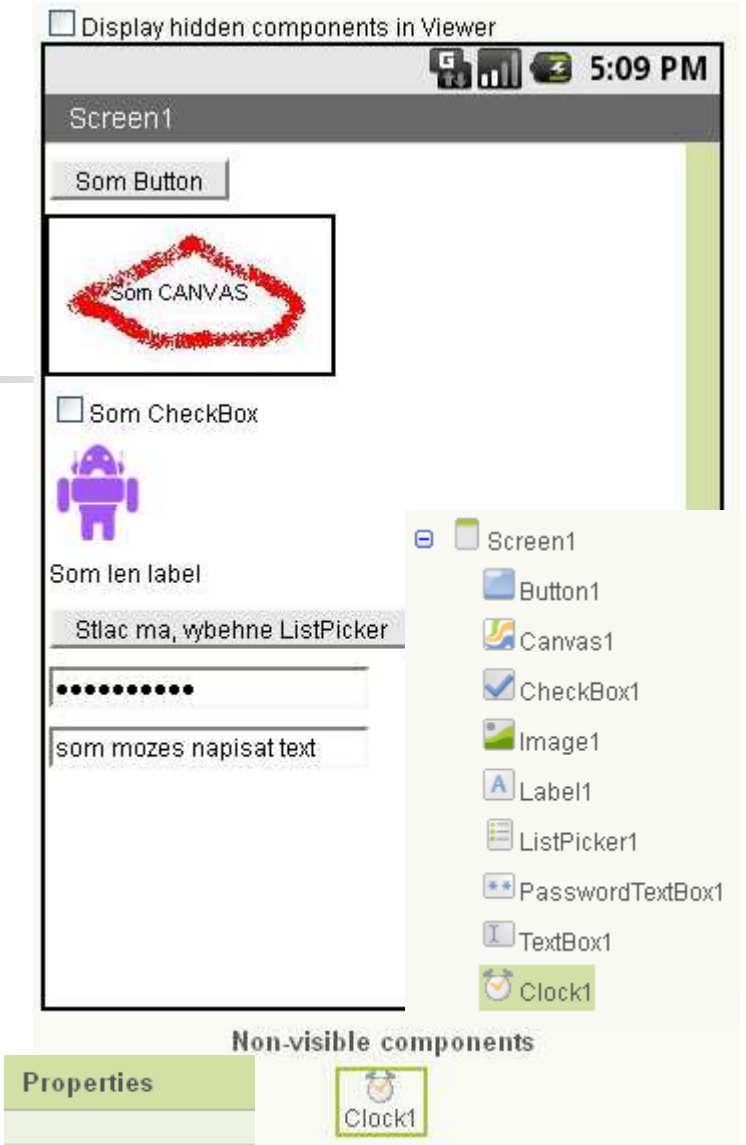
- User Interface
  - Button, CheckBox, Clock, Image, Label, List/Time/Date-Picker, Password, Slider, TextBox
- Layout
  - Horizontal/Vertical/Table Arrangement [Scrollable]
- Media
  - Camcoder, Camera, ImagePicked, Player, Sound, VideoPlayer, TextToSpeech, SpeechRecognizer
- Drawing and Animation
  - Ball, Canvas, ImageSprite
- Social
  - ContactPicker, EmailPicker, PhoneNumberPicker, PhoneCall, Texting, Twitter, Sharing
- Sensor
  - Accelerometer, Location, Orientation, Gyro, Pedometer, Proximity, Bar Code Scanner
- Storage
  - File, TinyDB, FireBaseDB
- Connectivity
  - BluetoothClient-Server, ActivityStarter
- Lego MINDSTORMS

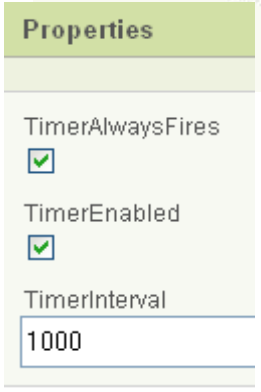
User Interface

Ilustrujeme si základné vizuálne komponenty:

- Button
- CheckBox
- Clock
- Image
- Label
- List/Time/Date-Picker
- PasswordTextBox
- TextBox
- Notifier
- WebViewer



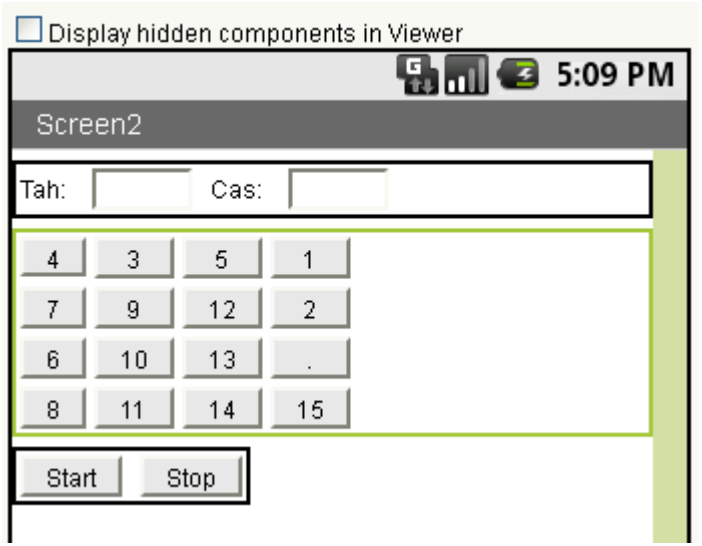


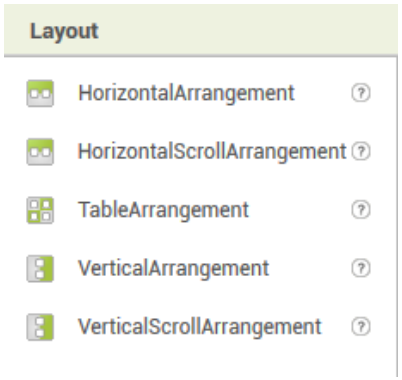


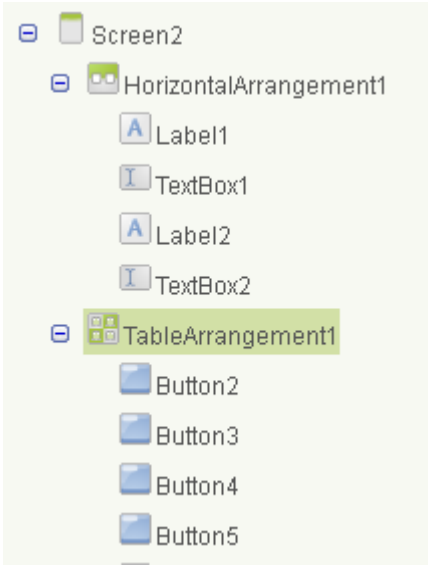
BasicComponents.zip,
BasicComponents.apk

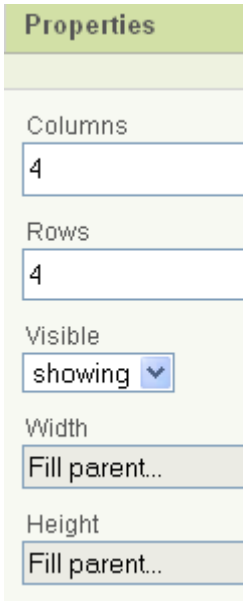
Layouts (Arrangement)

- HorizontalArrangement
- TableArrangement
- VerticalArrangement



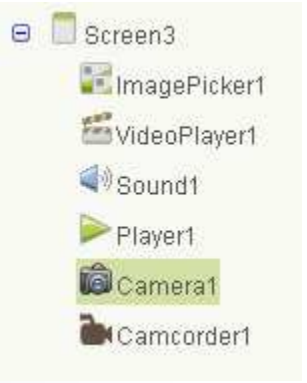






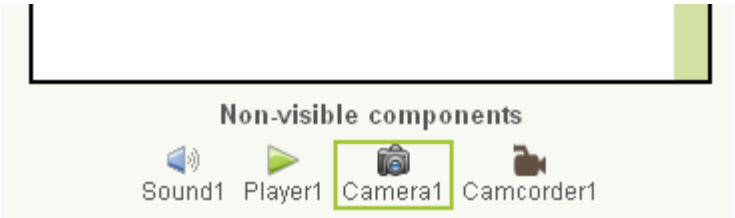
BasicComponents.zip, BasicComponents.apk

Media



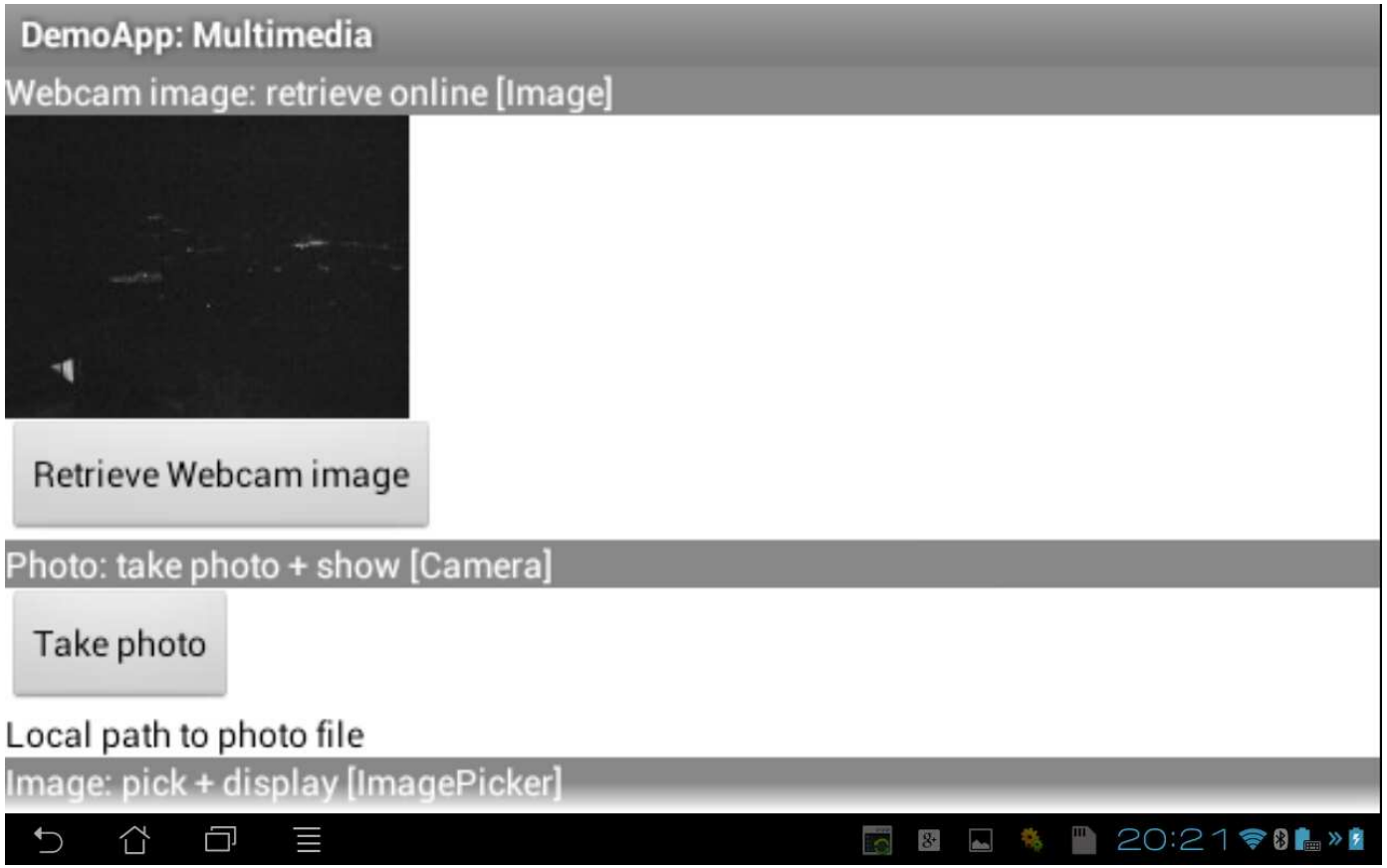
- Camera
- ImagePicker
- Player
- Sound
- VideoPlayer

