

# Consapevolezza digitale: dal codice sorgente alle app, passando per il coding

Stefano Penge

CODEXPO.ORG

Rank	Total Population	Online Population	Smartphone Penetration	Smartphone Users
1	United Arab Emirates	9,543,000	82.2%	7,845,000
2	Sweden	9,987,000	74.0%	7,391,000
3	Switzerland	8,524,000	73.5%	6,268,000
4	South Korea	50,897,000	72.9%	37,114,000
5	Taiwan	23,611,000	72.2%	17,050,000
6	Canada	36,958,000	71.8%	26,531,000
7	United States	328,836,000	71.5%	235,156,000
8	Netherlands	17,300,000		12,129,000
9	Germany	80,561,000	71.1%	57,200,000
10	United Kingdom	65,913,000	70.8%	46,639,000
11	Belgium	11,513,000	69.7%	8,020,000
12	Spain	46,117,000	69.5%	32,069,000
13	Australia	24,967,000	69.3%	17,292,000
14	Azerbaijan	10,070,000	69.1%	6,961,000
15	Italy	59,788,000	68.5%	40,938,000
16	Saudi Arabia	33,300,000	68.3%	22,748,000
17	Portugal	10,229,000	68.0%	7,160,000
18	France	65,206,000	67.8%	44,225,000
19	Czech Republic	10,563,000	67.3%	7,040,000
20	Poland	38,523,000	66.5%	25,980,000
21	Malaysia	31,571,000	66.5%	20,980,000
22	Greece	10,872,000	63.4%	6,896,000
23	Romania	19,105,000	60.6%	11,575,000
24	Chile	18,493,000	60.4%	11,166,000
25	Russia	143,261,000	58.7%	84,075,000
26	China	1,393,686,000	55.6%	775,028,000
27	Turkey	81,086,000	55.2%	44,771,000
28	Argentina	44,692,000	53.0%	23,668,000
29	Japan	125,738,000	51.9%	65,282,000



9	Germany	80,561,000	71.0%	57,200,000
10	United Kingdom	65,913,000	70.8%	46,639,000
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[https://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_smartphone\\_penetration](https://en.wikipedia.org/wiki/List_of_countries_by_smartphone_penetration)



Platform	3	7	12	16	18	Total
<b>Violence</b>		430	417	301	185	1333
<b>Bad Language</b>			232	115	125	472
<b>Fear/Horror</b>	96	37				133
<b>Sex</b>			72	24	9	105
<b>Drugs/Alcohol</b>				34	9	43
<b>Gambling</b>			8	2	3	13
<b>Discrimination</b>					0	0

<https://pegi.info/>

Classificazione	Descrizione
<b>3</b>	PEGI 3 I contenuti delle app aventi questa classificazione sono considerati adatti per tutte le età. Sono accettabili alcune forme di violenza in un contesto comico (come le forme di violenza da cartoni animati tipiche di Bugs Bunny o Tom e Jerry). Il bambino non deve associare i personaggi presenti sullo schermo ai personaggi della vita reale; essi devono essere totalmente di fantasia. L'app non deve contenere rumori o immagini che possano spaventare i bambini piccoli. Non devono essere presenti espressioni volgari.
<b>7</b>	PEGI 7 Le app che sarebbero classificate come 3 ma che contengono scene o rumori che potrebbero spaventare i bambini possono essere considerate adatte per questa categoria. Le app PEGI 7 possono contenere solo lievi forme di violenza come violenza implicita, non dettagliata o non realistica.
<b>12</b>	PEGI 12 In questo gruppo di età rientrano i giochi o le app che mostrano violenza leggermente più esplicita rivolta a personaggi di fantasia o violenza non esplicita rivolta a personaggi dall'aspetto umano o ad animali riconoscibili nonché che mostrano scene di nudo leggermente più esplicite e giochi a distanza simulati. Le espressioni volgari non devono essere forti e non devono contenere imprecazioni a sfondo sessuale.
<b>16</b>	PEGI 16 Questa classificazione si applica quando la violenza o l'attività sessuale descritta raggiunge un livello simile a quello presente nella vita reale. Le app classificate come 16 potrebbero includere un linguaggio molto più inappropriato che incoraggia l'uso del tabacco o delle droghe e la descrizione di attività criminali.



# Nearly one in 10 children gets first mobile phone by age five, says study

**On average, parents give their child initial handset at age 11, spending £125 on gadget**



▲ Fewer than one in 20 of parents disable the data function on their children's mobile phones so they are only able to use them to call and text. Photograph: Getty



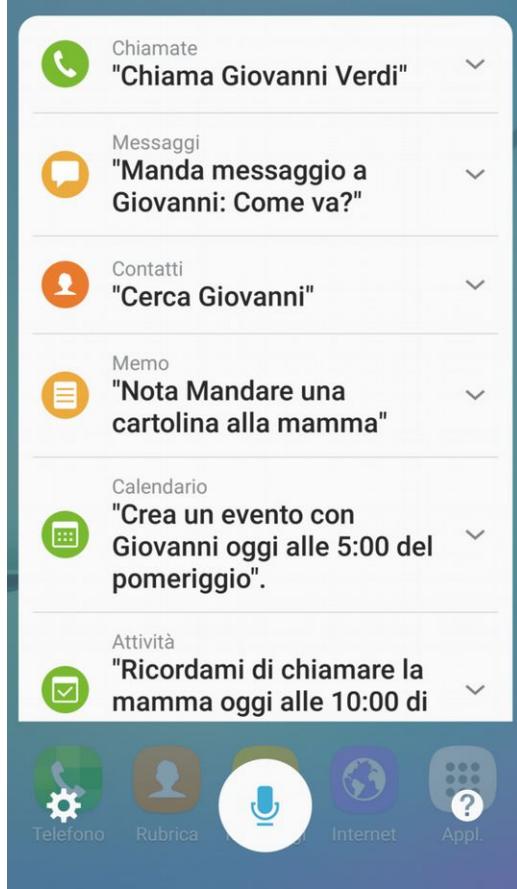
[Home](#) > [Test Centre](#) > [Smartphones Test Centre](#) > The best kids' phones for 2018

## The best kids' phones for 2018

Your guide to the latest and best kids' phones of 2018. Check out our latest reviews children's phones for this year.

