ENJOY FOR ARDUINO INTERMEDIATE!!

Presenter by Muhammad Shahkhir Bin Mozamir ☺

REMEMBER THIS LOGO ?

NOW…….

CONGRATULATION !!!

WHAT IS YOUR CORE BUSINESS HERE?

LEADER

SLAVE OF ALLAH

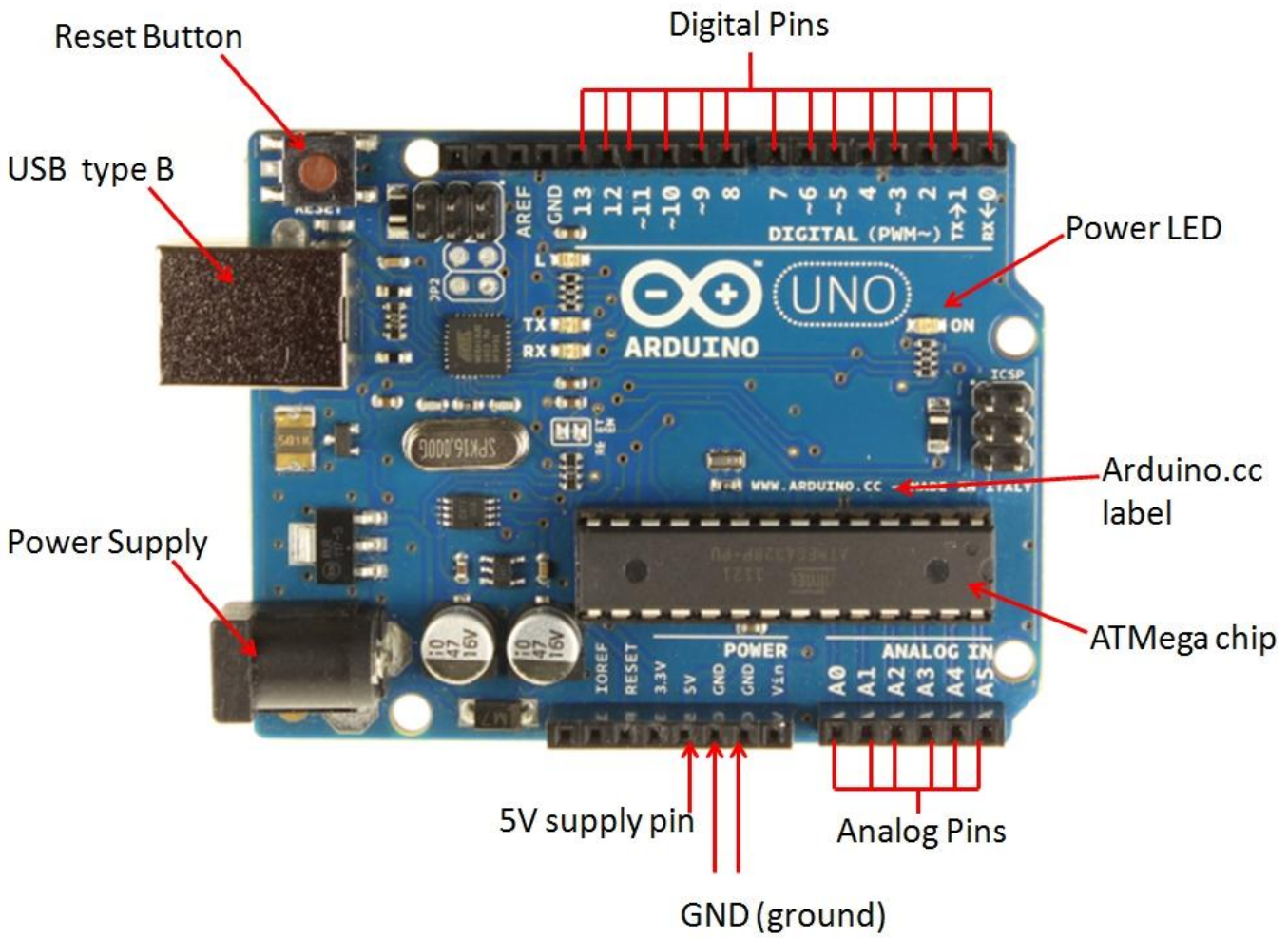
Preacher

WHY WE ARE HERE?

Al-Mujaadilah ayat 11 :

"Allah akan meninggikan orang-orang yang beriman diantaramu dan orang-orang yang diberi ilmu pengetahuan beberapa derajat"

REVISION FOR ARDUINO BEGINNER



WHAT IS NEW KNOWLEDGE FOR INTERMEDIATE?

INSYAALLAH … WE COMBINED TWO VALUEABLE KNOWLEDGE

DID YOU KNOW ABOUT WIRELESS?