- Spustiť: block editor
- Uložiť (strýčko Google si to ukladá sám v MyProjects:-)



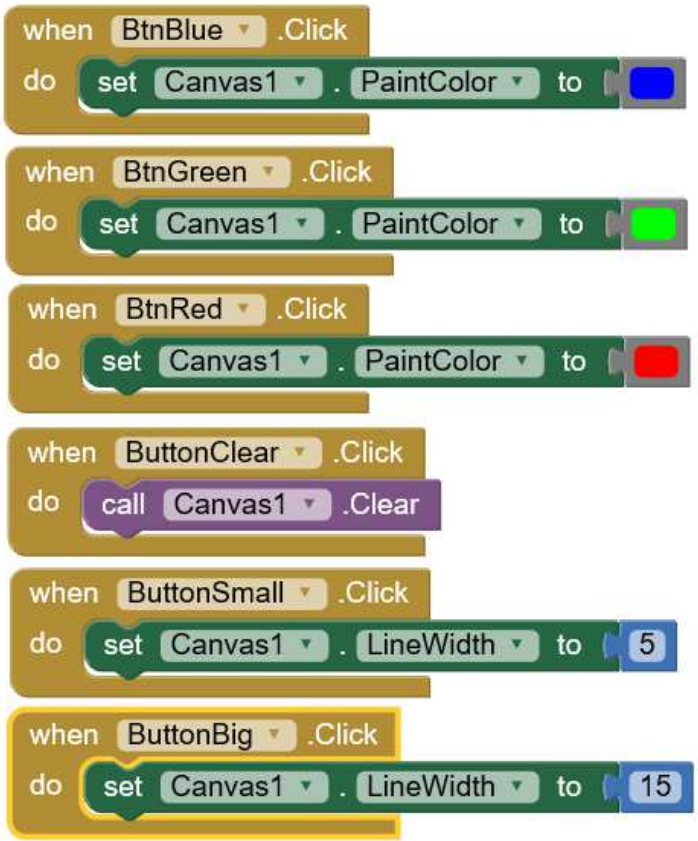
BasicComponents.zip, BasicComponents.apk

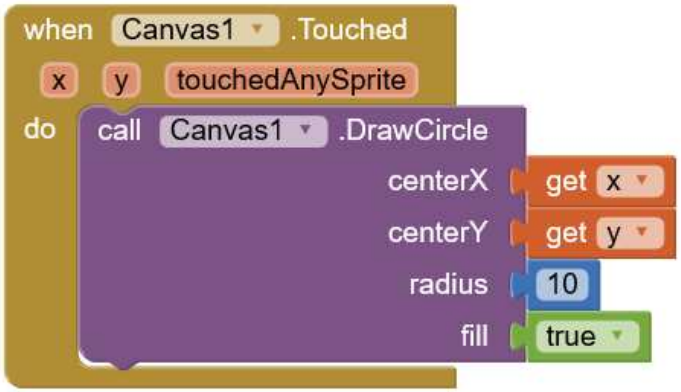
demo_Media

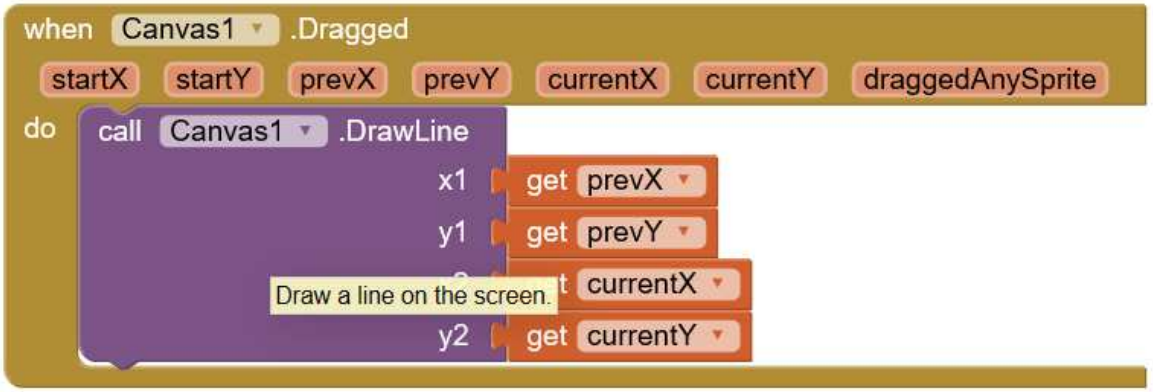

DemoApp: Multimedia
Webcam image: retrieve online [Image]
Retrieve Webcam image
Photo: take photo + show [Camera]
Take photo
Local path to photo file
Image: pick + display [ImagePicker]
20:21