By [Marie Black](#) | 02 Jan 2018





# This app has access to:

## Identity

find accounts on the device

## Contacts

find accounts on the device

## Location

approximate location (network-based)

## Photos/Media/Files

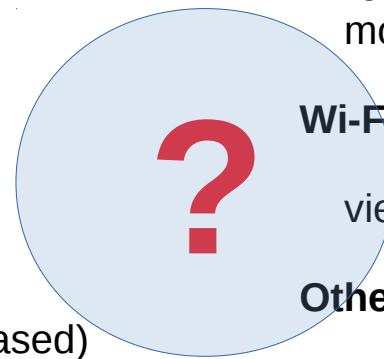
access USB storage filesystem

read the contents of your USB storage

modify or delete the contents of your USB storage

## Storage

read the contents of your USB storage  
modify or delete the contents of your USB storage



## Wi-Fi

connection information  
view Wi-Fi connections

## Other

receive data from Internet  
view network connections  
change network connectivity  
connect and disconnect from Wi-Fi  
full network access  
control vibration  
prevent device from sleeping

 Apps

Categories ▾

Home

Top Charts

New Releases



My apps

Shop

Games

Family

Editors' Choice

Account

My subscriptions

Redeem



## Bible App for Kids

Life.Church Education Education

★★★★★ 190,532

3 PEGI 3 Ages 6-8

This app is compatible with all of your devices.

Add to Wishlist

Install

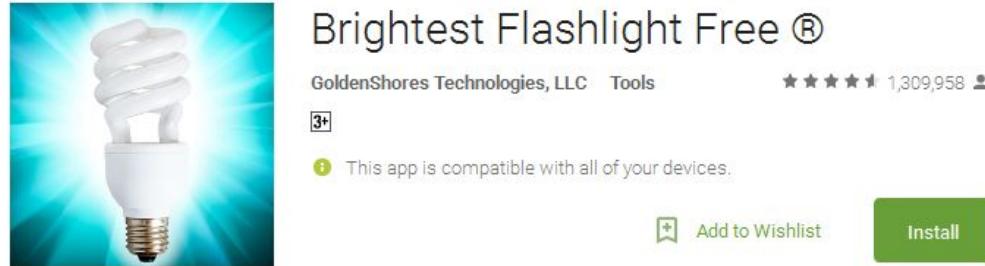


# Balance Of Information

In ←



→ Out

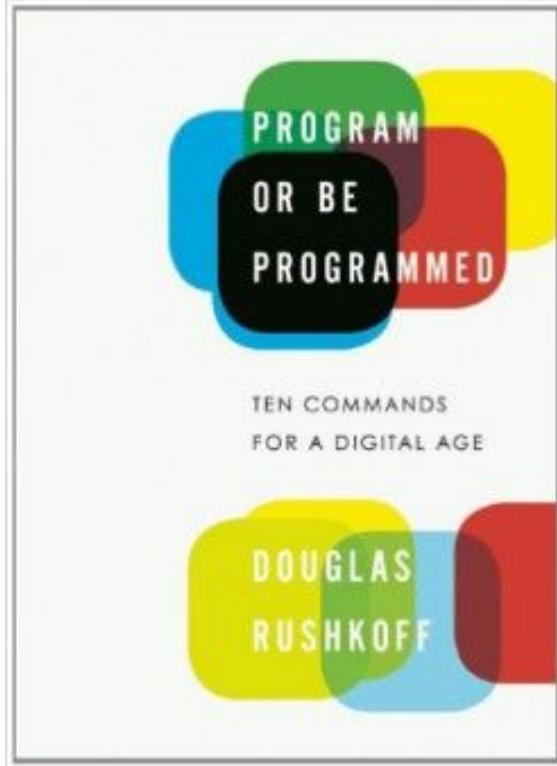




Flashlight Apps	Super-Bright LED Flashlight	Brightest Flashlight Free	Tiny Flashlight + LED	Flashlight	Flashlight	Brightest LED Flashlight	Color Flashlight	High-Powered Flashlight	Flashlight HD LED	Flashlight: LED Torch Light
<b>Permissions</b>										
retrieve running apps	✓					✓		✓		
modify or delete the contents of your USB storage	✓	✓				✓		✓		
test access to protected storage	✓	✓				✓		✓		
take pictures and videos	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
view Wi-Fi connections	✓	✓				✓		✓		
read phone status and identity	✓	✓				✓		✓		
receive data from Internet	✓					✓		✓		
control flashlight	✓	✓	✓			✓	✓	✓	✓	
change system display settings	✓					✓		✓		
modify system settings	✓					✓		✓		
prevent device from sleeping	✓							✓		
view network connections	✓							✓		
full network access	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
approximate location (network-based)	✓							✓		
precise location (GPS and network-based)	✓							✓		
disable or modify status bar	✓									
read Home settings and shortcuts	✓	✓								✓
install shortcuts	✓	✓								✓
uninstall shortcuts	✓	✓								✓
control vibration	✓		✓							
prevent device from sleeping		✓	✓	✓					✓	✓
write Home settings and shortcuts					✓				✓	
disable your screen lock					✓					✓
read Google service configuration						✓			✓	



Flashlight Apps	Super-Bright LED Flashlight	Brightest Flashlight Free	Tiny Flashlight + LED	Flashlight	Flashlight	Brightest LED Flashlight	Color Flashlight	High-Powered Flashlight	Flashlight HD LED	Flashlight: LED Torch Light
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retrieve running apps	✓					✓		✓		
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test access to protected storage	✓	✓				✓		✓		
take pictures and videos	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
view Wi-Fi connections	✓	✓				✓		✓		
read phone status and identity	✓	✓			✓	✓		✓		
receive data from Internet	✓					✓		✓		
control flashlight	✓	✓	✓			✓	✓	✓	✓	
change system display settings	✓					✓		✓		
modify system settings	✓					✓		✓		
prevent device from sleeping	✓							✓		
view network connections	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
full network access	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
approximate location (network-based)	✓							✓		
precise location (GPS and network-based)	✓	✓						✓		
disable or modify status bar	✓									
read Home settings and shortcuts	✓	✓			✓					✓
install shortcuts	✓	✓			✓					✓
uninstall shortcuts	✓	✓			✓					✓
control vibration	✓		✓		✓					
prevent device from sleeping		✓	✓	✓		✓			✓	✓
write Home settings and shortcuts					✓					✓
disable your screen lock					✓					✓
read Google service configuration						✓			✓	



“When human beings acquired language, we learned not just how to **listen** but how to **speak**.

When we gained literacy, we learned not just how to **read** but how to **write**.

And as we move into an increasingly digital reality, we must learn **not just how to use programs but how to make them**.”