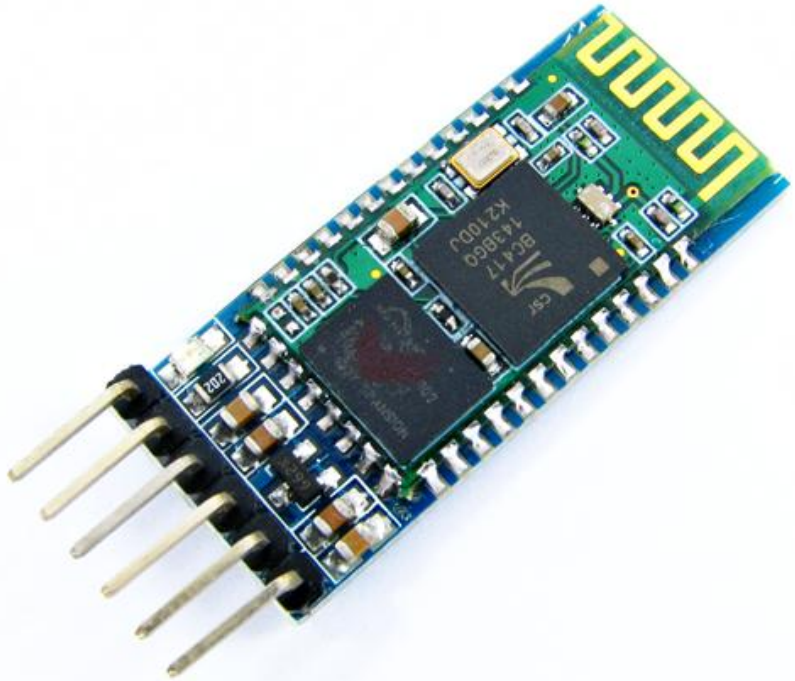
A LOT OF APPLICATION USE THE WIRELESS

INCLUDE BLUETOOTH TECHNOLOGY

802.15.1

leee standard

BLUETOOTH MODULE HC05



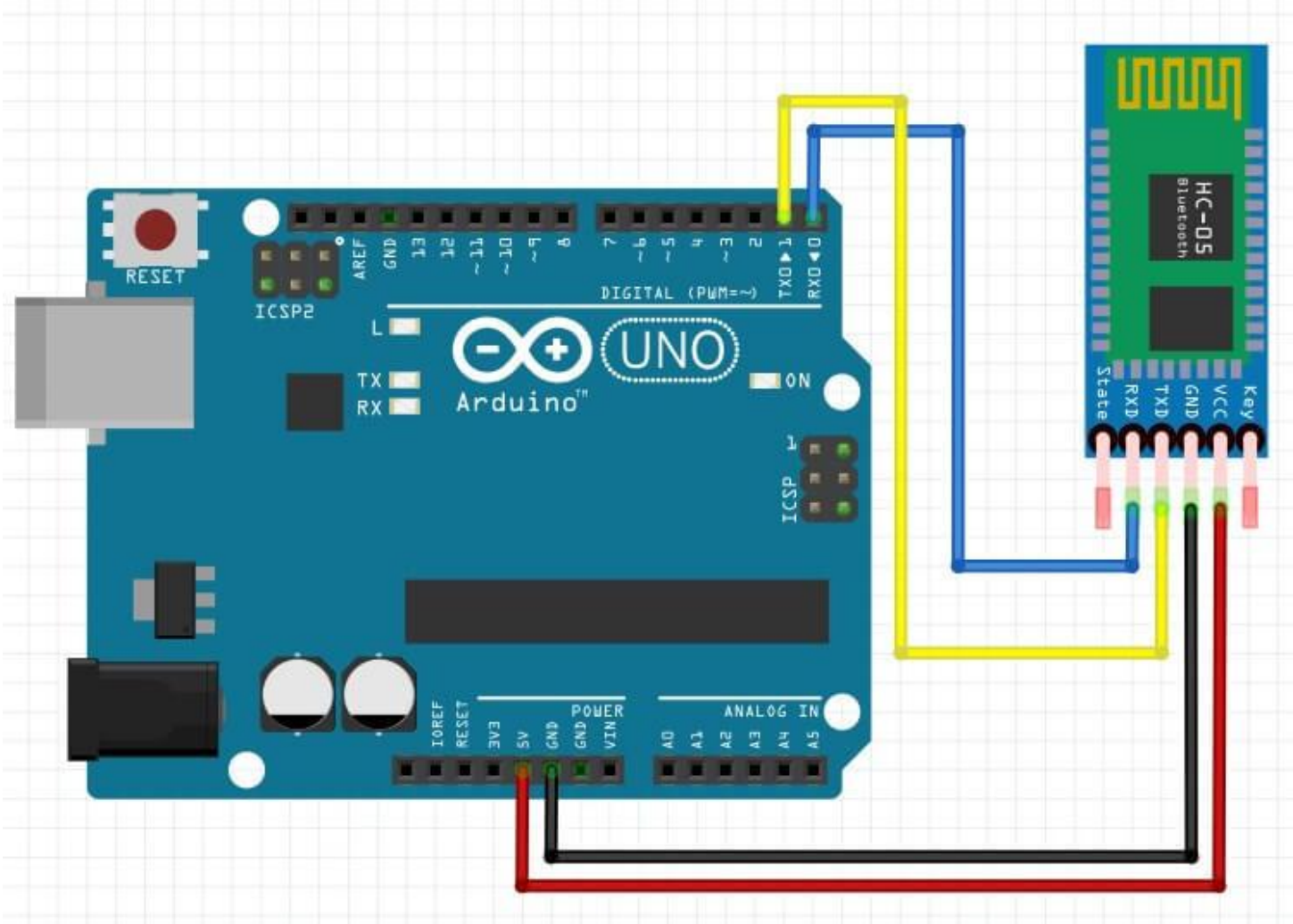
LETS EXPLORE HOW TO BUILD EASY ANDROID APPLICATION CREATOR

MIT
APP INVENTOR

CONFIGURE BLUETOOTH MODULE

pin RX -> RX
pin TX -> TX
VCC ->5 volt DC dari arduino
GND -> gnd Arduino

*untuk masuk ke mode AT command ini , RX hubungkan ke RX TX hubungkan ke TX



Upload programming kosong

- setelah selesai,cabut kabel arduino
- tekan dan tahan tombol pada modul bluetooth HC-05 dan pasang kabel arduino ke port usb komputer/laptop anda

- lepas setelah terpasang selama 3 detik
- maka lampu pada modul bluetooth akan berkedip secara perlahan
- kemudian masuklah ke serial monitor arduino ide di penjuru kanan atas
- setting seperti di bawah ini yaitu plih Both NL & CR dan 38400 baud

- taip AT kemudian send
- akan muncul pesan error,tapi itu bukan masalah
- Taip saja lagi AT
- Daftar perintah di AT Command :

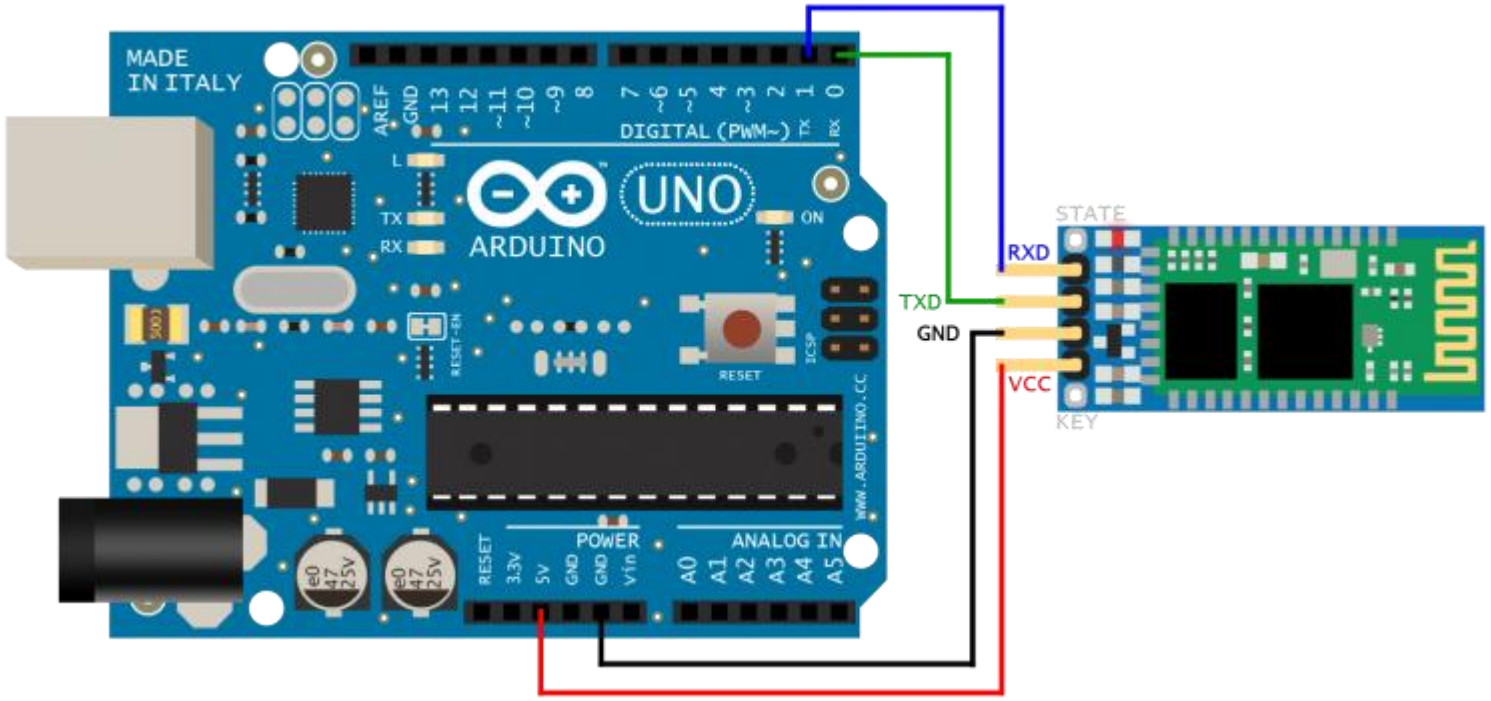
AT+ROLE “untuk cek baud status master atau slave”
AT+NAME =“untuk cek nama”
AT+UART “untuk cek baud rate”
AT+ROLE=0 “mengeset modul ke mode slave”
AR+ROLE=1 “mengeset modul ke mode master ”
AT+PSWD=(password kamu) “mengeset pasword ke pasword yang diinginkan”
AT+UART=9600,0,0 “mengeset baud rate ke 9600”