FingerPaint1

jednoduché malovátko prstom





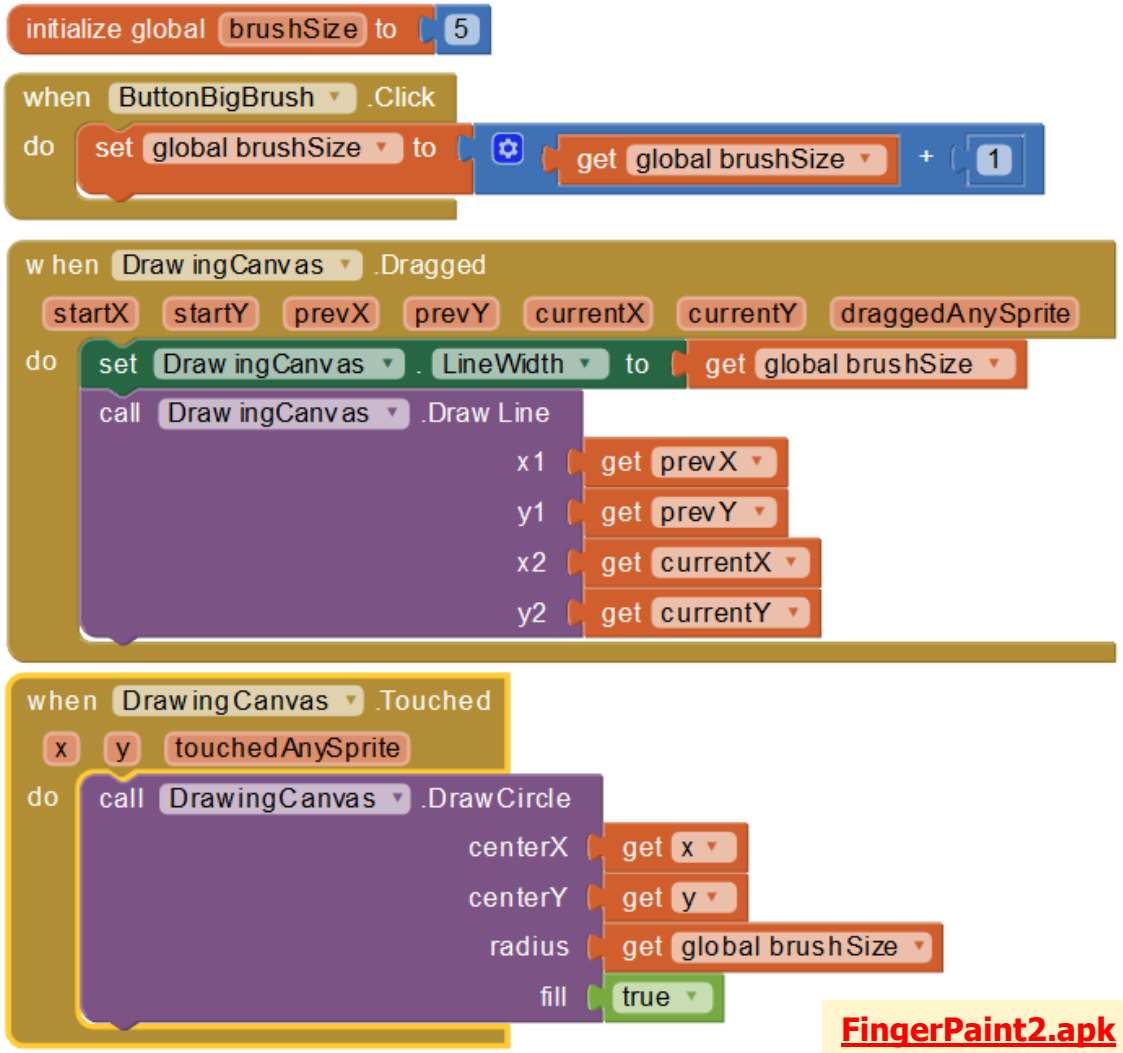


FingerPaint1.apk

FingerPaint2

Pokročilejšia verzia

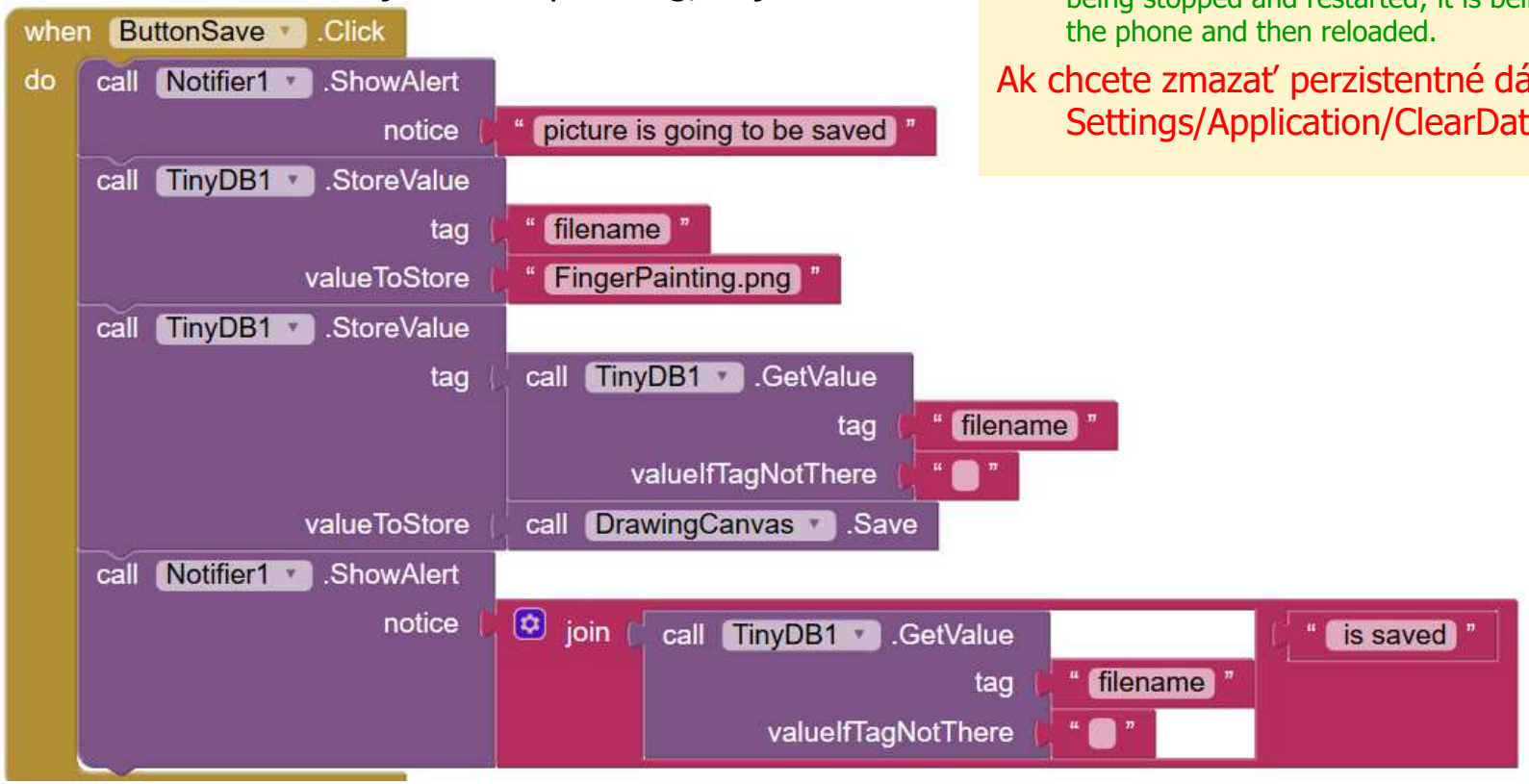
- Hrúbka pera
  - globálna premenná brushSize
- Kreslenie čiar
  - drawingCanvas.Dragged



FingerPaint2.apk

FingerPaint2

- Ukladanie obrázku
  - Persistencia
- Práca s TinyDB
  - čo je HashMap<String, Object>



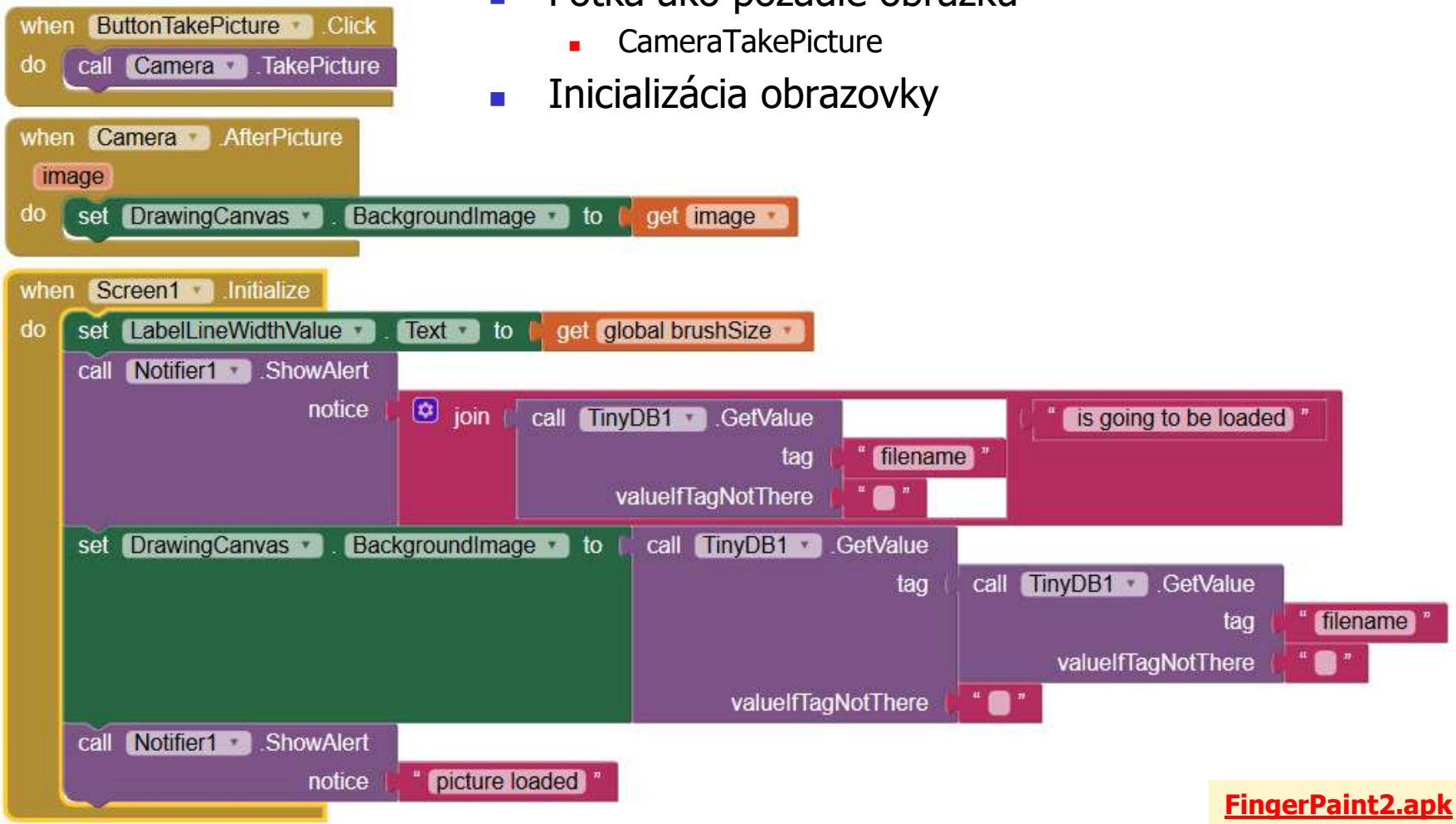
The data in TinyDB is persistent only when you have packaged and downloading your app. If you are developing connected to the phone, and you restart the Appinventor application, or if you disconnect and reconnect the phone, then the data base will start fresh. This is a case where the application is not merely being stopped and restarted; it is being removed from the phone and then reloaded.

Ak chcete zmazať perzistentné dáta, Settings/Application/ClearData

FingerPaint2.apk

FingerPaint2

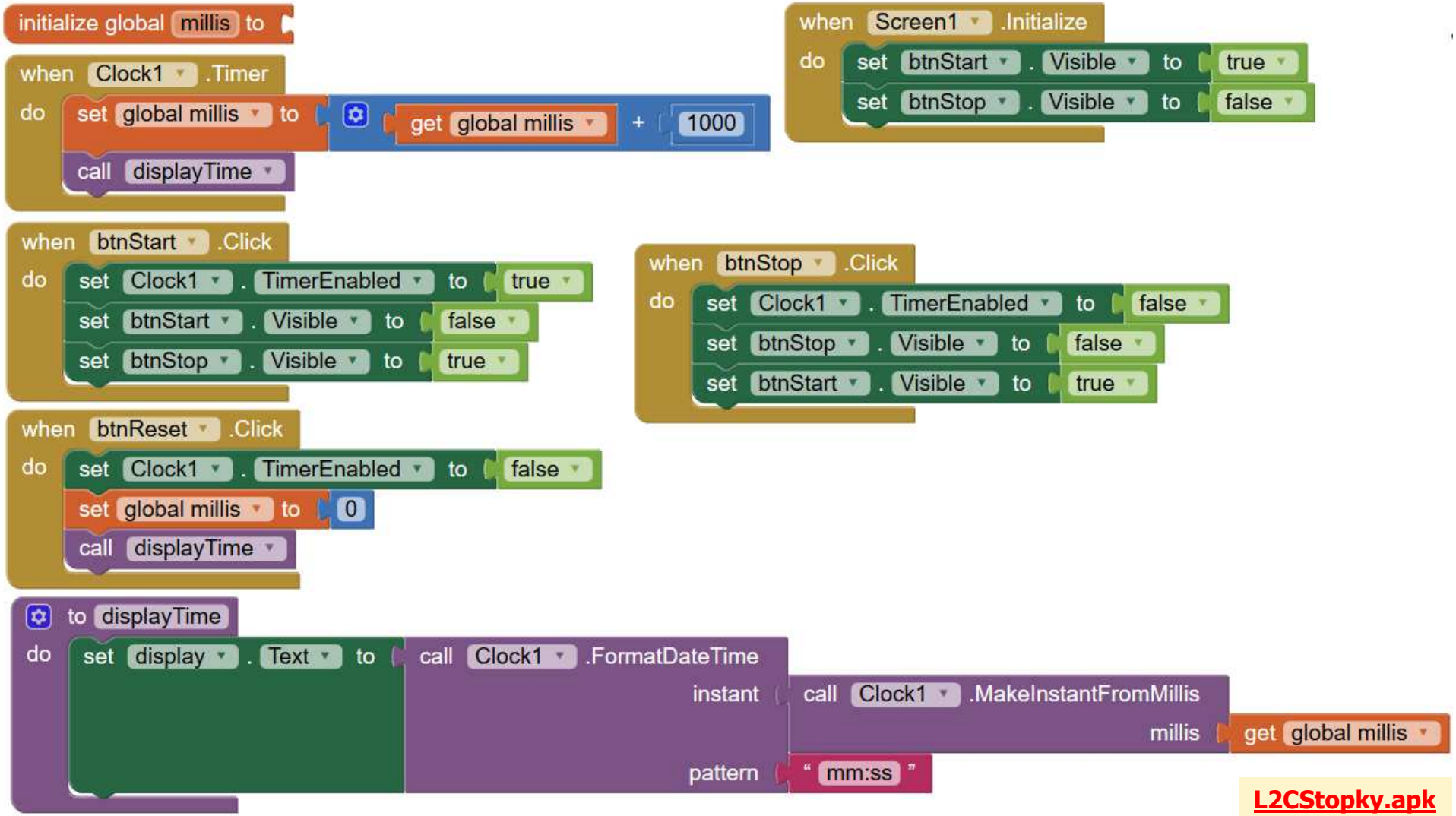
- Fotka ako pozadie obrázku
  - CameraTakePicture
- Inicializácia obrazovky