Douglas Rushkoff

## I. TIME

Do Not Be “Always On”

## II. PLACE

Live in Person

## III. CHOICE

You May Always Choose “None of the Above”

## IV. COMPLEXITY

You Are Never Completely Right

## V. SCALE

One Size Does Not Fit All

## VI. IDENTITY

Be Yourself

## VII. SOCIAL

Do Not Sell Your Friends

## VIII. FACT

Tell the Truth

## IX. OPENNESS

Share, Don’t Steal

## X. PURPOSE

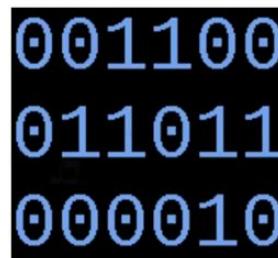
Program or Be Programmed

RUSHKOFF'S PRINCIPLE OF:

# X. PURPOSE

## PROGRAM OR BE PROGRAMMED.

The “user friendly” programs we use everyday make our work with computers easy; however, they come with a cost: we as a society are becoming further removed from the code that actually creates the applications we’re using. We just accept the programs that exist, and are content to attempt to master how to use them. We are at the mercy of the programmers and any potential agendas they may have. Familiarizing ourselves with how to program will allow us to innovate and create technology that serves the specific needs of many individuals, not just those of the elite who know how to program.



001100  
011011  
000010



### TRY AN ACTIVITY

Make a game using the Scratch programming software:  
<http://scratch.mit.edu>. It is easy, fun and a great way to start on using computational thinking.



### TRY AN ACTIVITY

Make a simple blog post using (wordpress.com or blogger.com). Go to the “dashboard” once you have finished and look at your “post.” Notice that you can toggle between “visual” and “text.” Look at your post in both options. What information is located in the text mode that is not in the visual mode? Play with eliminating items in the text mode and see what your post looks like in the visual mode when you do. Are you able to fix any problems that you have caused after changing your code?

<http://www.rushkoff.com/wp-content/uploads/2015/12/Rushkoff-Study-Guide.pdf>

C  
O  
D  
E

Accedi



Guarda il video

"I nostri figli — tra cui le nostre ragazze —  
devono avere l'opportunità di imparare informatica."