MODULE

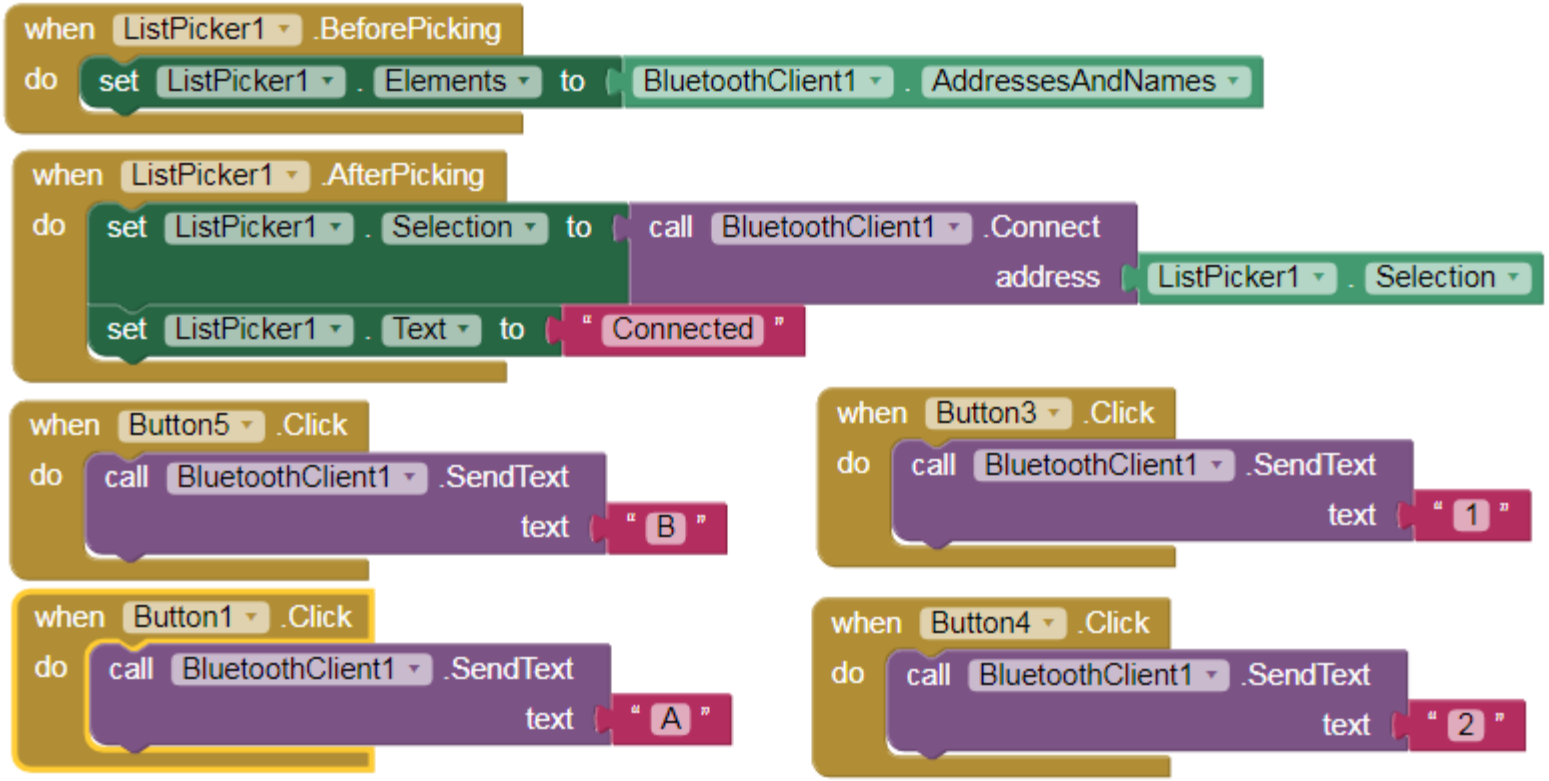
- LED
- SINGLE VALUE
- MULTIPLE VALUE
- SPEAK