FingerPaint2.apk

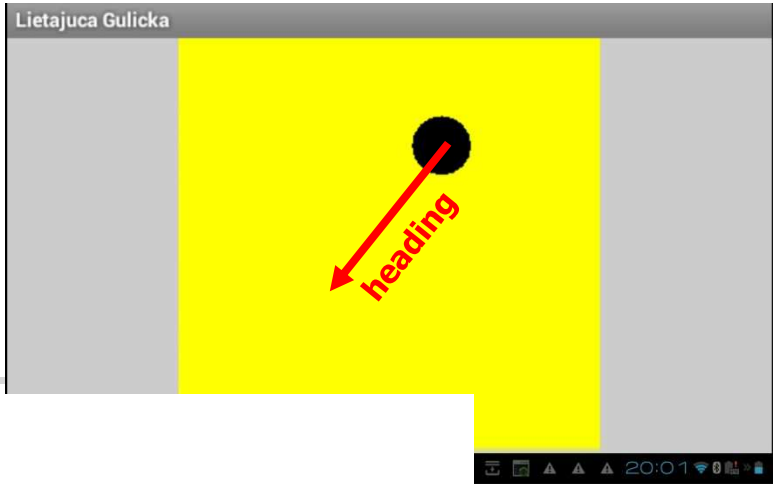
Stopky

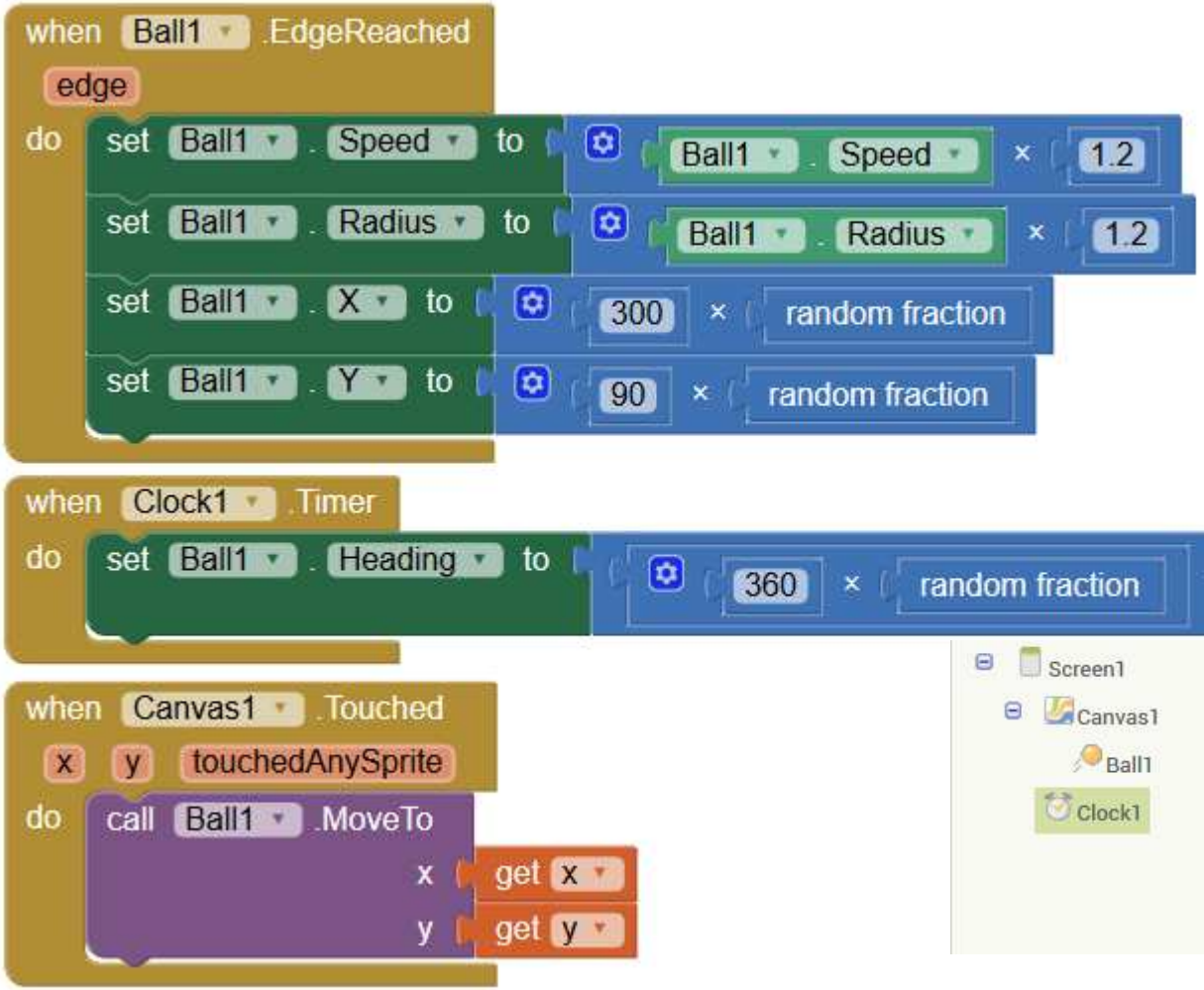
(clock – timer)

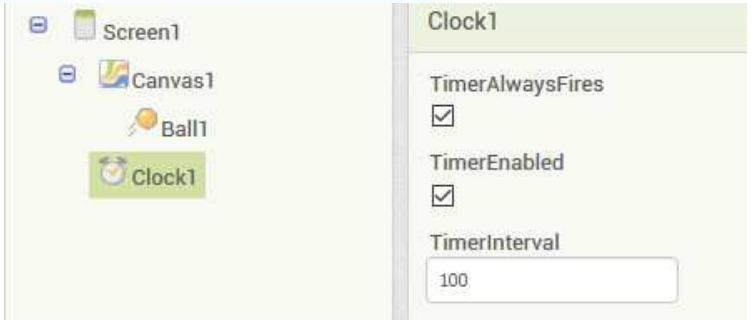


L2CStopky.apk

Dynamic
(random)