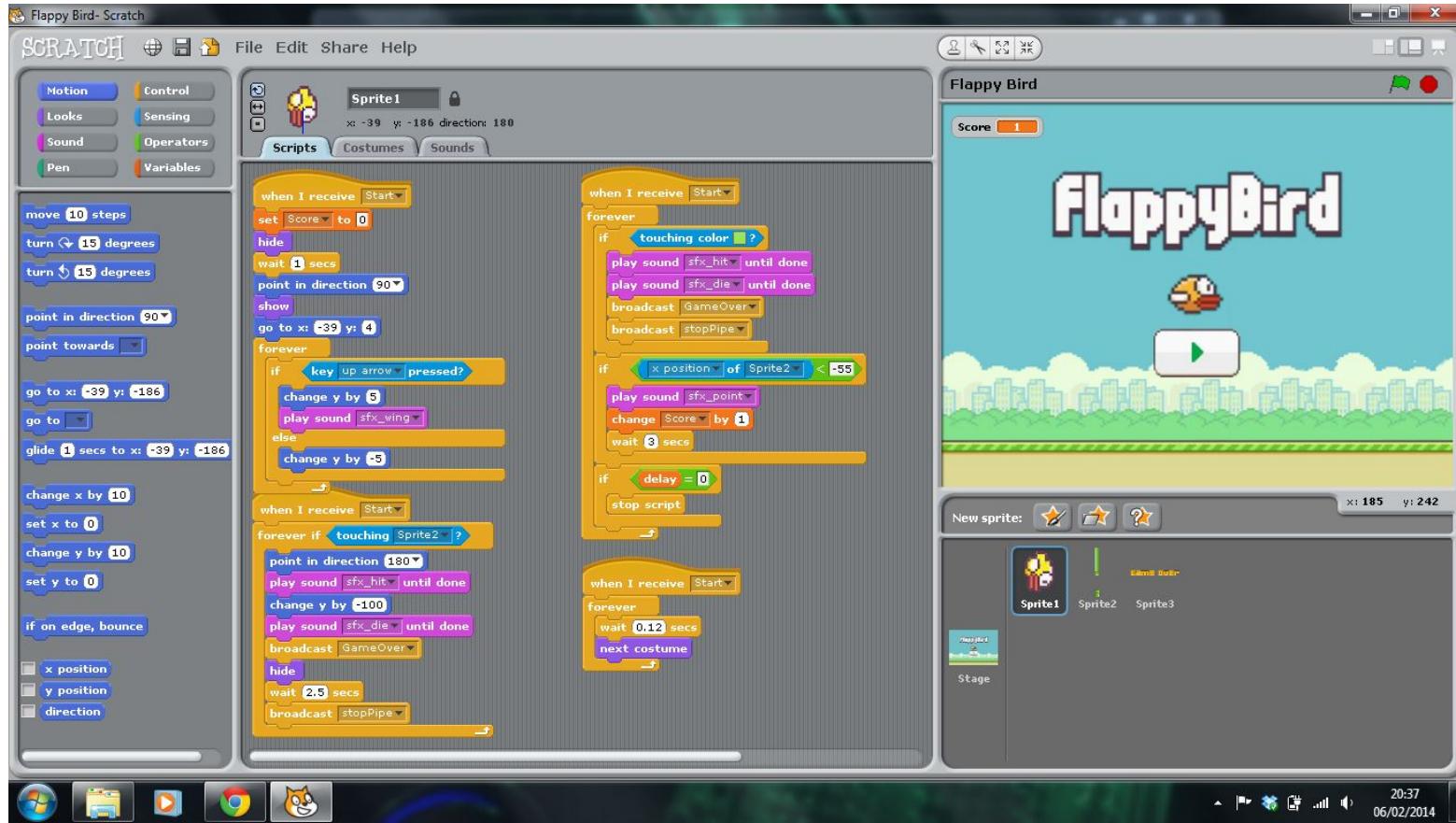
Sheryl, Direttore Operativo di Facebook

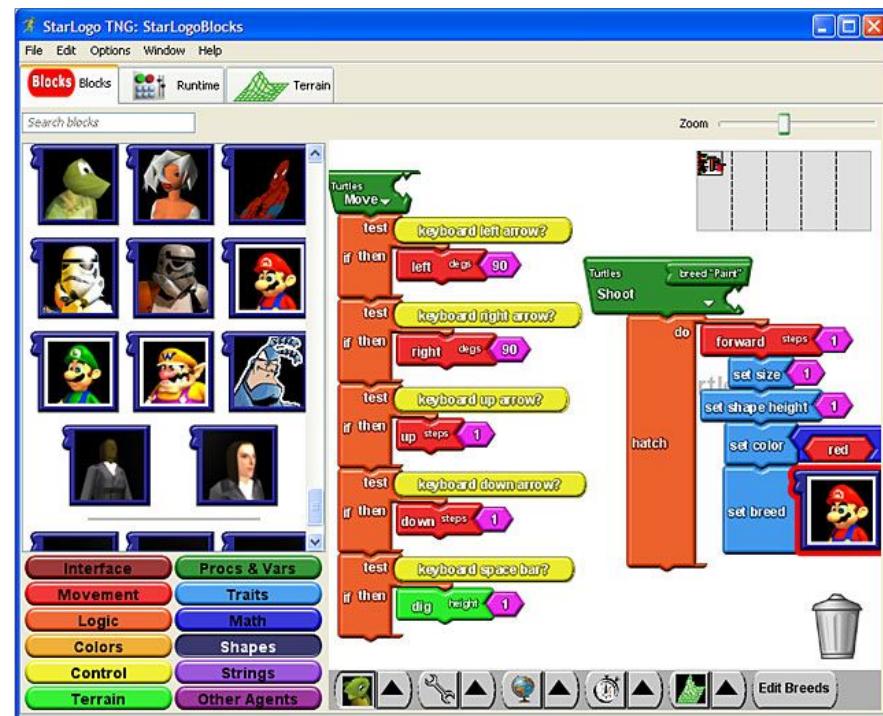
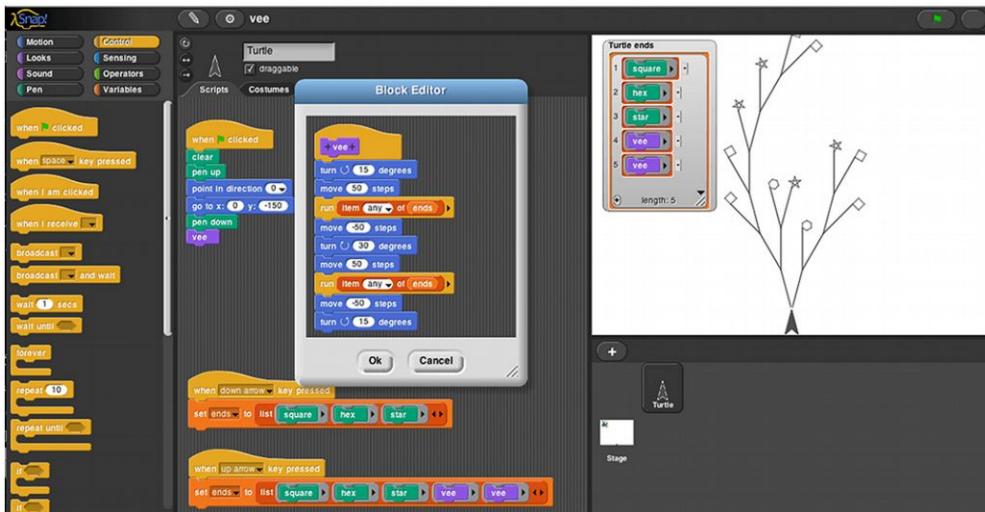
Inizia ad apprendere

Ogni studente di ogni Scuola dovrebbe avere l'opportunità di imparare informatica

Sostienilo ▾

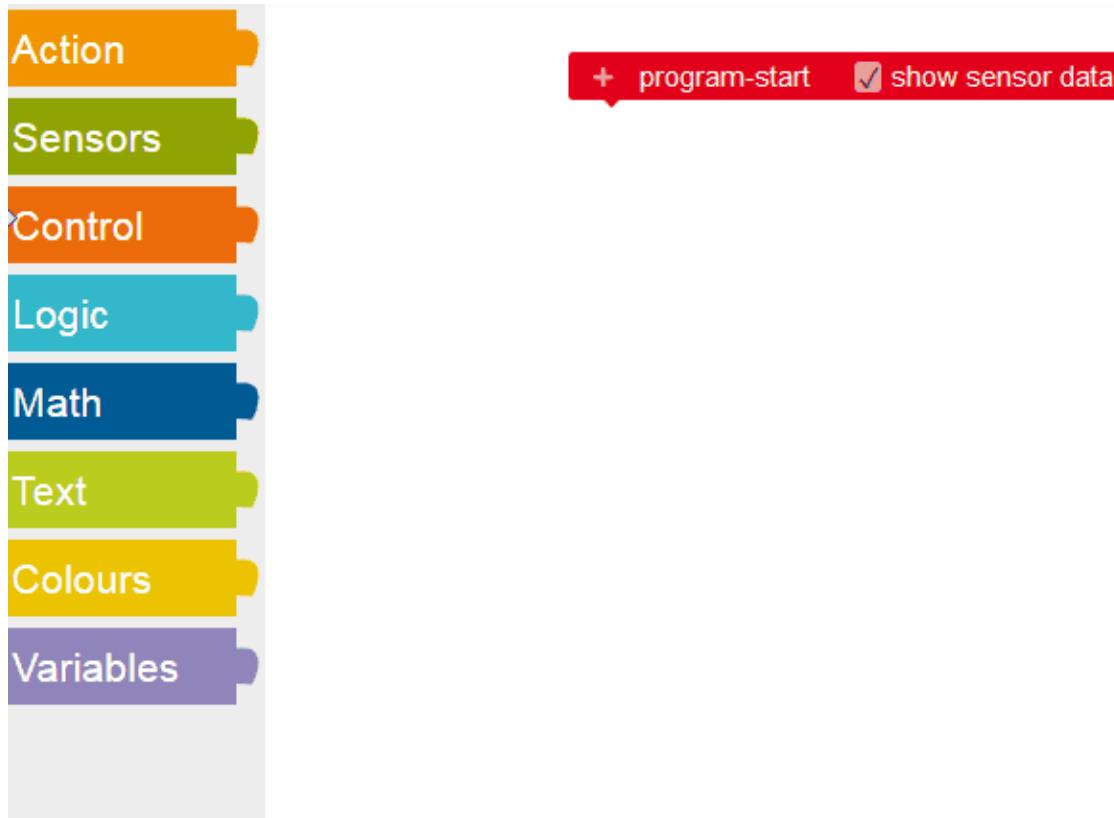
Sheryl  
Sandberg,  
Facebook





## “Dietro il Coding”

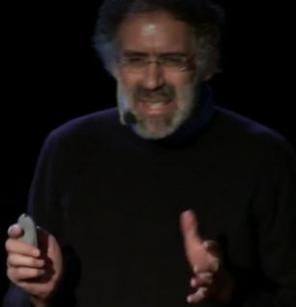
[http://steve.lynxlab.com/wp-content/uploads/2016/09/dietro\\_il\\_coding-1.pdf](http://steve.lynxlab.com/wp-content/uploads/2016/09/dietro_il_coding-1.pdf)



