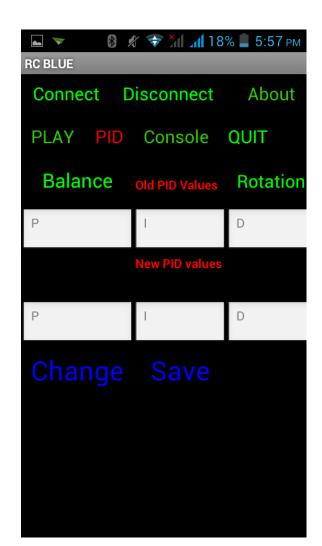
RC BLUE App Documentation







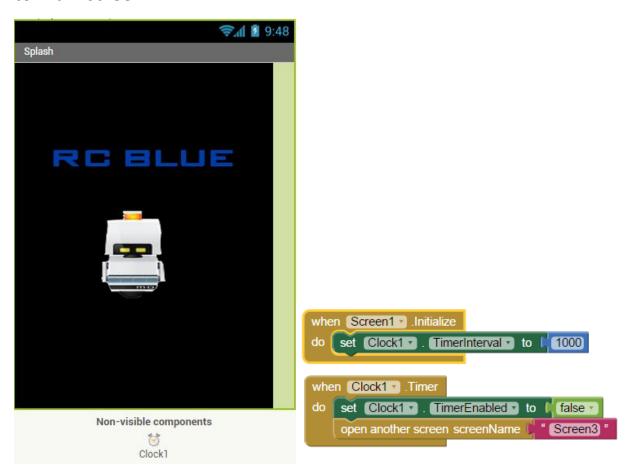
Images of App

The App consists of 2 separate screens-

- 1. Splash
- 2. Main

Splash Screen

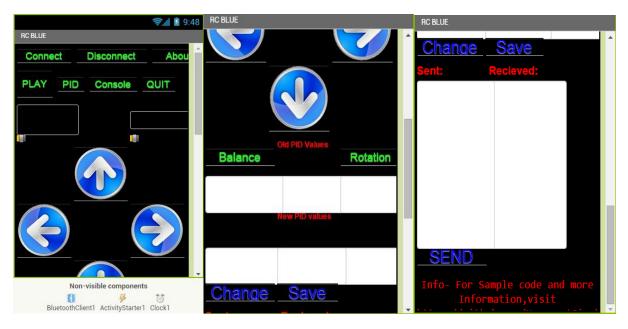
Splash screen as name implies displays splash image for 1 sec and then move to Main screen.



A timer is set to 1 sec. When it goes off, Screen3 (main) will open.

Main screen

Main screen contains all the program.



Above Images shows the Design of main screen. Main screen has 3 non-visible components-

- BluetoothClient
- ActivityStarter
- Clock

BluetoothClient is for Bluetooth connection, ActivityStarter is enable Bluetooth if not already enabled and clock is used as timer.

Main screen is divided into following parts for better understanding.

1. Screen

```
when Screen3 Initialize
               not ( BluetoothClient1 - Enabled -
do
           eal ActivityStarter1 - .StartActivity
     then
     set connect . Visible . to 1 true .
     set disconnect . Visible .
                                 to [
                                      frue -
     set pid . Visible to (
                               true
     set console . Visible to to true .
     set about . Visible . to
     set quit . Visible to
                                 true 🔻
     set play . Visible to
                                true 🕶
     call play -
when Screen3 . BackPressed
do -
    close application
when quit .Click
     close application
```

On initialize, if Bluetooth is not enabled, it will start activity to enable it. It set menu to visible and by default load the play options.

2. Bluetooth

```
initialize global (bluetooth) to ( disconnected )
when connect . BeforePicking
do set connect . Elements to BluetoothClient1 .
                                                      AddressesAndNames •
when connect . AfterPicking
    set connect . Selection to call BluetoothClient1 .Connect
                                                                    connect . Selection .
          BluetoothClient1 ▼ .. (IsConnected ▼
          set global bluetooth - to | connected
          call BluetoothClient1 . SendText
                                            • Ш
                                     text
          set connect . TextColor to (
          set disconnect . TextColor to
when disconnect . Click
    🔳 if
                BluetoothClient1 - . IsConnected - = - . true -
    then call BluetoothClient1 .Disconnect
          set global bluetooth 🔻 to 🛭
          set Clock1 . TimerInterval to 11
          set connect . TextColor to (
          set disconnect . TextColor to
```

Initialize global Bluetooth variable to *disconnected*. A listpicker named connect is used to first select Bluetooth device. After picking, connect to device and set bluetooth to *connected*.

On clicking *disconnect*, disconnect Bluetooth device if connected and set Bluetooth to *disconnected*.