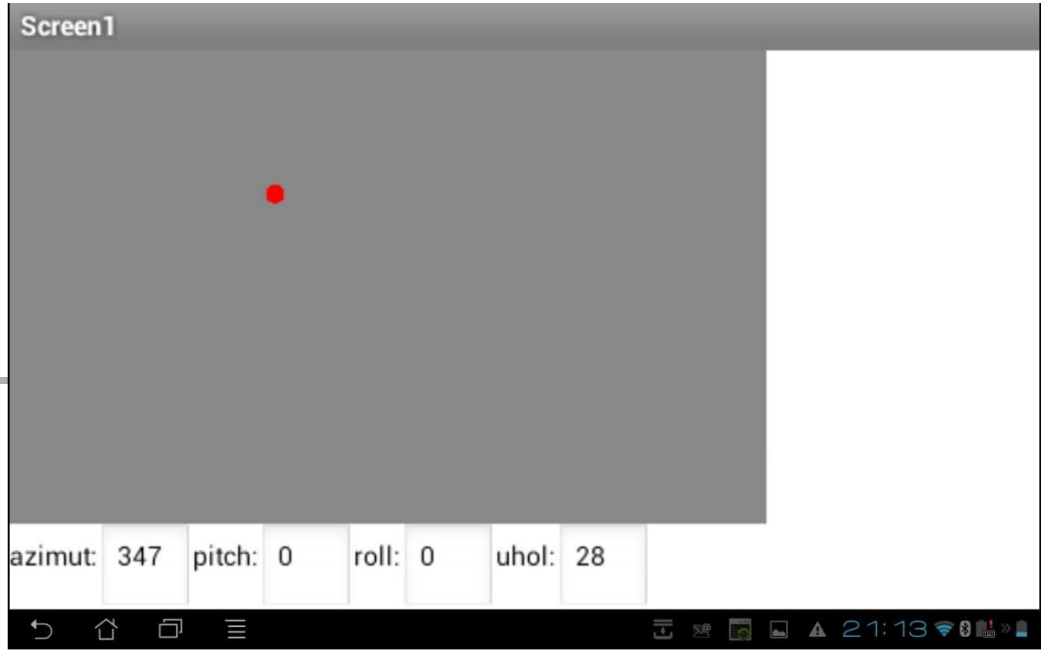


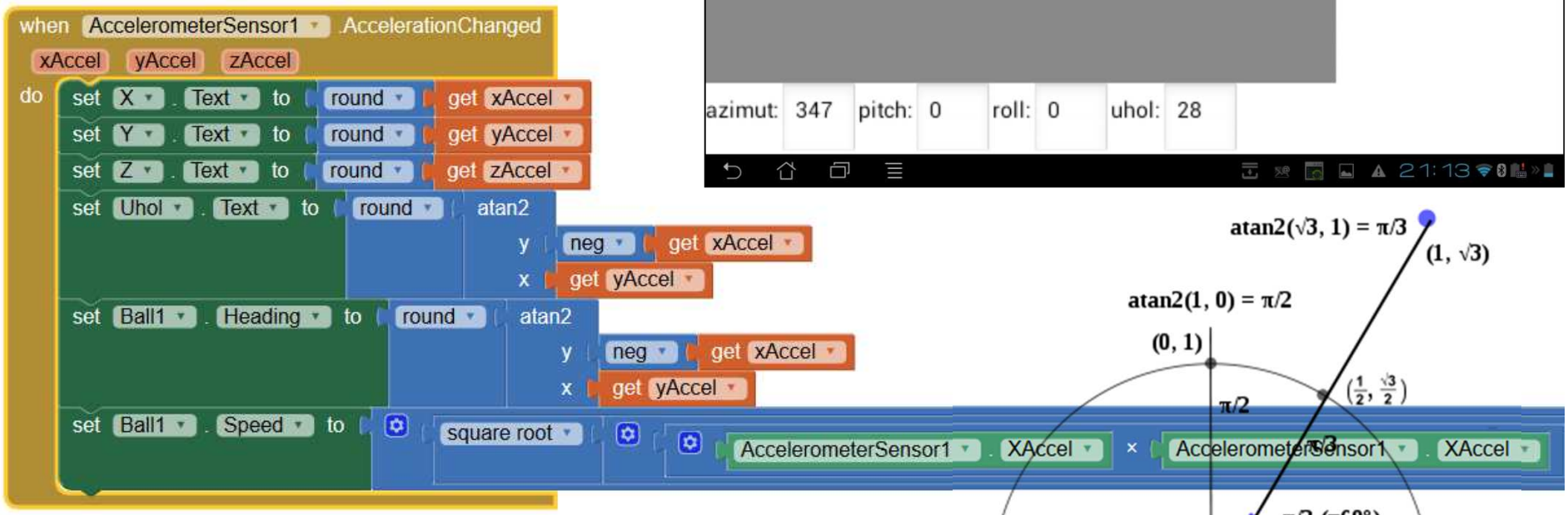


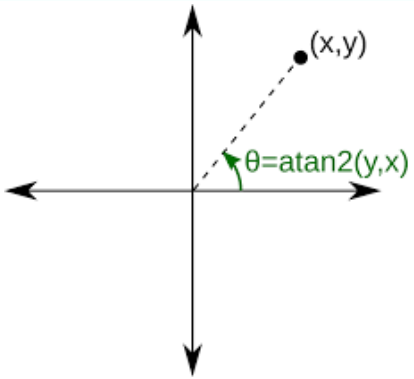


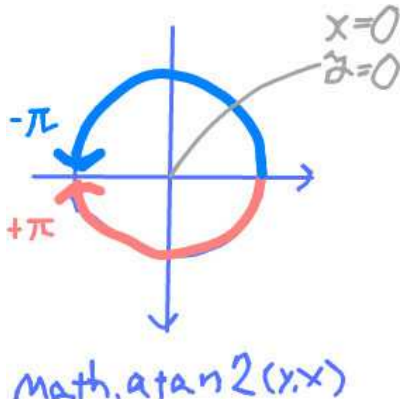
Dynamic.apk

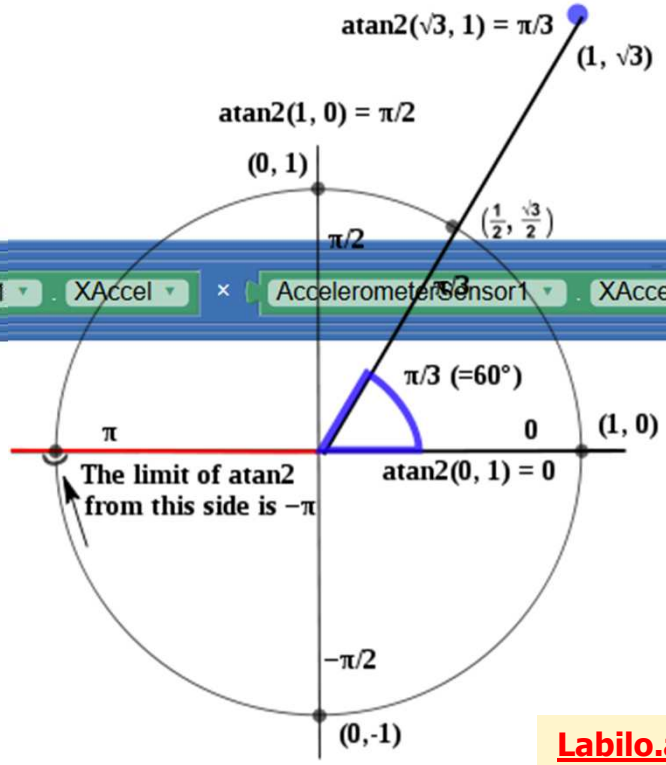
Labilo
(atan2)







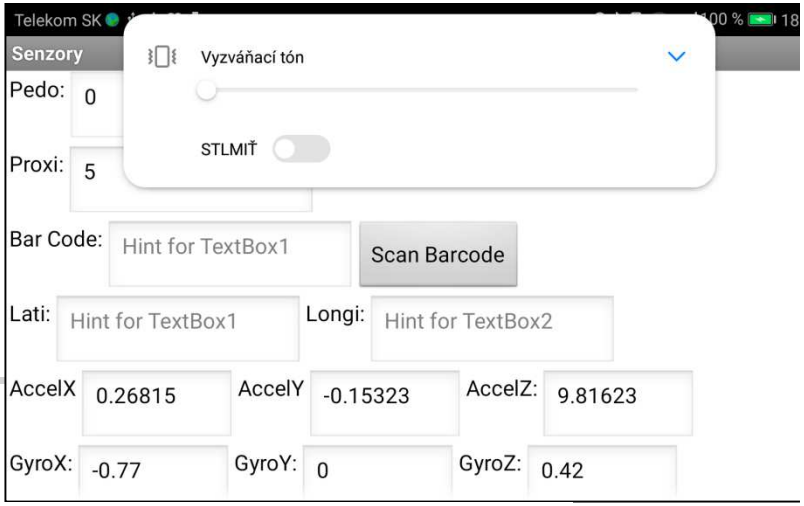


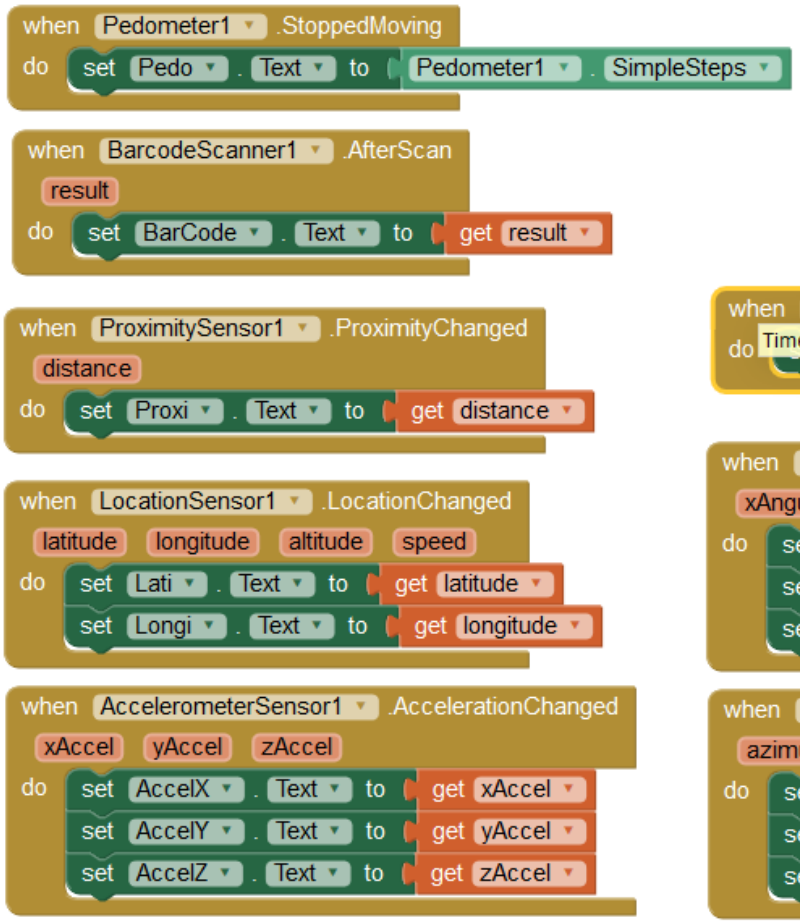


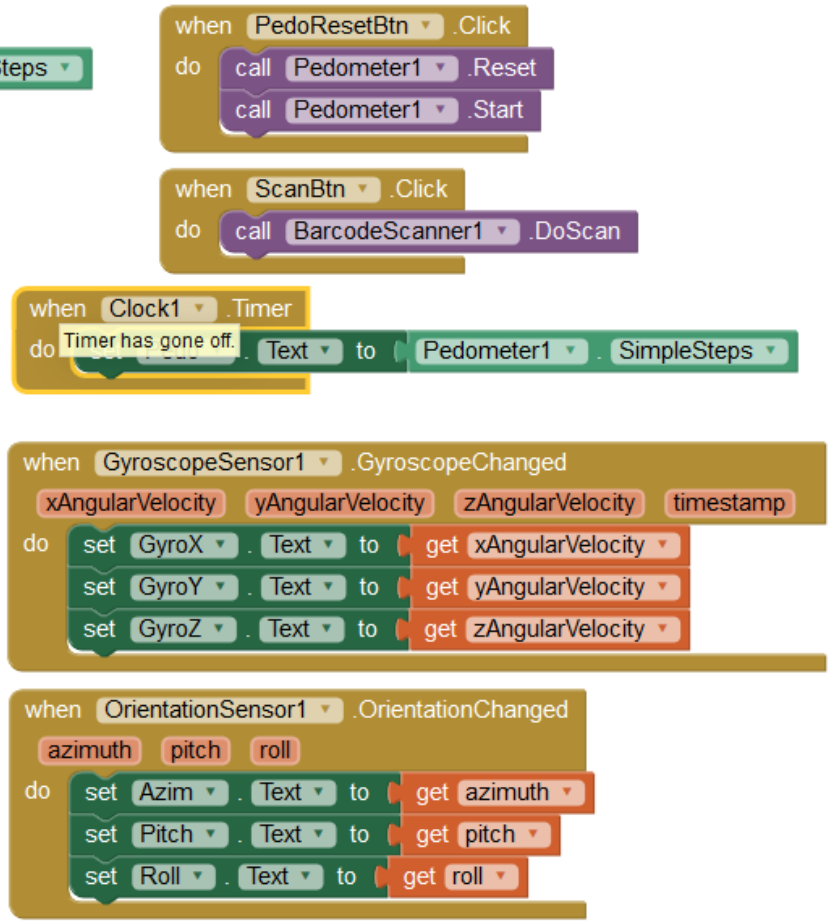
Labilo.apk

Senzory

(accel, barcode, gyro, NFC, GPS, kompas, pedo, proximity)