Open Roberta <https://lab.open-roberta.org/>



e, improvvisamente, mi sono reso conto



NOVEMBER 2012 che il giorno dopo era la festa della mamma, BROOKLINE MASSACHUSETTS

The image shows the Scratch programming environment. On the left, the script editor displays a script for "Sprite1" (a ballerina) triggered by a click. The script consists of the following blocks:

- when green flag clicked
- passa al costume [ballerina-d v]
- fai [20] passi
- attendi [2] secondi
- fai [40] passi
- attendi [2] secondi
- fai [20] passi
- attendi [2] secondi
- passa al costume [ballerina-a v]
- attendi [2] secondi
- ruota di [15] gradi
- attendi [2] secondi
- ruota di [15] gradi
- dire [Ti voglio bene, mamma!]

On the right, the stage view shows the ballerina sprite on the stage with a speech bubble containing the text "Ti voglio bene, mamma!". The stage has a festive background with bunting and spotlights.

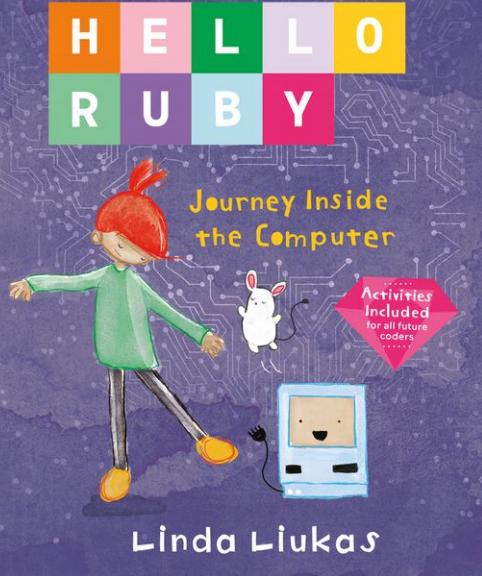
[https://www.ted.com/talks/mitch\\_resnick\\_let\\_s\\_teach\\_kids\\_to\\_code#t-3977](https://www.ted.com/talks/mitch_resnick_let_s_teach_kids_to_code#t-3977)

## A delightful way to teach kids about computers



Linda Liukas

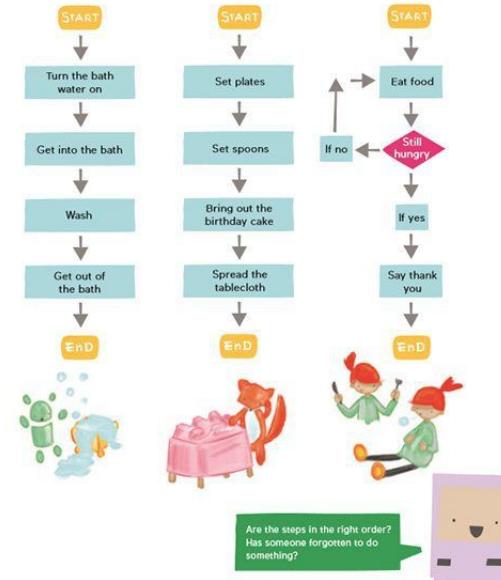
[https://www.ted.com/talks/linda\\_liukas\\_a\\_delightful\\_way\\_to\\_teach\\_kids\\_about\\_computers](https://www.ted.com/talks/linda_liukas_a_delightful_way_to_teach_kids_about_computers)



### Exercise 20: Debugging

#### Problems

Each of Ruby's friends has a problem. What went wrong? How would you help them?



`puts poem.lines.reverse.join("\n")`

### Exercise 21: Pair Programming

#### Who Am I?

Can you match the right friend with the description below?



#### Who Am I?

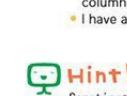
- I am in the bottom row.
- I am not orange.
- I have green ears.

#### Who Am I?

- I have black eyes.
- I have orange in me.
- I'm not in the last two columns.

#### Who Am I?

- I have black in me.
- I'm not sad.
- My hair is spiky.

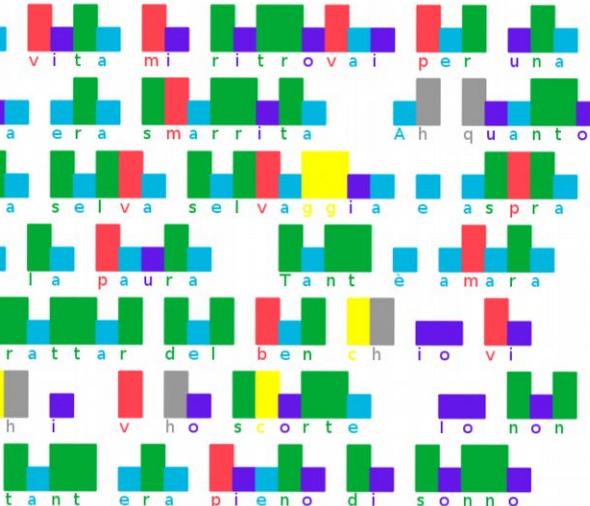


Sometimes it helps to read the problem aloud. Even real programmers explain their programs out loud. This is called rubber duck debugging.