3. Menu

```
set global mode - to | ' pld '
                                                                                                        call allhide -
                                                                                                        set pid . TextColor to I
to allhide
                                                                                                        set Oid p. . Visible to ( true -
set recievedbox . Visible to false
 set recieved . Visible to false
                                                                                                        set Old . Visible to ( true -
 set (send) . (Visible ) to (false)
                                                                                                        set old_d - . Visible - to ( true -
                                                                                                        set new_p - . Visible - to ( true
 set sention . Visible to (false -
 set sents. Visibles to false
                                                                                                        set new_i . Visible to i true .
 set Old_Die . Visible to 1 false -
                                                                                                        set new_d - . Visible - to ( true
 set Old . Visible to false
                                                                                                        set (change -) . (Visible -) to ( true -
                                                                                                        set save . Visible to true -
 set old_d . Visible - to false -
                                                                                                        set Old_PID_values . (Visible . to 1 true .
 set new_p - . Visible - to | false
                                                                                                        set new_pid . Visible to true .
 set (new_i - . Visible - to (false -
                                                                                                        set rotation . Visible to (true -
 set (new_d - ). (Visible - to () false -
                                                                                                        set (balance). (Visible) to (true)
 set changes . Visibles to lifeise -
                                                                                                        call pid -
 set (savet) . (Visible) to (false)
 set (Old_PID_values . Visible to (false -
                                                  initialize globa mode to 🕻 🕻 play 🔭
 set (new_pid -). (Visible -) to (false -)
                                                                                                        n play - .Click
                                                    en about - .Click
 set down . Visible to false
                                                                                                        set global mode - to ( ' play) '
                                                     set global mode - to () * about *
 set (eft) . (Visible) to (false)
                                                                                                        call play -
 set right. Visible to laise.
                                                     call allhide -
                                                      set about . TextColor to
 set up. Visible to false
                                                     set (About . Visible to ( true
  set speedbox . Visible to (false)
  set speed . Visible to (false -
                                                                                                         set play. TextColor to I
  set (directionbox . Visible to false -
                                                   when console .Click
                                                                                                         set down . Visible to litue
 set directions. Visibles to lates
                                                  do set global mode - to 1, * console *
 set player. TextColors to
                                                                                                         set (eft. . Visible to (tue -
                                                      call allhide -
                                                      set (consoler). (TextColors) to (
                                                                                                         set (right - . (Visible - to i) true -
 set Consoles . TextColors to (
                                                                                                         set up . Visibles to litue -
                                                      set recievedbox . Visible to true -
                                                                                                         set (speedbox) . (Visible) to ( true -
                                                      set (recieved . Visible to (true -
 set about . TextColor . to
                                                                                                         set speed. Visible to (true -
                                                      set Send . (Visible) to ( true -
 set rotation . Visible to I false -
                                                                                                         set directionbox . Visible to i true -
 set (balance . (Visible . to (false .
                                                                                                         set direction - . Visible - to | true -
                                                      set Sento . (Visibles) to ( true -
 set (About - . Visible - to (false -
```

By default, *play* mode is selected. On clicking a mode, all contents of other mode will be hidden by *allhide* procedure and only the content of current mode will be shown.

4. Play

```
lize globa up to 🏮 false 🔹
get global bluetooth:
                                                                 loba down to (false -
then set global up to true -
  get global bluetooth - . . . . connected .
 ten set global up - to false -
 set global down - to ( true -
 get global bluetooth - . . . connected .
                                                           en speed - .PositionChange
then set global down to false -
                                                            get global bluetooth - - - connected .
                                                             then set speedbox . Text to speed . ThumbPosition .
  get global bluetooth : -- | connected •
 then set global left to true -
                                                                                                    · (M3) ·
                                                                                                   speed - . ThumbPosition -
                                                                 set (speedbox - ). Text - to ( speed - ). ThumbPosition -
      get global bluetooth - - . connected .
  then set global left - to false -
  get global bluetooth - . . . connected .
                                                                    get global bluetooth - - - connected *
                                                                 set directionbox - . Text - to direction - . ThumbPosition -
  hen set global right - to ( true -
      get global bluetooth : . . . connected .
                                                                  set global direction : to true
  then set global right to (false -
```

On holding any of the four buttons-*up*, *down*, *left*, *right*, *it* will set corresponding variables to true until hold. These variables are further used in timer to send message through Bluetooth.

On changing of *speed, direction* slider, it will send its position through Bluetooth using appropriate headers.

5. Console

When send is clicked, it will send whatever is in the sentbox through Bluetooth.

6. Timer

In each interval, if *up,down,left,right* is true, it will send *F,B.L,R*.

If there is any incoming message, it will be placed in receivedbox.

7. Pid

```
when Cotations of Cotations to provide the control of the control of the cotations of the c
```

In Pid mode, if *rotation* is clicked, *updater* is sent and if balance is clicked, *updateb* is sent and then pid procedure is called.

On clicking *save*, if pid is set to *balance*, *PSB* is sent and if pid is set to *rotation*, *PSR* is sent.

On clicking *change*, depending on pid variable, new pid values are sent in appropriate format and new pid values are copied to the old pid value boxes.

```
interior global (in the process of t
```

In above pid procedure, if recievedbox has received old pid value from Bluetooth in suitable format, they will be updated in app.