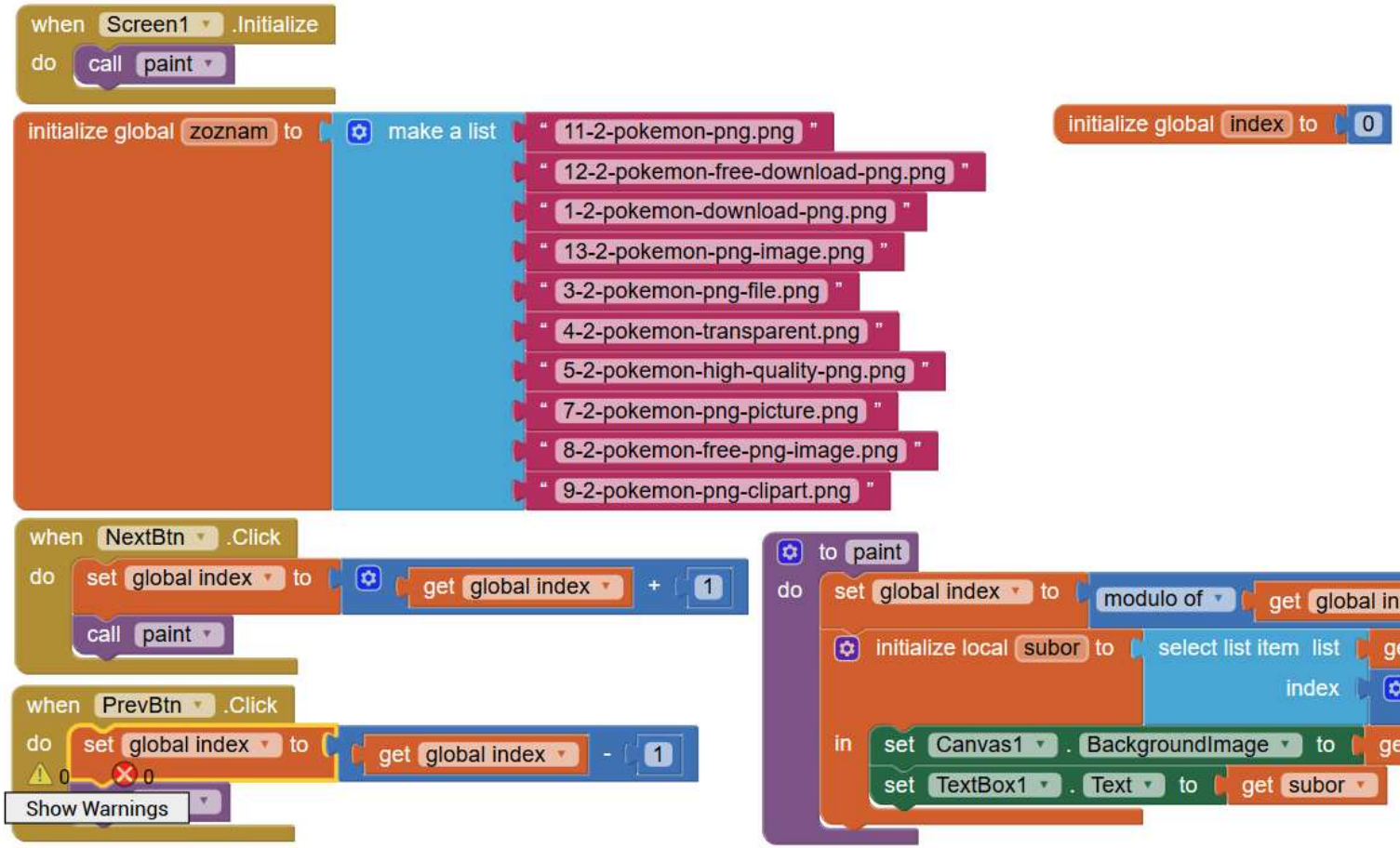




Senzory.apk

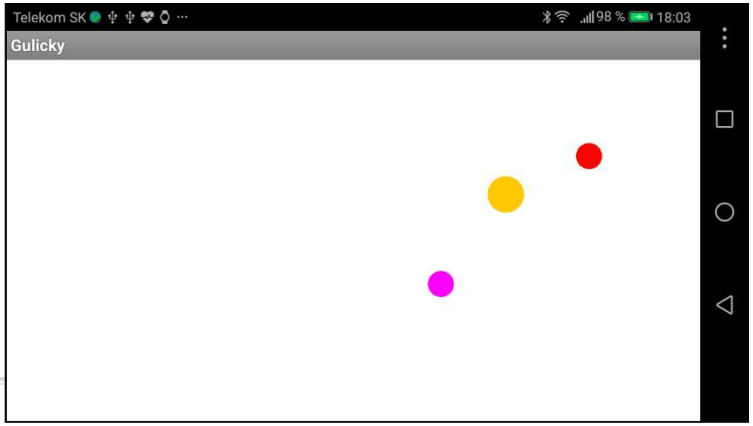
Zoznam

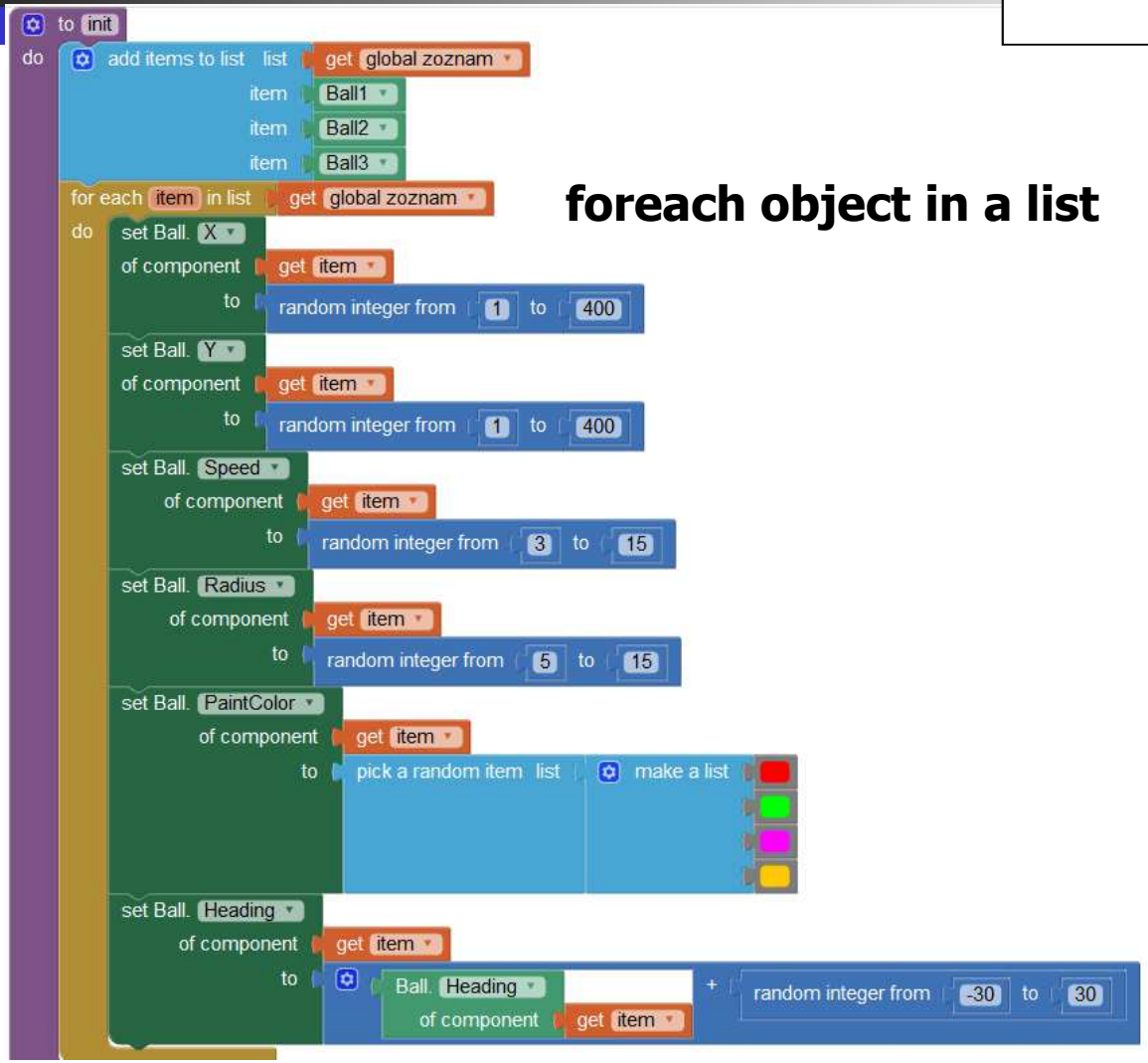
(zoznam)



Pokemoni.apk

Zoznam objektov (for each)



