GPIO PIN

1. Config the /dtoverlay/config.txt by adb commands.

```
a. Pull the config.txt file for edit
   - adb root
   - adb remount
   - adb pull /dtoverlay/config.txt

b. Edit the config.txt on PC to the following status
```

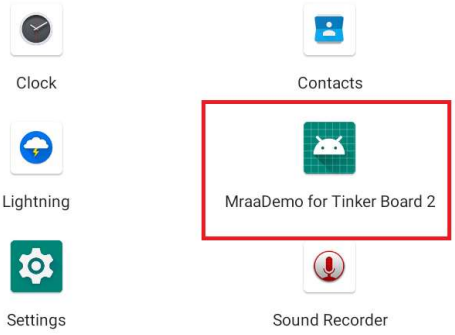
```
intf:fiq_debugger=on
#intf:uart0=on
#intf:uart4=on
#intf:i2c6=on
#intf:i2c7=on
#intf:i2s0=on
#intf:spdif=on
#intf:spi1=on
#intf:spi5=on
#intf:pwm0=on
#intf:pwm1=on
#intf:pwm3a=on
#intf:test_clkout2=on
```

```
c. Push the file to device
   - adb push config.txt /dtoverlay/
d. Reboot the system
   - adb reboot
```

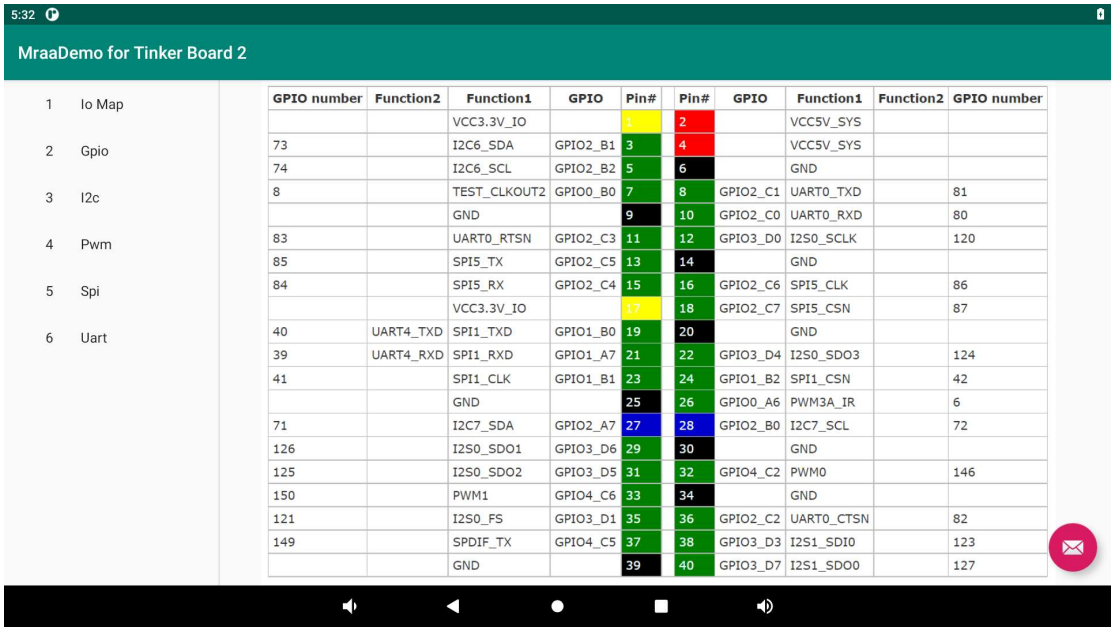
2. Install the MraaDemo app by the following commands and then open it

```
a. Install apk commands
   - adb install -r MraaDemo_TinkerBoard2.apk

b. Open MraaDemo_TinkerBoard2 app
   - Select app icon
```