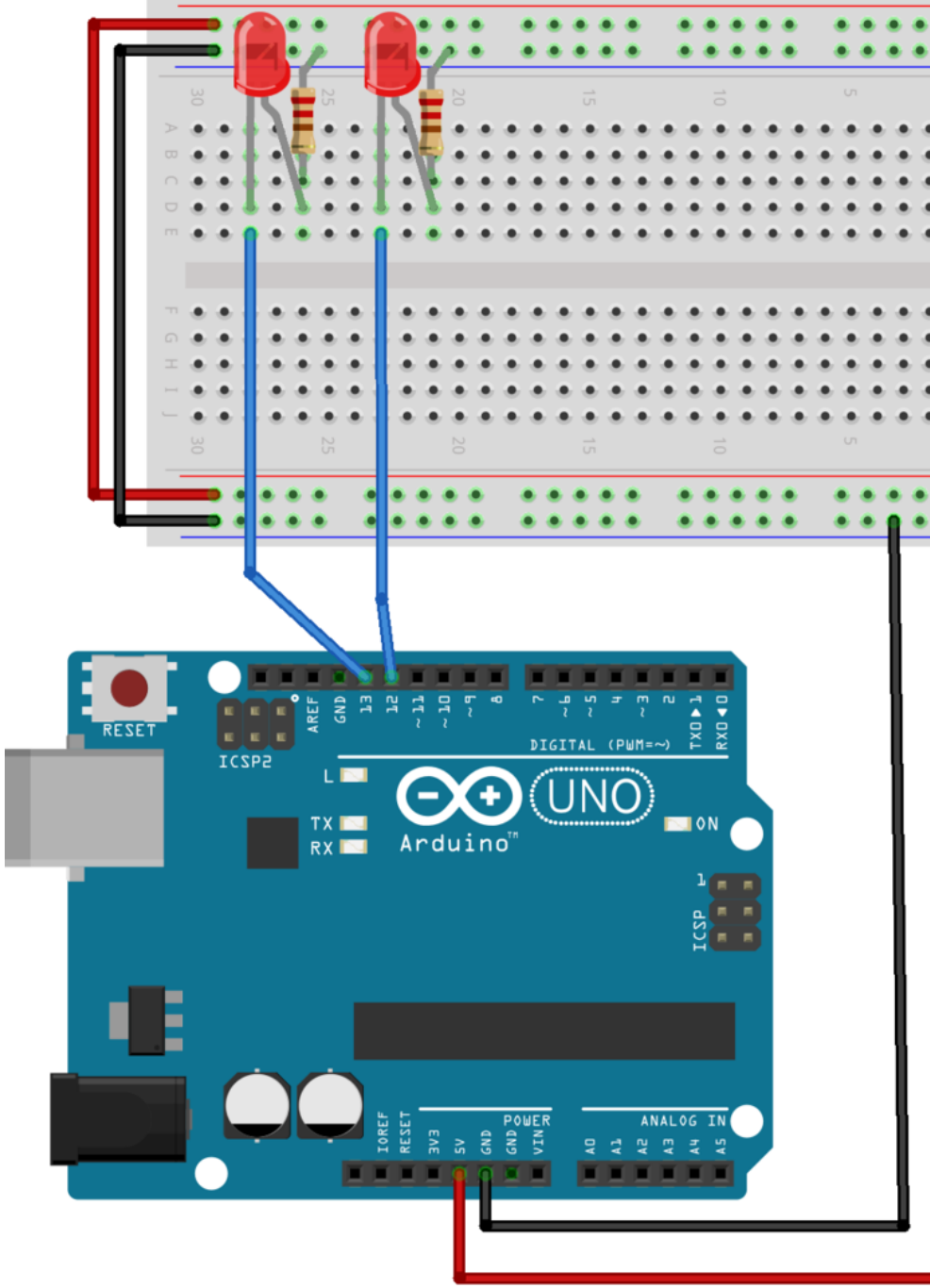
BASIC CONNECTION BLUETOOTH AND ARDUINO

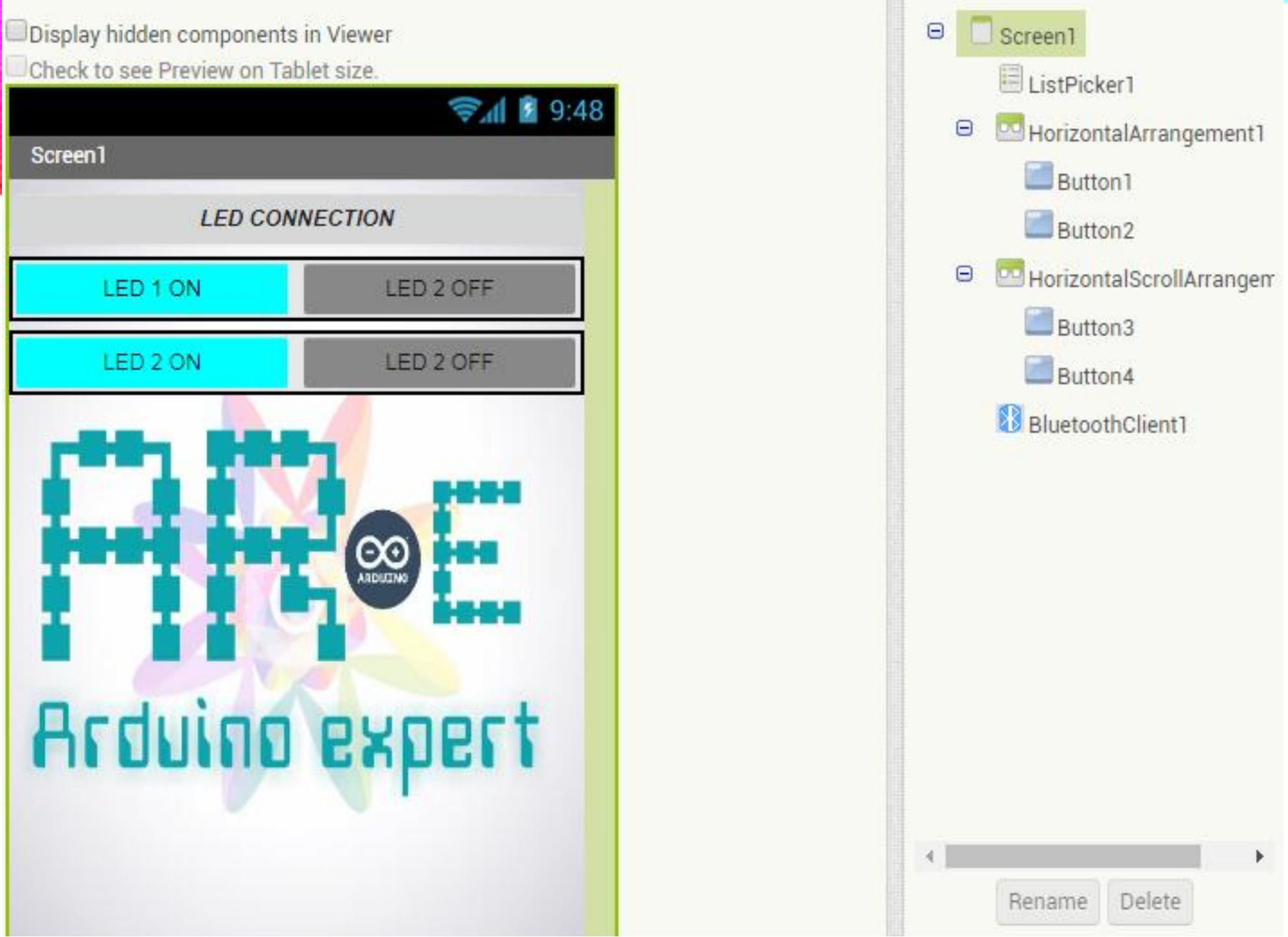
pin RX-> TX
pin TX -> RX
VCC ->5 volt DC dari arduino
GND -> gnd Arduino



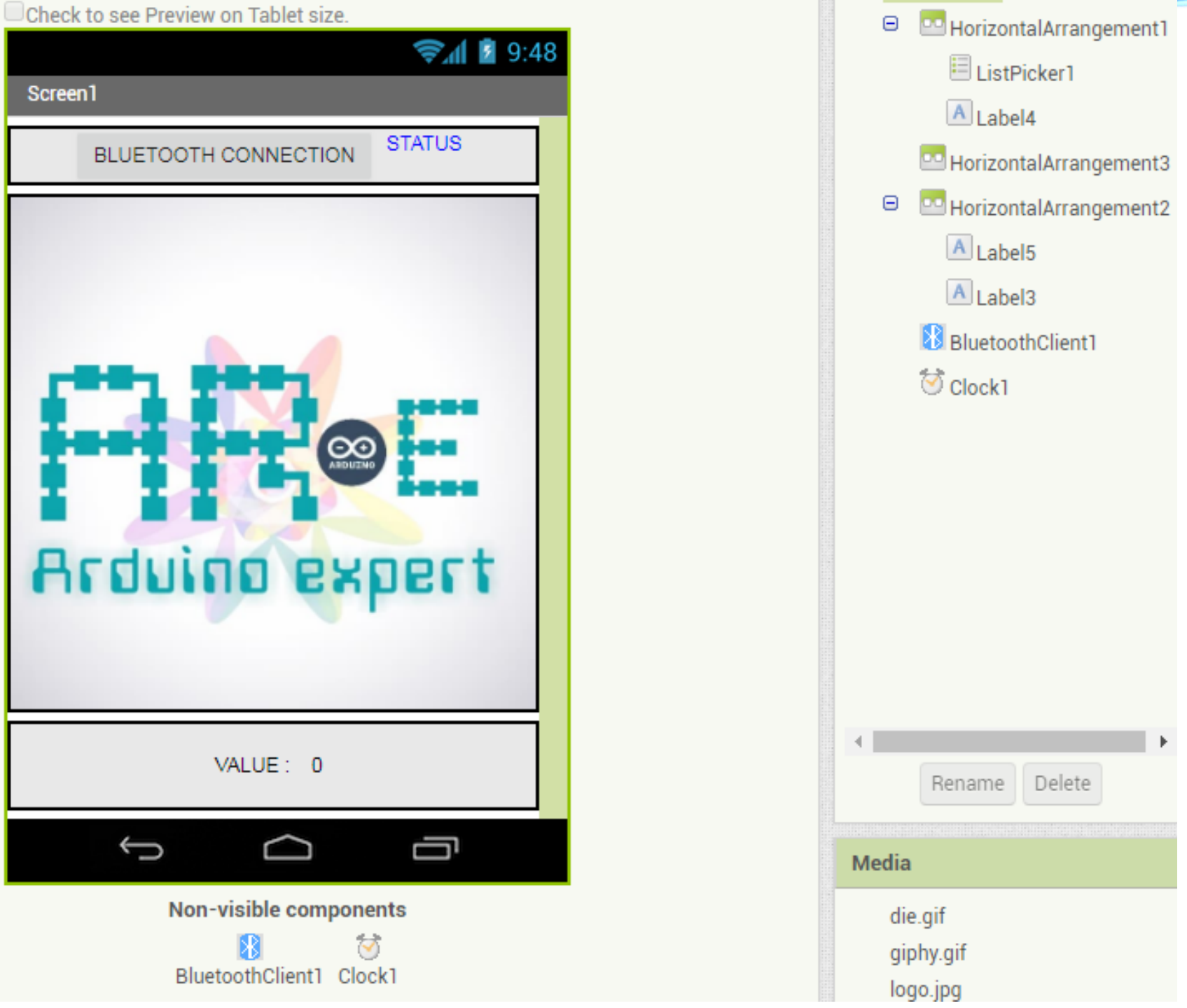
CONTROL LED


when ListPicker1 .BeforePicking
do set ListPicker1 . Elements to BluetoothClient1 . AddressesAndNames
when ListPicker1 .AfterPicking
do set ListPicker1 . Selection to call BluetoothClient1 .Connect
address ListPicker1 . Selection
set ListPicker1 . Text to " Connected "
when Button5 .Click
do call BluetoothClient1 .SendText
text " B "
when Button1 .Click
do call BluetoothClient1 .SendText
text " A "
when Button3 .Click
do call BluetoothClient1 .SendText
text " 1 "
when Button4 .Click
do call BluetoothClient1 .SendText
text " 2 "