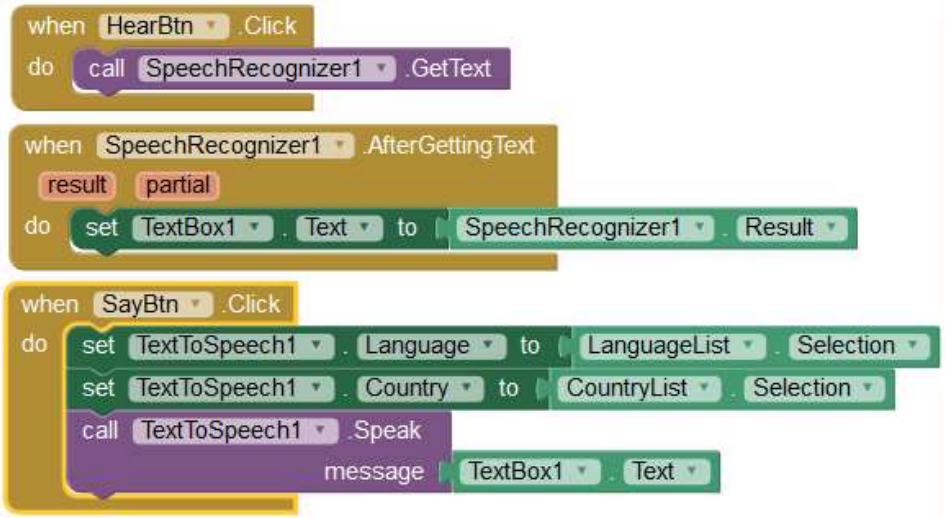


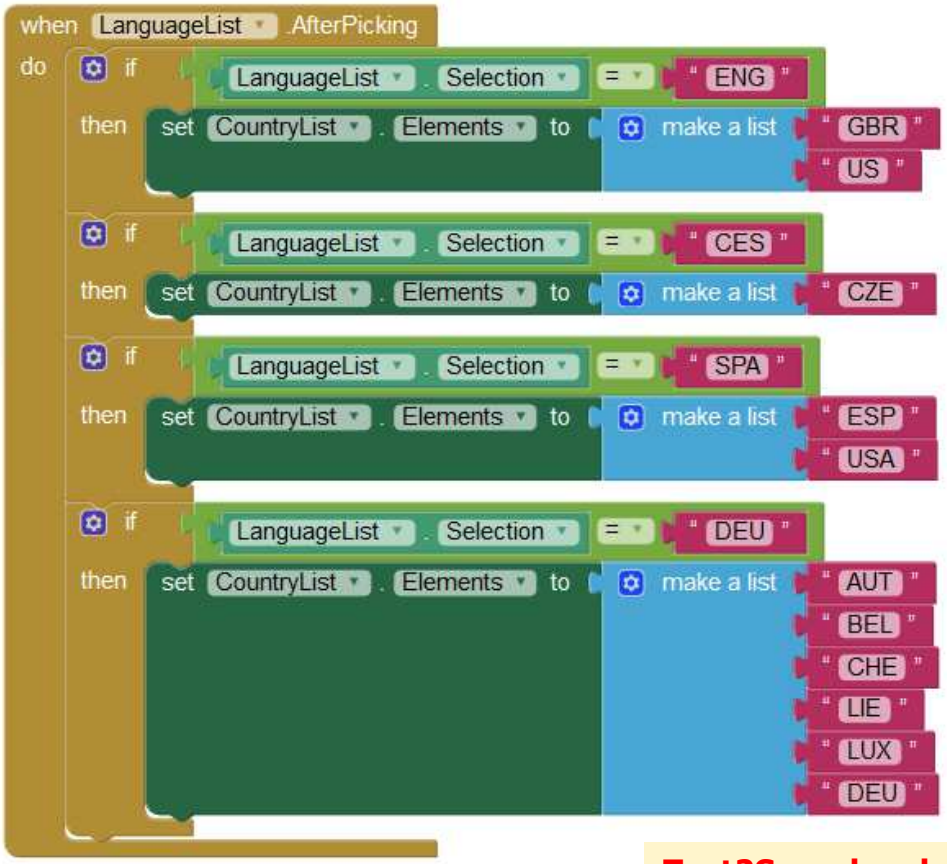
foreach object in a list

Gulicky.apk

TextToSpeech

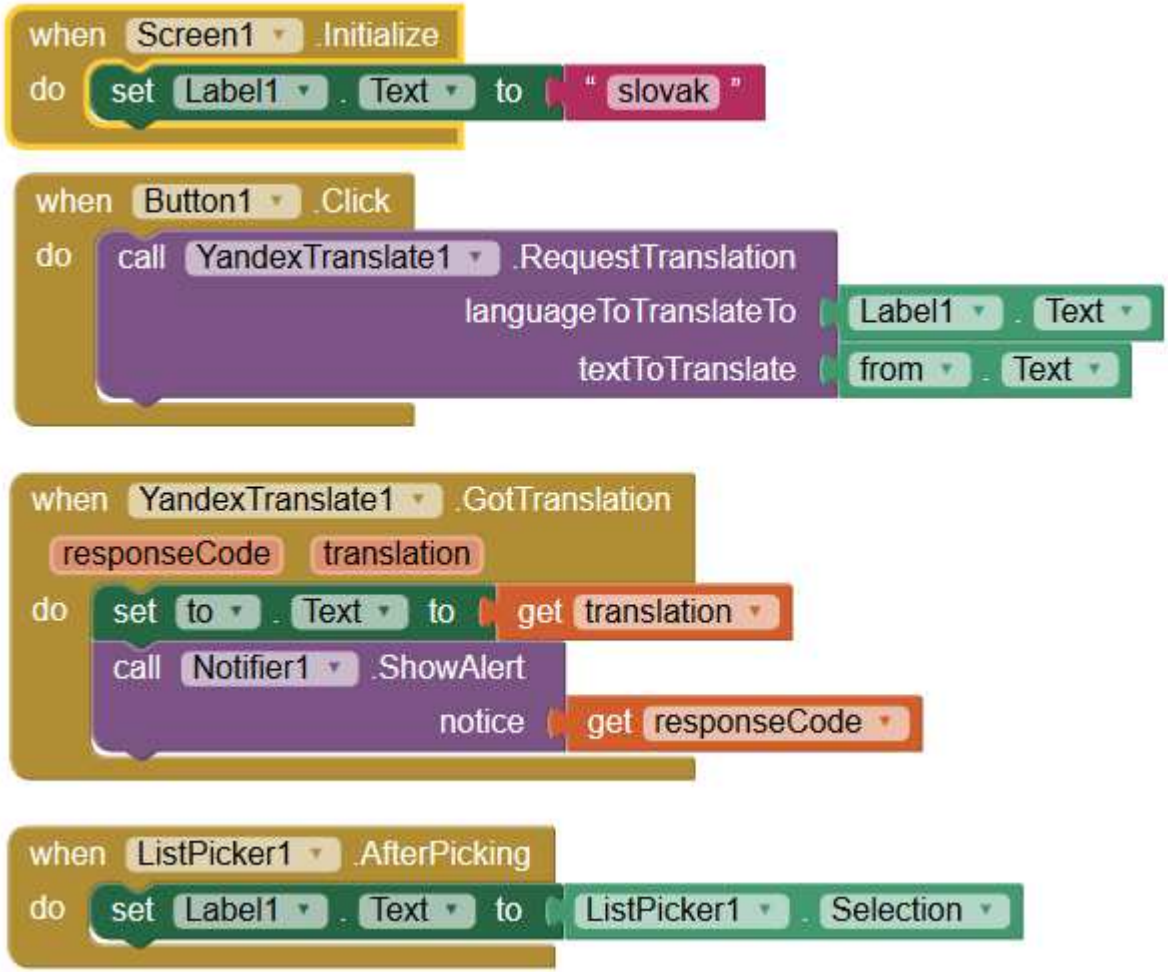
- Nainštaluj eSpeak
- https://play.google.com/store/apps/details?id=com.googlecode.eyesfree.espeak&hl=sk