File Edit Selection View Go Debug Terminal Help

digital\_art2 (copia).scala \*

```
1 class DisegnaTesto {
2     val altezza = 50
3     val larghezza = 25
4     val consonantiList = List("b", "c", "d", "f", "g", "h",
5     val vocaliList = List("a", "e", "è", "é", "i", "o", "ò", "u",
6
7     val colore = Map(
8         "vocali" -> Color(0, 95, 177),
9         "consonanti" -> Color(153, 153, 255)
10        /* consonanteLabiale -> Color(153, 153, 255),
11        consonanteDentale -> Color(153, 153, 255),
12        consonanteSibilante -> Color(153, 153, 255) */
13    )
14    val forma = Map(
15        "vocali" -> "quadrato",
16        "consonanti" -> "rettangolo"
17        /* consonanteLabiale -> Color(153, 153, 255),
18        consonanteDentale -> Color(153, 153, 255),
19        consonanteSibilante -> Color(153, 153, 255) */
20    )
21}
```

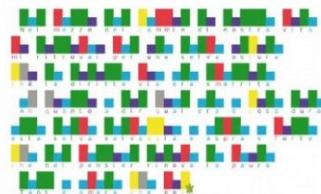


BIDATTICA::CODING

STEFANO PENGE

## LINGUA CODING E CREATIVITÀ

Fare coding con le materie umanistiche



1

ea  
ANICIA

**GCO4**

Screen1 ▾ Add Screen ... Remove Screen Designer Blocks

Palette	Viewer	Components	Properties
User Interface	Display hidden components in Viewer Un-check to see Preview on Phone size.	Screen1	Screen1
Layout		Image1	AboutScreen Benvenuto in
Media		WebViewer1	AccentColor Default
Drawing and Animation		VerticalArrangement1	AlignHorizontal Left : ▾
Maps		Label1	AlignVertical Top : ▾
Sensors		HorizontalArranger1	AppName GenerazioniConnesseOnli
Social		username	BackgroundColor Custom...
ContactPicker		Label2	BackgroundImage None...
EmailPicker		HorizontalArranger2	CloseScreenAnimation SlideHorizontal ▾
PhoneCall		password	Icon logo_GC.png...
PhoneNumberPicker		visible	OpenScreenAnimation SlideHorizontal ▾
Sharing		VerticalArrangement2	PrimaryColor Default
Texting		Login	PrimaryColorDark Default
Twitter		esplora	ScreenOrientation Unspecified ▾
Storage		Quit	Scrollable
Connectivity		Label3	ShowListsAsJson
LEGO® MINDSTORMS®		versione	ShowStatusBar
Experimental			
Extension			
	Non-visible components		
	ActivityStarter1 userLogin Notifier1 TinyDB1 WSUserLogin Sound1 Clock1 WebViewTools		

## Connectivity

ActivityStarter

?

BluetoothClient

?

BluetoothServer

?

Web

?

## Social

ContactPicker

?

EmailPicker

?

PhoneCall

?

PhoneNumberPicker

?

Sharing

?

Texting

?

Twitter

?

## Palette

### User Interface

### Layout

### Media

Camcorder

?

Camera

?

ImagePicker

?

Player

?

Sound

?

SoundRecorder

?

SpeechRecognizer

?

TextToSpeech

?

VideoPlayer

?

YandexTranslate

?

## Sensors

AccelerometerSensor

?

BarcodeScanner

?

Clock

?

GyroscopeSensor

?

LocationSensor

?

NearField

?

OrientationSensor

?

Pedometer

?

ProximitySensor

?

## GCO\_Remix

[Rischi ▾](#)   [Add Screen ...](#)   [Remove Screen](#)
[Designer](#)   [Blocks](#)

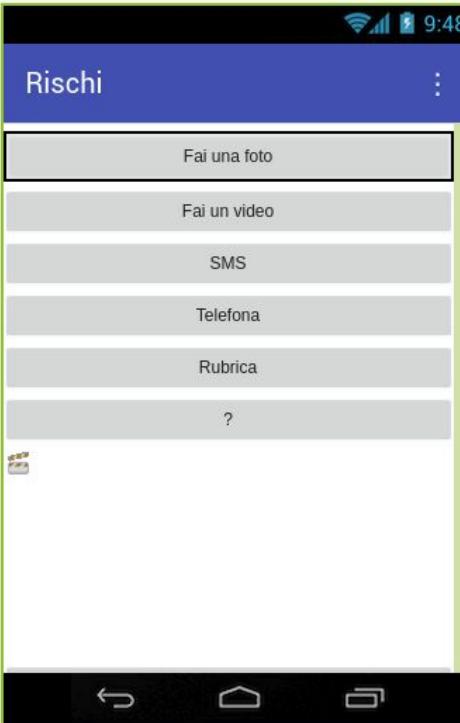
### Palette

#### 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.



#### Layout

#### Media

#### Drawing and Animation

#### Maps

### Components

- Rischi
- HorizontalArrangement1
  - Foto
  - Video
  - SMS
  - Telefono
  - ContactPicker1
  - Sorpresa
  - VideoPlayer1
  - Home
  - Camcorder1
  - Texting1
  - PhoneCall1
  - ActivityStarter1
  - Camera1
  - Notifier1

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

### Media

- 1.png
- 2.png
- 3.png

### Properties

#### Rischi

##### AboutScreen

AlignHorizontal  
Left : 1 ▾

AlignVertical  
Top : 1 ▾

BackgroundColor  
 Default

BackgroundImage  
None...

CloseScreenAnimation  
Default ▾

OpenScreenAnimation  
Default ▾

ScreenOrientation  
Unspecified ▾

Scrollable

ShowStatusBar

##### Title

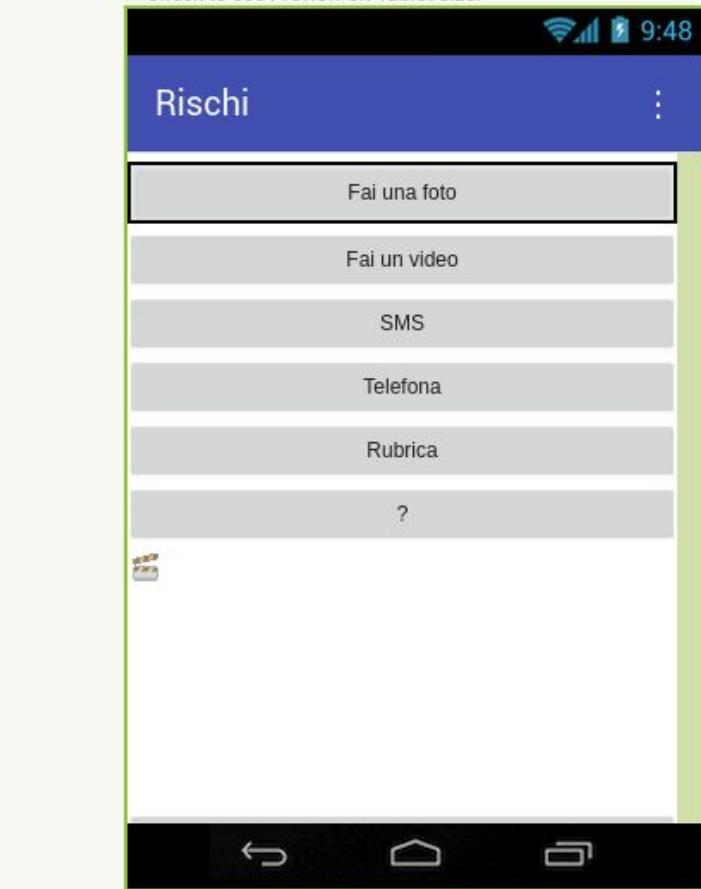
Rischi

##### TitleVisible

 Camcorder1   
  Texting1   
  PhoneCall1   
  ActivityStarter1   
  Camera1   
  Notifier1

Display hidden components in Viewer

Check to see Preview on Tablet size.