RESET
ICSP2
DIGITAL (PWM=~)
UNO
Arduino
ON
TX
RX
ICSP
POWER
ANALOG IN
fritz

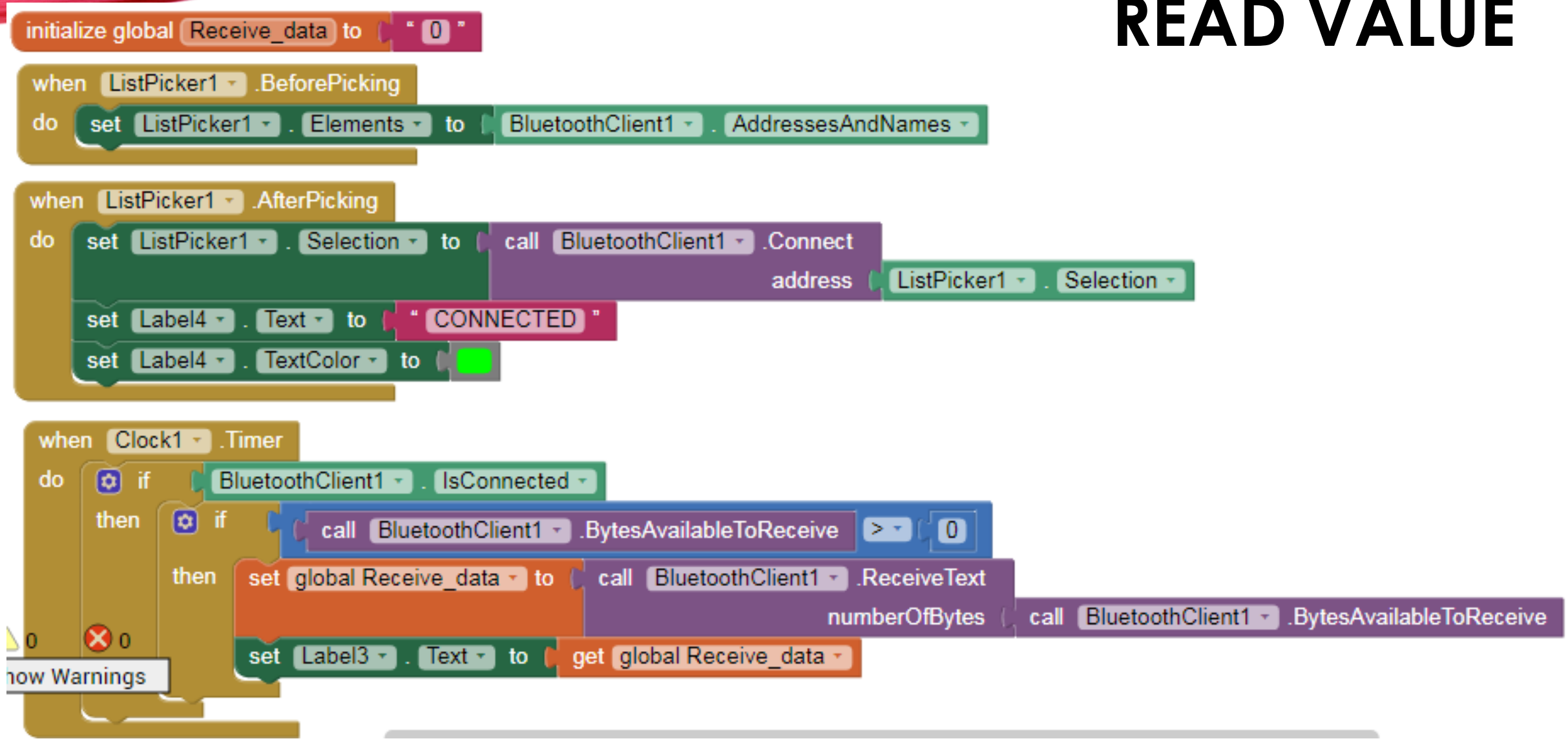

Display hidden components in Viewer
Check to see Preview on Tablet size.
9:48
Screen1
LED CONNECTION
LED 1 ON
LED 2 OFF
LED 2 ON
LED 2 OFF
Arduino expert
Screen1
ListPicker1
HorizontalArrangement1
Button1
Button2
HorizontalScrollArrangem
Button3
Button4
BluetoothClient1
Rename
Delete

DESIGN

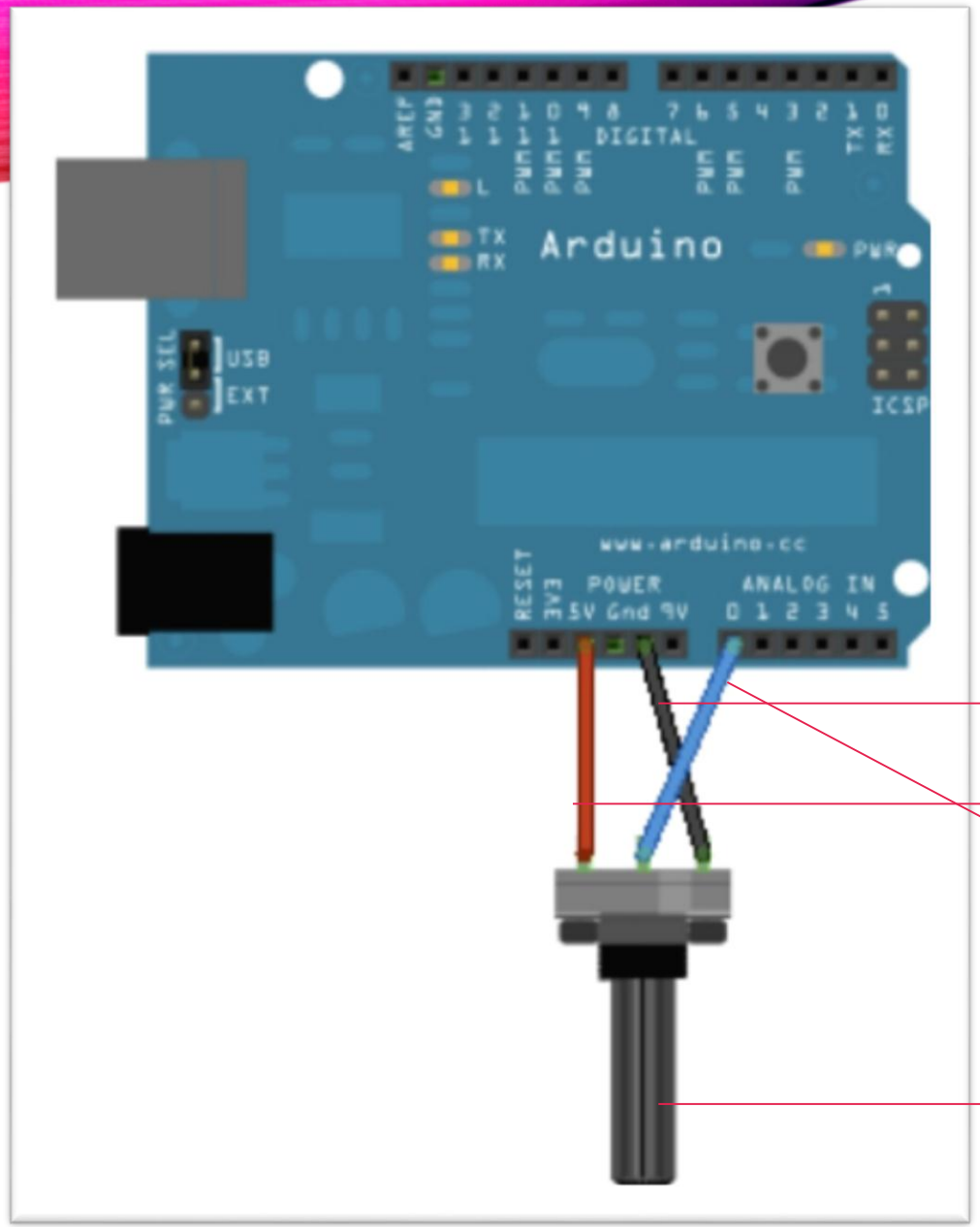

Check to see Preview on Tablet size.
9:48
Screen1
BLUETOOTH CONNECTION
STATUS
Arduino expert
VALUE : 0
Non-visible components
BluetoothClient1
Clock1
HorizontalArrangement1
ListPicker1
Label4
HorizontalArrangement3
HorizontalArrangement2
Label5
Label3
BluetoothClient1
Clock1
Rename
Delete
Media
die.gif
giphy.gif
logo.jpg

READ VALUE

READ VALUE


initialize global Receive_data to " 0 "
when ListPicker1 .BeforePicking
do set ListPicker1 . Elements to BluetoothClient1 . AddressesAndNames
when ListPicker1 .AfterPicking
do set ListPicker1 . Selection to call BluetoothClient1 .Connect
address ListPicker1 . Selection
set Label4 . Text to " CONNECTED "
set Label4 . TextColor to
when Clock1 .Timer
do if BluetoothClient1 . IsConnected
then if call BluetoothClient1 .BytesAvailableToReceive > 0
then set global Receive_data to call BluetoothClient1 .ReceiveText
numberOfBytes call BluetoothClient1 .BytesAvailableToReceive
set Label3 . Text to get global Receive_data
0
0
how Warnings