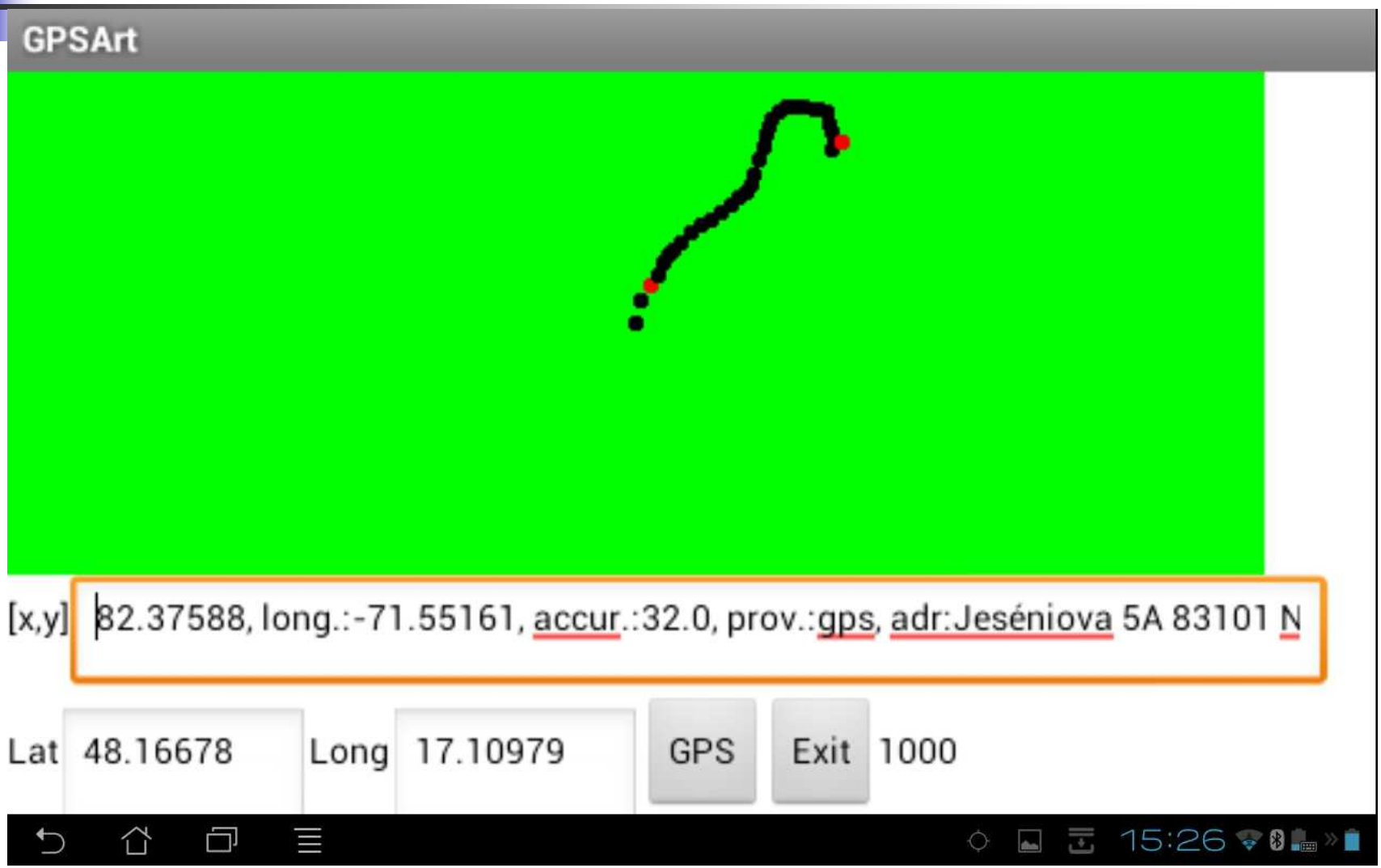
Text2Speech.apk

Translator

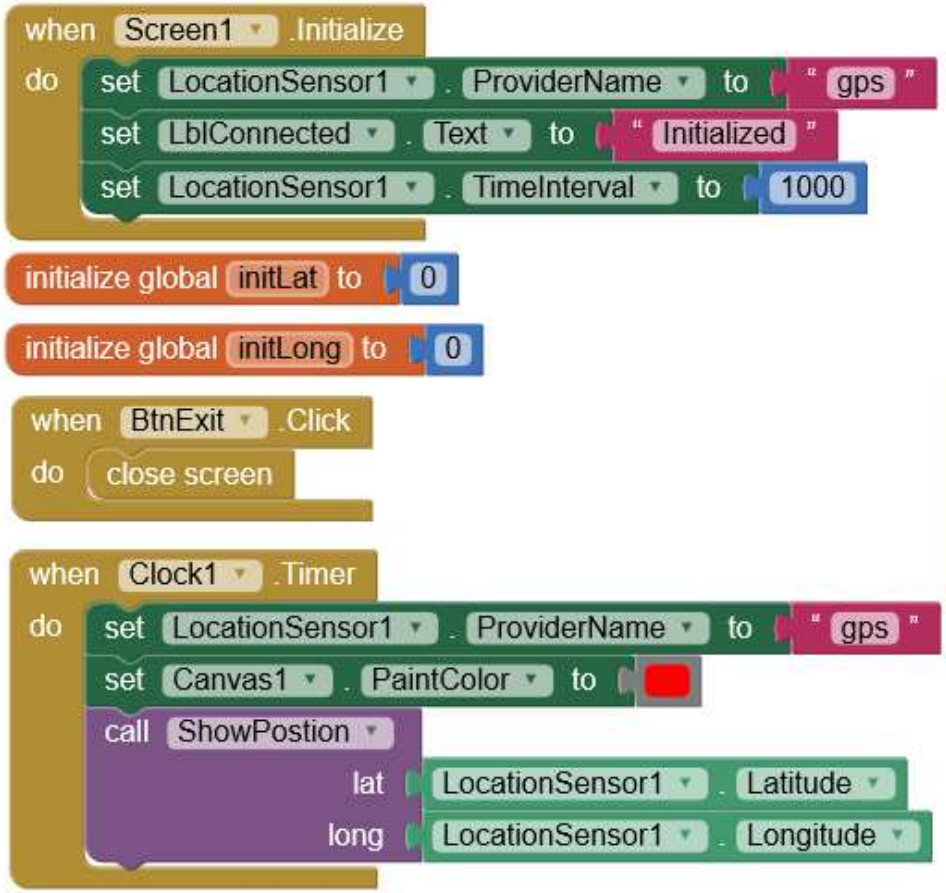


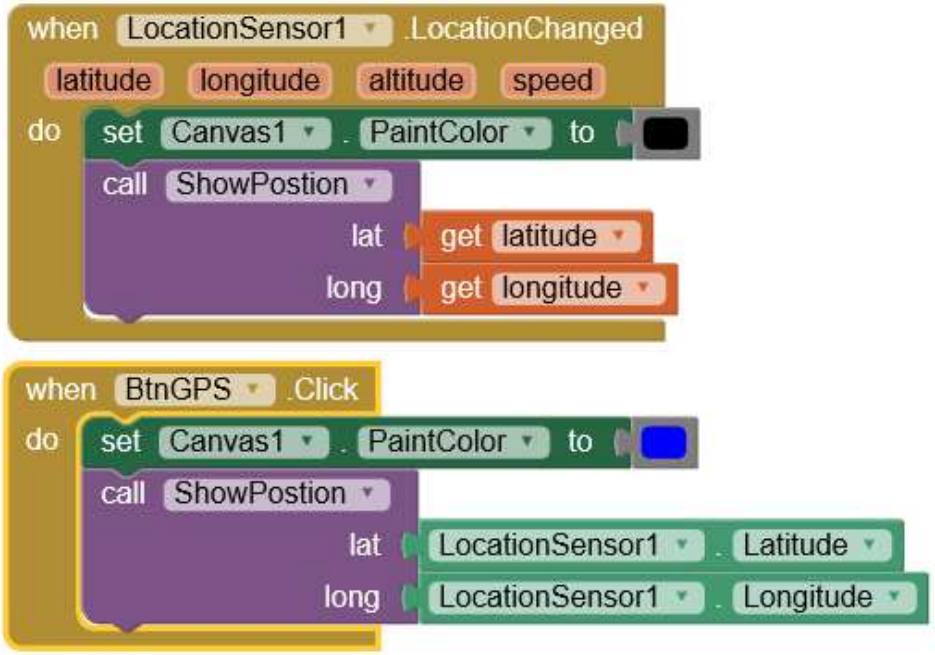
Translator.apk

GPS Art


GPSArt
[x,y] 82.37588, long.:-71.55161, accur.:32.0, prov.:gps, adr:Jeséniova 5A 83101 N
Lat 48.16678
Long 17.10979
GPS
Exit
1000
15:26

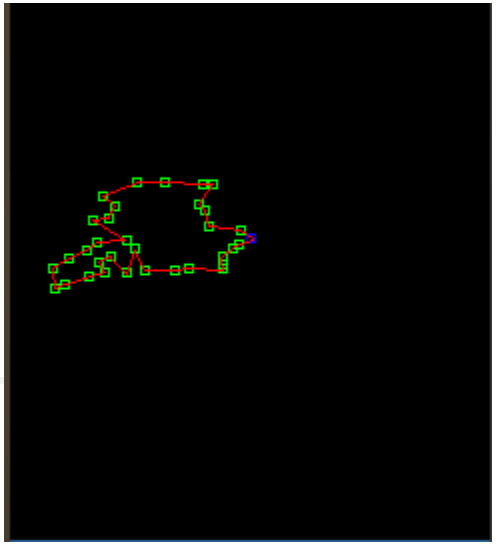
GPS Art

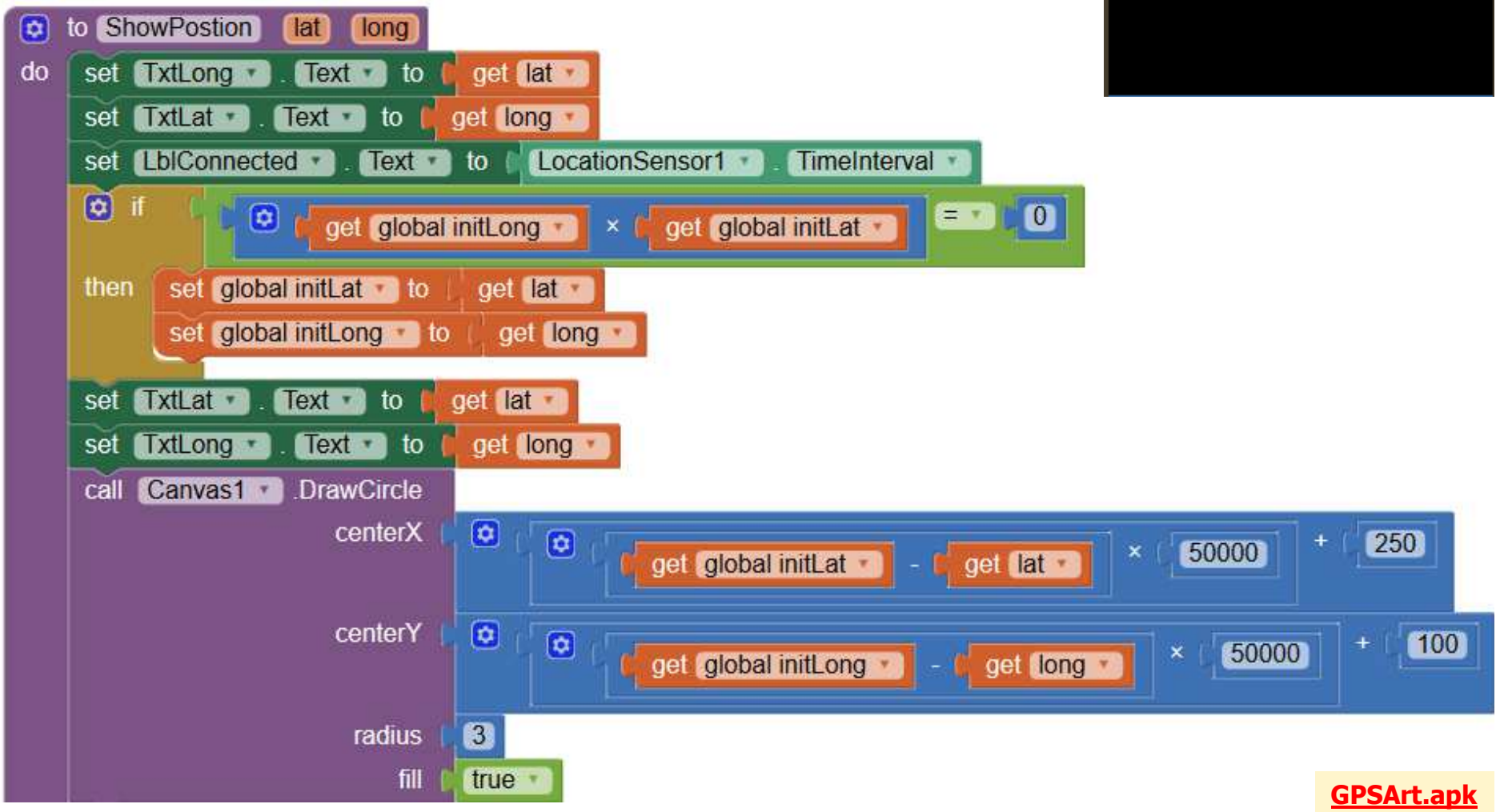




GPSArt.apk

GPS Art

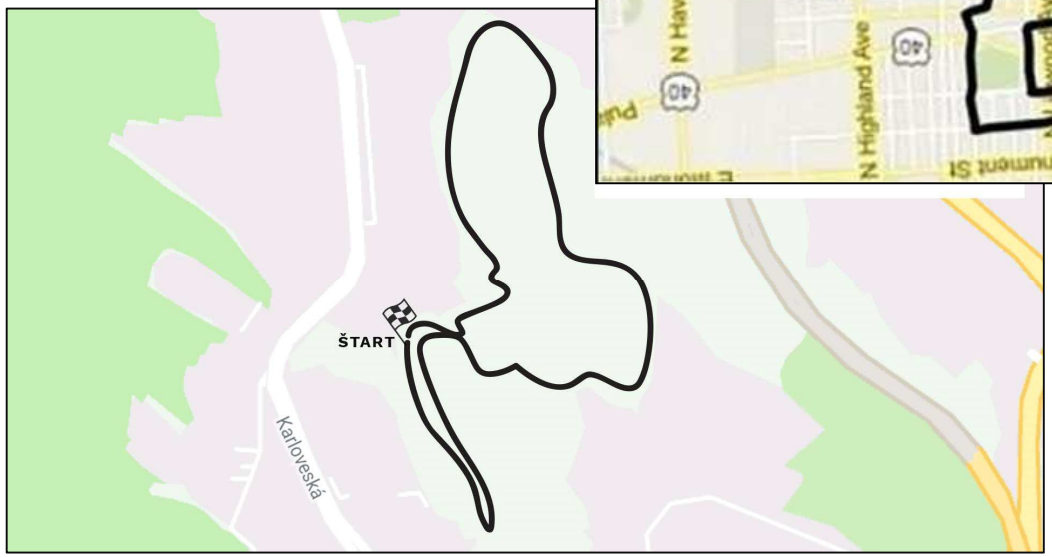




GPSArt.apk

GPS Art


Boston St
S Highland St
Brewer's Hill
Eastern Ave
S East Ave
Park
E Baltimore St
Baltimore Highlands
N Haven St
N Highland Ave
Patterson Place
McElderry
E Monument St
Dunbar
Butcher's Hill
E Lombard St
S Wolfe St
S Register St
Perkins Homes
E Pratt St
S Central Ave
Harbor East
Orleans St
E Lombard St
E Pratt St
40


ŠTART
Karloveská