Non-visible components



**GCO\_Remix**

Rischì Add Screen ... Remove Screen Designer Blocks

**Blocks**

- Built-in
  - Control
  - Logic
  - Math
  - Text
  - Lists
  - Colors
  - Variables
  - Procedures
- Rischì
  - HorizontalArrangement
  - Foto
  - Video
  - SMS
  - Telefono
  - ContactPicker1
  - Sorpresa

**Viewer**

```

when Home.Click
do close screen

when ContactPicker1.TouchUp
do call Notifier1.ShowAlert
notice ContactPicker1.ContactName

when ContactPicker1.TouchDown
do call ContactPicker1.Open

when Foto.Click
do call Camera1.TakePicture

when Camera1.AfterPicture
image
do set Rischì.BackgroundImage to get image

when Video.Click
do call Camcoder1.RecordVideo

when Camcoder1.AfterRecording
clip
do set VideoPlayer1.Source to get clip
set VideoPlayer1.FullScreen to true
call VideoPlayer1.Start

when VideoPlayer1.Completed
do set VideoPlayer1.FullScreen to false

when SMS.Click
do set Texting1.Message to "Ciao da GCO Remix"
set Texting1.PhoneNumber to "3385356835"
call Texting1.SendMessage

when Sorpresa.Click
do set ActivityStarter1.Activity to android.intent.action.VIEW
set ActivityStarter1.Action to android.intent.action.GET_CONTENT
set ActivityStarter1.DataType to vnd.android.cursor.item/phone
set ActivityStarter1.DataUri to content://contacts/people/
call ActivityStarter1.StartActivity

when ActivityStarter1.AfterActivity
result
do call Notifier1.ShowAlert
notice ActivityStarter1.Result

when Rischì.PermissionDenied