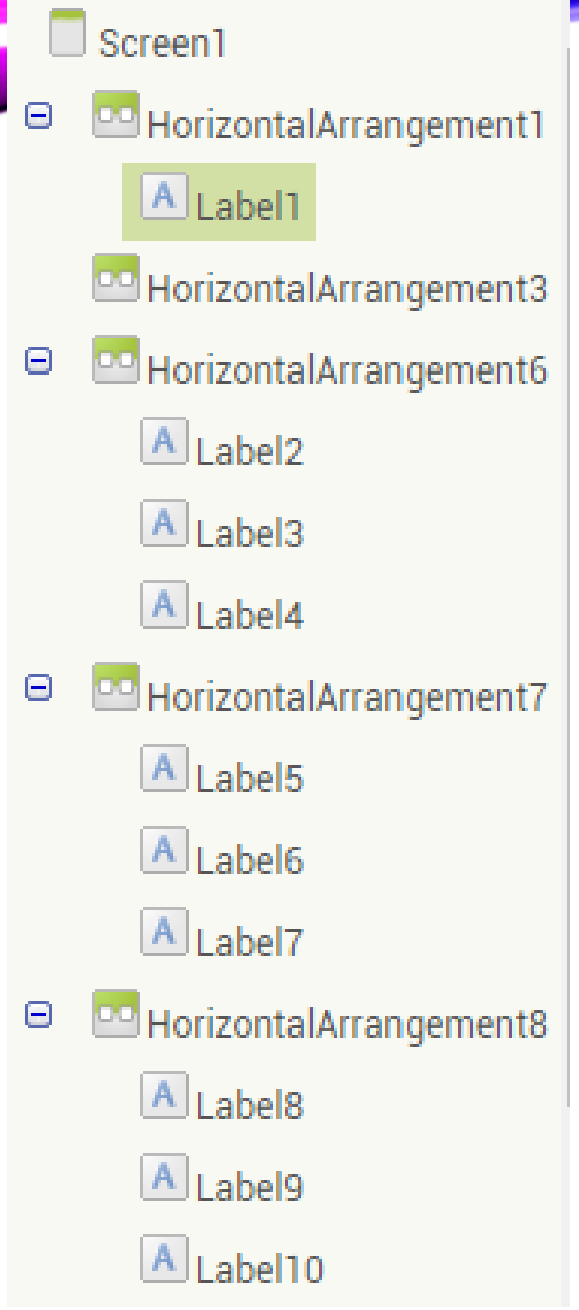
READ VALUE
(CONNECTION)



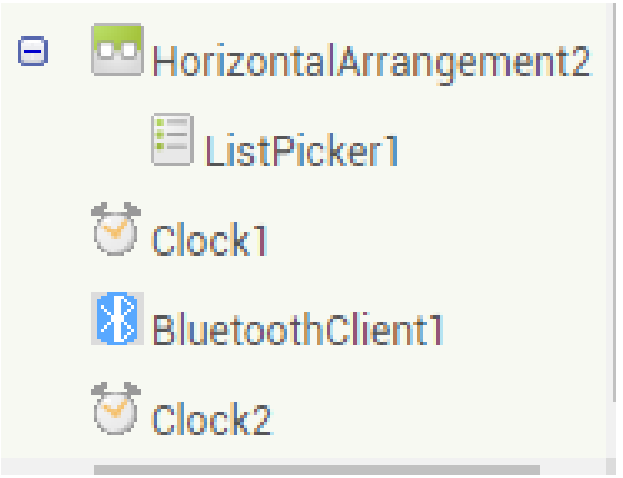
ADD CALL AND MESSAGE

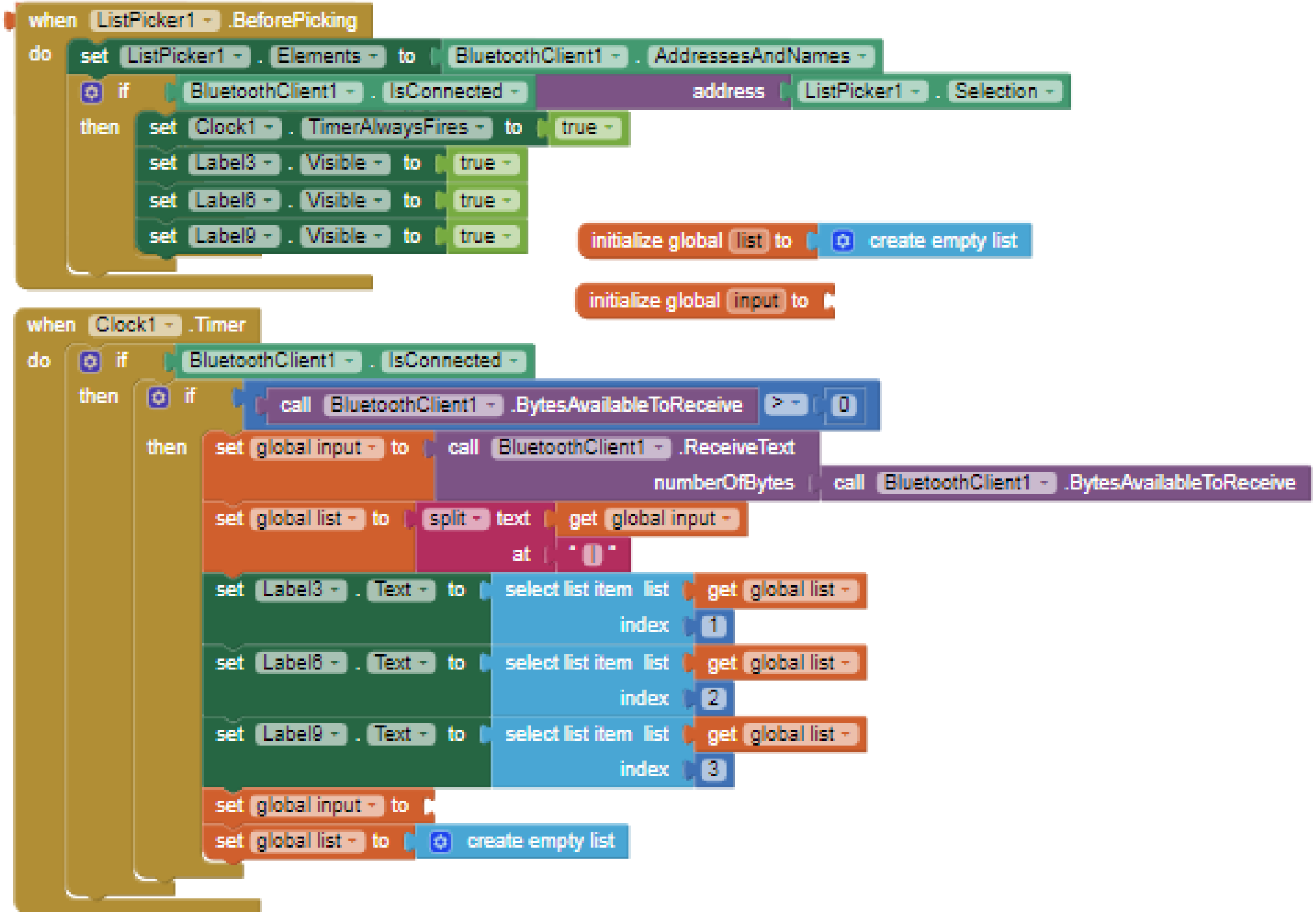
- Add another clock
- Drag the send message and call icon
- Set Number phone (at design interface)

9:48
Screen1
VALUE READING
Arduino expert
Value 1: 0.00 CM
Value 2: 0.00 Volts
Value 3: 0.00 Volts
Bluetooth Connection
Non-visible components
Clock1
BluetoothClient1
Clock2