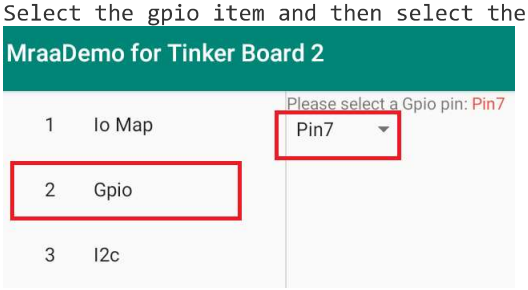

```
   - App screen
```



GPIO number	Function2	Function1	GPIO	Pin#	Pin#	GPIO	Function1	Function2	GPIO number
		VCC3.3V_IO		1	2		VCC5V_SYS		
73		I2C6_SDA	GPIO2_B1	3	4		VCC5V_SYS		
74		I2C6_SCL	GPIO2_B2	5	6		GND		
8		TEST_CLKOUT2	GPIO0_B0	7	8	GPIO2_C1	UART0_TXD		81
		GND		9	10	GPIO2_C0	UART0_RXD		80
83		UART0_RTSN	GPIO2_C3	11	12	GPIO3_D0	I2S0_SCLK		120
85		SPI5_TX	GPIO2_C5	13	14		GND		
84		SPI5_RX	GPIO2_C4	15	16	GPIO2_C6	SPI5_CLK		86
		VCC3.3V_IO		17	18	GPIO2_C7	SPI5_CSN		87
40	UART4_TXD	SPI1_TXD	GPIO1_B0	19	20		GND		
39	UART4_RXD	SPI1_RXD	GPIO1_A7	21	22	GPIO3_D4	I2S0_SDO3		124
41		SPI1_CLK	GPIO1_B1	23	24	GPIO1_B2	SPI1_CSN		42
		GND		25	26	GPIO0_A6	PWM3A_IR		6
71		I2C7_SDA	GPIO2_A7	27	28	GPIO2_B0	I2C7_SCL		72
126		I2S0_SDO1	GPIO3_D6	29	30		GND		
125		I2S0_SDO2	GPIO3_D5	31	32	GPIO4_C2	PWM0		146
150		PWM1	GPIO4_C6	33	34		GND		
121		I2S0_FS	GPIO3_D1	35	36	GPIO2_C2	UART0_CTSN		82
149		SPDIF_TX	GPIO4_C5	37	38	GPIO3_D3	I2S1_SDI0		123
		GND		39	40	GPIO3_D7	I2S1_SDO0		127

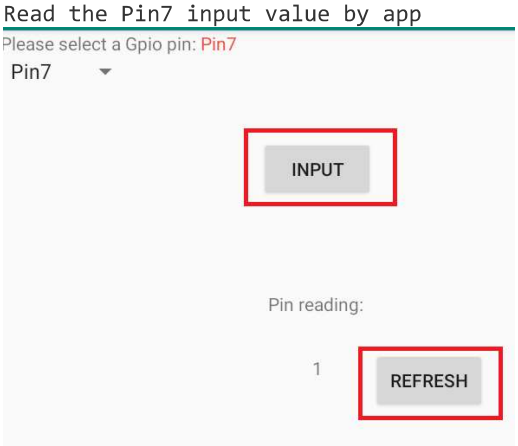
3. Select the GPIO item to test

a. Select the gpio item and then select the "Pin7"



4. Test the gpio input mode and values

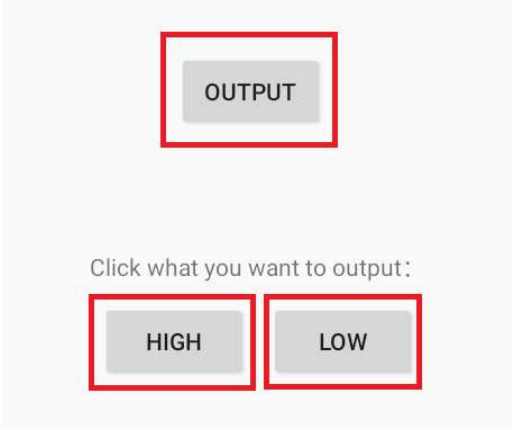
a. Read the Pin7 input value by app



b. Read the Pin7 value by adb
- adb shell cat /sys/class/gpio/gpio8/direction
  Return: "in" --> Pass
  "out" --> Fail
- adb shell cat /sys/class/gpio/gpio8/value
  Return: same with app value --> Pass
  different with app value --> Fail

5. Test the gpio output mode and values

a. Set the gpio output mode and values by app



b. Check the output mode and value by adb commands
- adb shell cat /sys/class/gpio/gpio8/direction
  Return: "out" --> **Pass**
  "in" --> **Fail**
- adb shell cat /sys/class/gpio/gpio8/value
  Return: same with app value (High=1, low=0)--> **Pass**
  different with app value --> **Fail**

6. The GPIO verify completely!