component functionName permissionName
do call Rischì.askForPermission
permissionName get permissionName

when Rischì.Click
do set PhoneCall1.PhoneNumber to "3385356835"
call PhoneCall1.MakePhoneCall

when Rischì.PermissionDenied
component functionName permissionName
do call Rischì.askForPermission
permissionName get permissionName

when Rischì.Click
do set ActivityStarter1.ActivityClass to com.android.contacts.ContactsListActivity
set ActivityStarter1.Action to android.intent.action.GET_CONTENT
set ActivityStarter1.ActivityPackage to com.android.contacts
set ActivityStarter1.DataType to vnd.android.cursor.item/phone
call ActivityStarter1.StartActivity

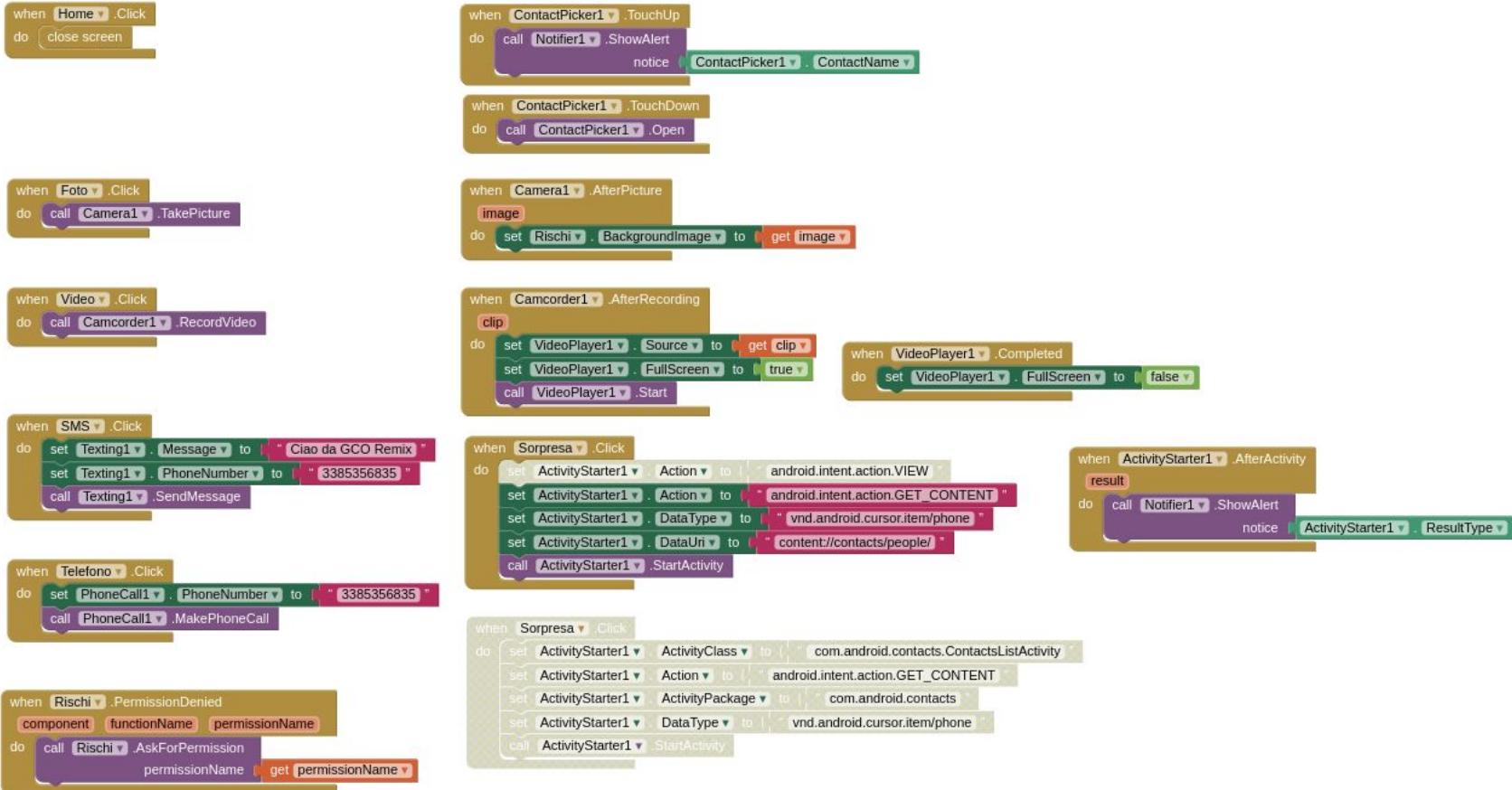
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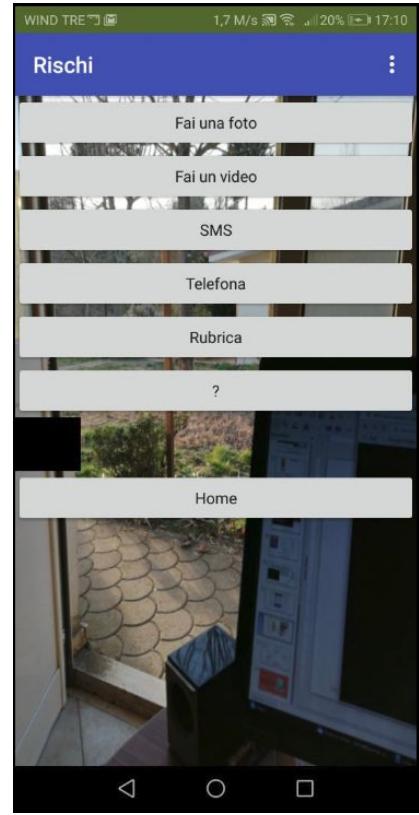
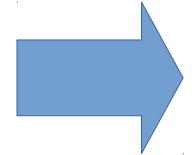
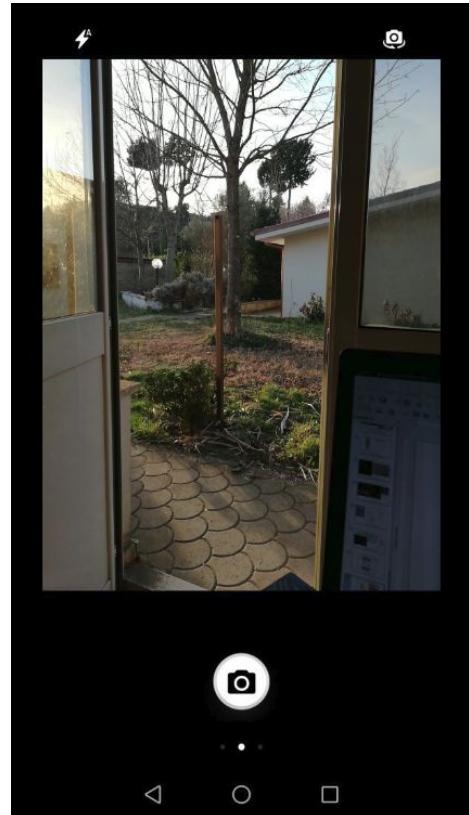
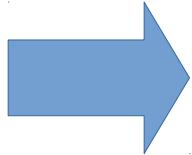
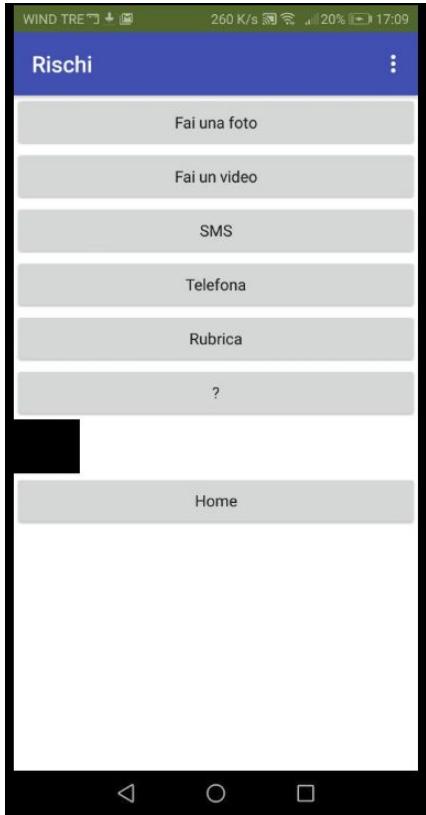
**Media**

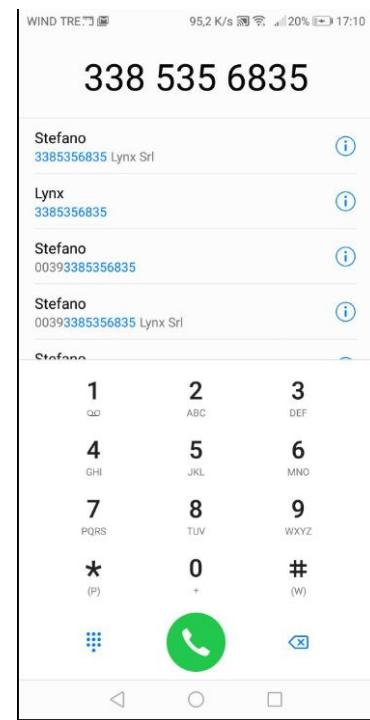
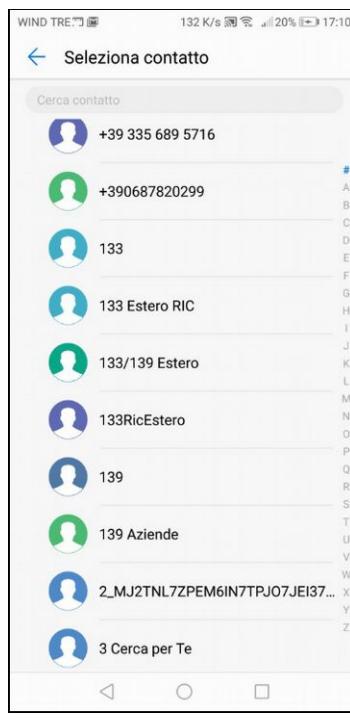
- 1.png
- 2.png
- 3.png
- 4.png
- 5.png
- Logo\_Gen\_se-01.png
- argumenti\_scuola.txt
- descriptions.html
- helpline.html
- info.html
- infoline.html
- logo\_GC.png
- logo\_gen\_site.png
- privacy.html
- privacy.png
- riscorsi1.png
- riscorsi2.png
- riscorsi3.png
- segnaia.html
- telefono.png
- titolo\_GC.png

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0 Show Warnings







Grazie per l'attenzione

stefano.penge@gmail.com