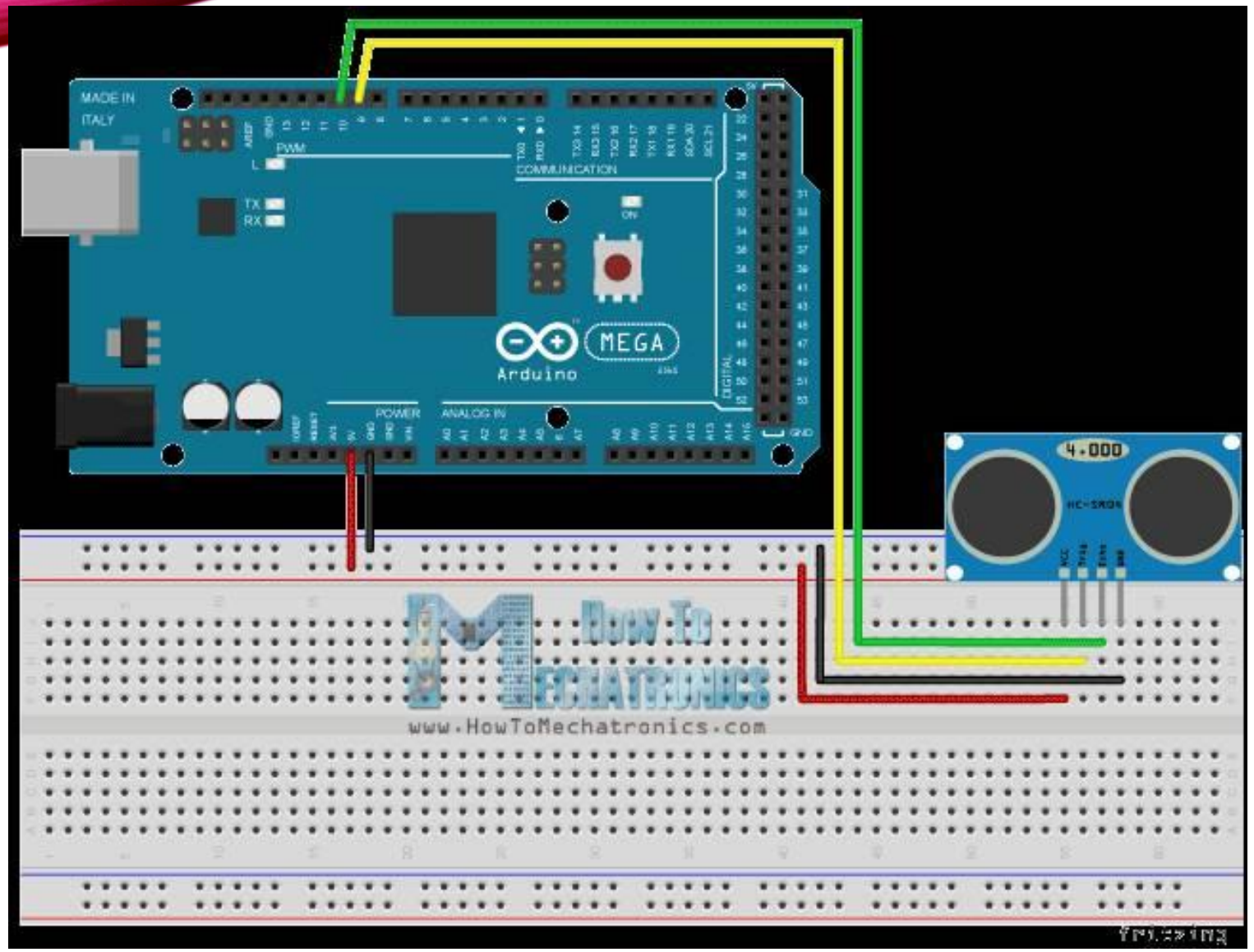

Screen1
HorizontalArrangement1
Label1
HorizontalArrangement3
HorizontalArrangement6
Label2
Label3
Label4
HorizontalArrangement7
Label5
Label6
Label7
HorizontalArrangement8
Label8
Label9
Label10

MULTI VALUE

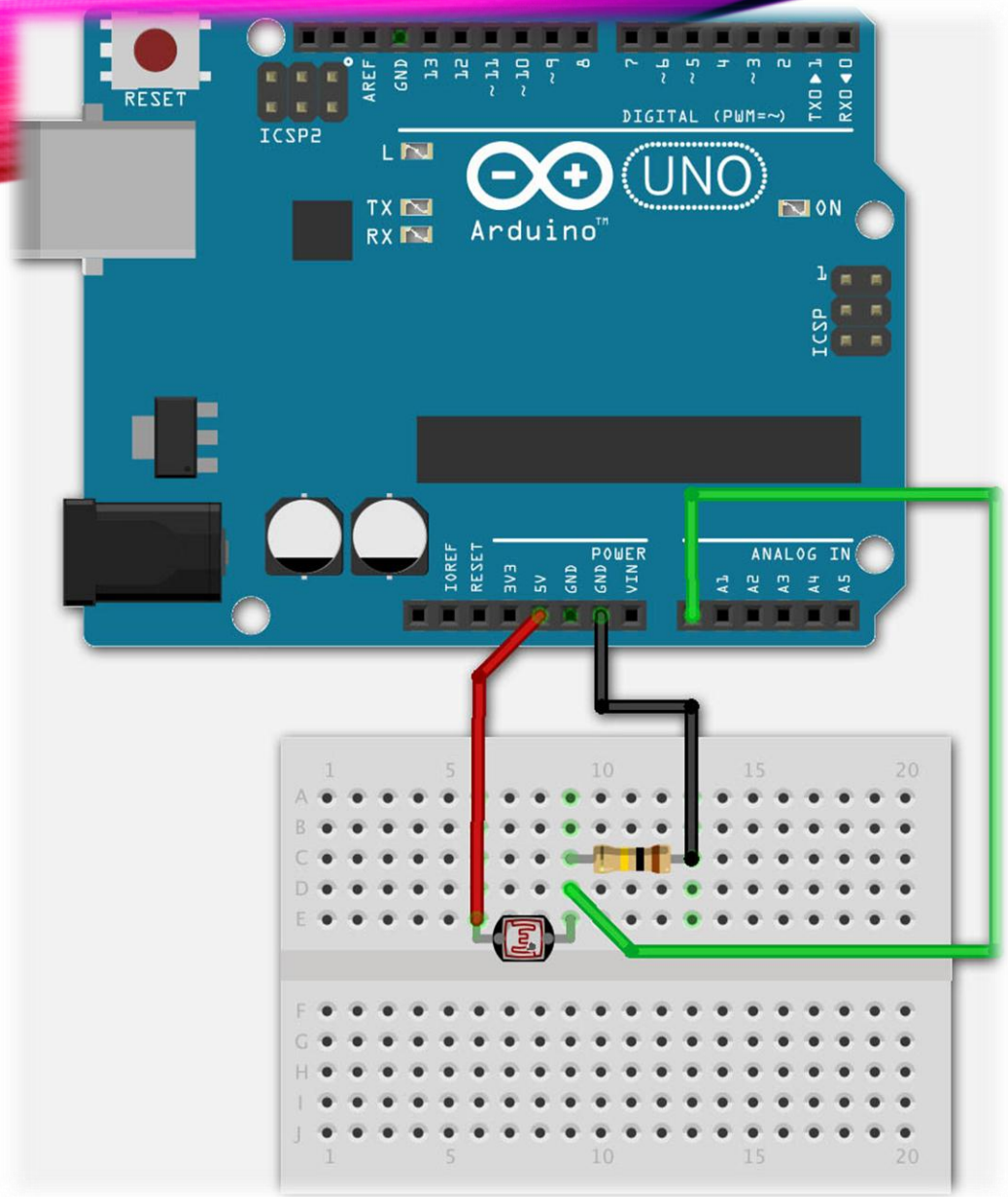

HorizontalArrangement2
ListPicker1
Clock1
BluetoothClient1
Clock2


when ListPicker1 .BeforePicking
do set ListPicker1 . Elements to BluetoothClient1 . AddressesAndNames
if BluetoothClient1 . IsConnected
then set Clock1 . TimerAlwaysFires to true
set Label3 . Visible to true
set Label6 . Visible to true
set Label9 . Visible to true
address ListPicker1 . Selection
initialize global list to create empty list
initialize global input to
when Clock1 .Timer
do if BluetoothClient1 . IsConnected
then if call BluetoothClient1 .BytesAvailableToReceive > 0
then set global input to call BluetoothClient1 .ReceiveText
numberOfBytes call BluetoothClient1 .BytesAvailableToReceive
set global list to split text get global input
at " 0 "
set Label3 . Text to select list item list get global list
index 1
set Label6 . Text to select list item list get global list
index 2
set Label9 . Text to select list item list get global list
index 3
set global input to
set global list to create empty list

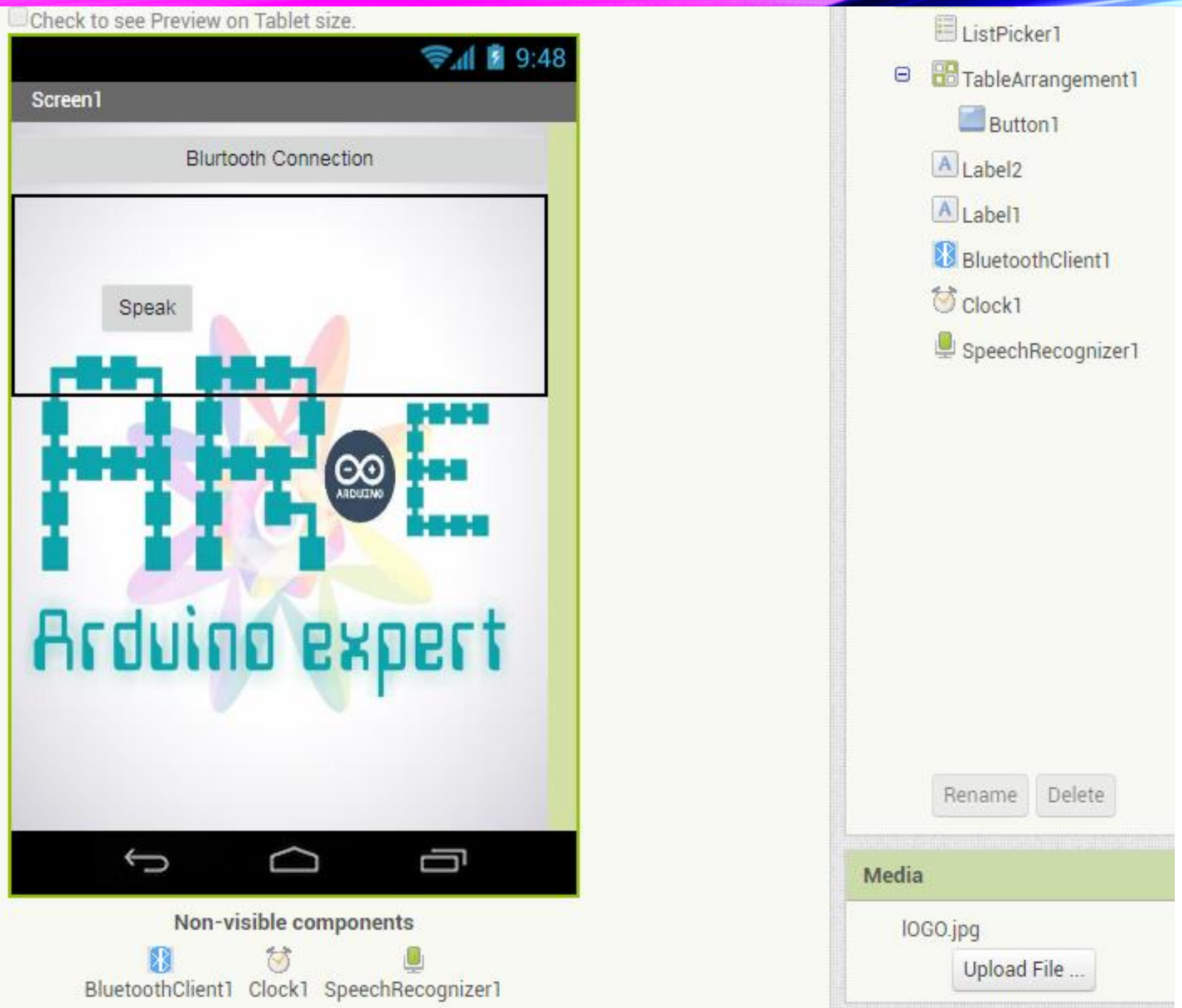
ULTRASONIC SENSOR



VCC = PIN 5V
TRIG = PIN ~9
Echc= PIN 10
Gnd = PIN GROUND

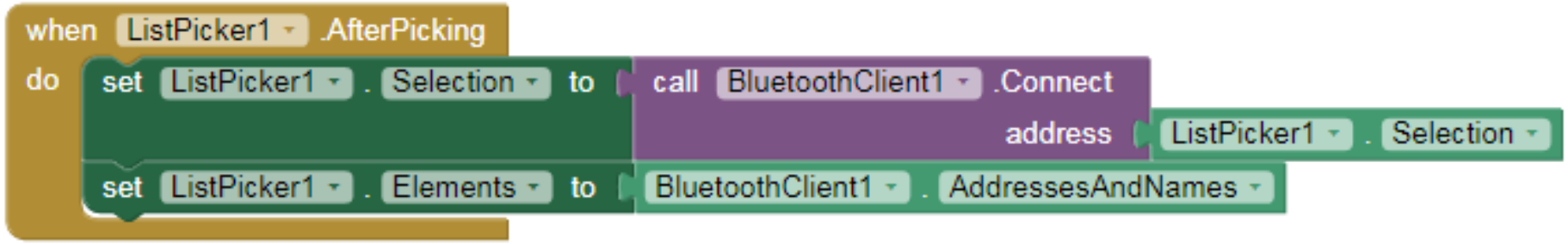


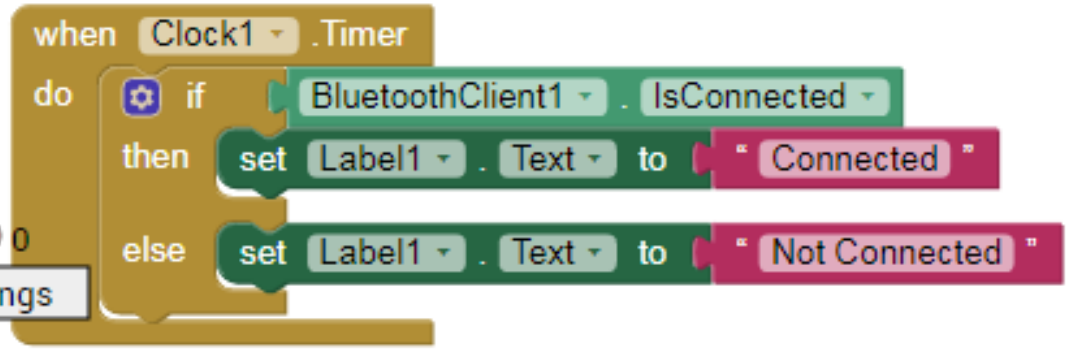
LIGHT DEPENDENT RESISTOR


Check to see Preview on Tablet size.
9:48
Screen1
Blurtooth Connection
Speak
Arduino expert
Non-visible components
BluetoothClient1
Clock1
SpeechRecognizer1
ListPicker1
TableArrangement1
Button1
Label2
Label1
BluetoothClient1
Clock1
SpeechRecognizer1
Rename
Delete
Media
IOGO.jpg
Upload File ...

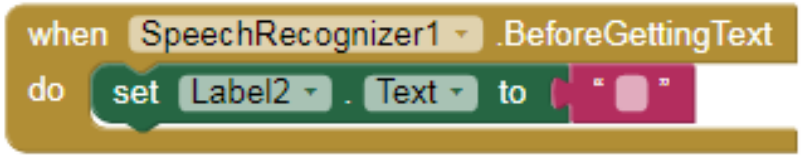
SPEAK

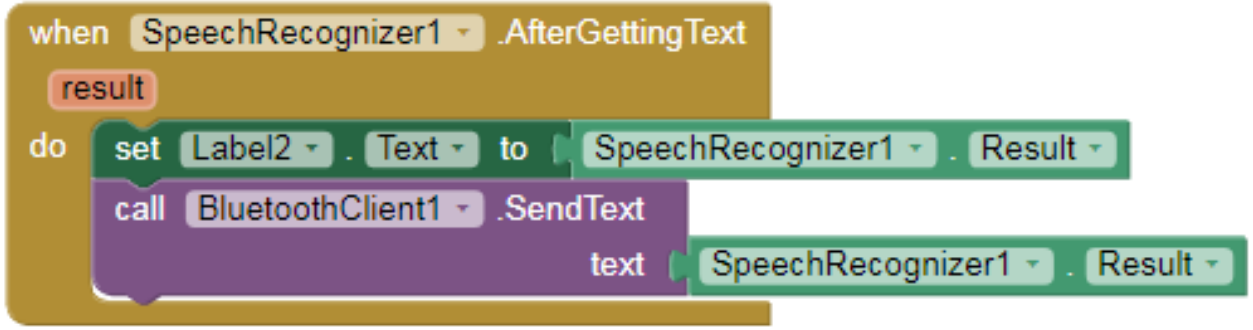
when ListPicker1 .BeforePicking
do set ListPicker1 . Elements to BluetoothClient1 . AddressesAndNames


when ListPicker1 .AfterPicking
do set ListPicker1 . Selection to call BluetoothClient1 .Connect
address ListPicker1 . Selection
set ListPicker1 . Elements to BluetoothClient1 . AddressesAndNames


when Clock1 .Timer
do if BluetoothClient1 . IsConnected
then set Label1 . Text to " Connected "
else set Label1 . Text to " Not Connected "
0
nings

when Button1 .Click
do call SpeechRecognizer1 .GetText


when SpeechRecognizer1 .BeforeGettingText
do set Label2 . Text to " "


when SpeechRecognizer1 .AfterGettingText
result
do set Label2 . Text to SpeechRecognizer1 . Result
call BluetoothClient1 .SendText
text SpeechRecognizer1 . Result

TYPE OF FILE FORMAT

- .apk = install in android
- .aia = install in MIT Inventor 2