FTK Introduction

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What is FTK

1. FTK = Funny toolkit, write it just for fun.
2. FTK << GTK+ (libftk.so less than 200K)
3. FTK is a GUI library for embedded devices.
4. http://code.google.com/p/ftk/

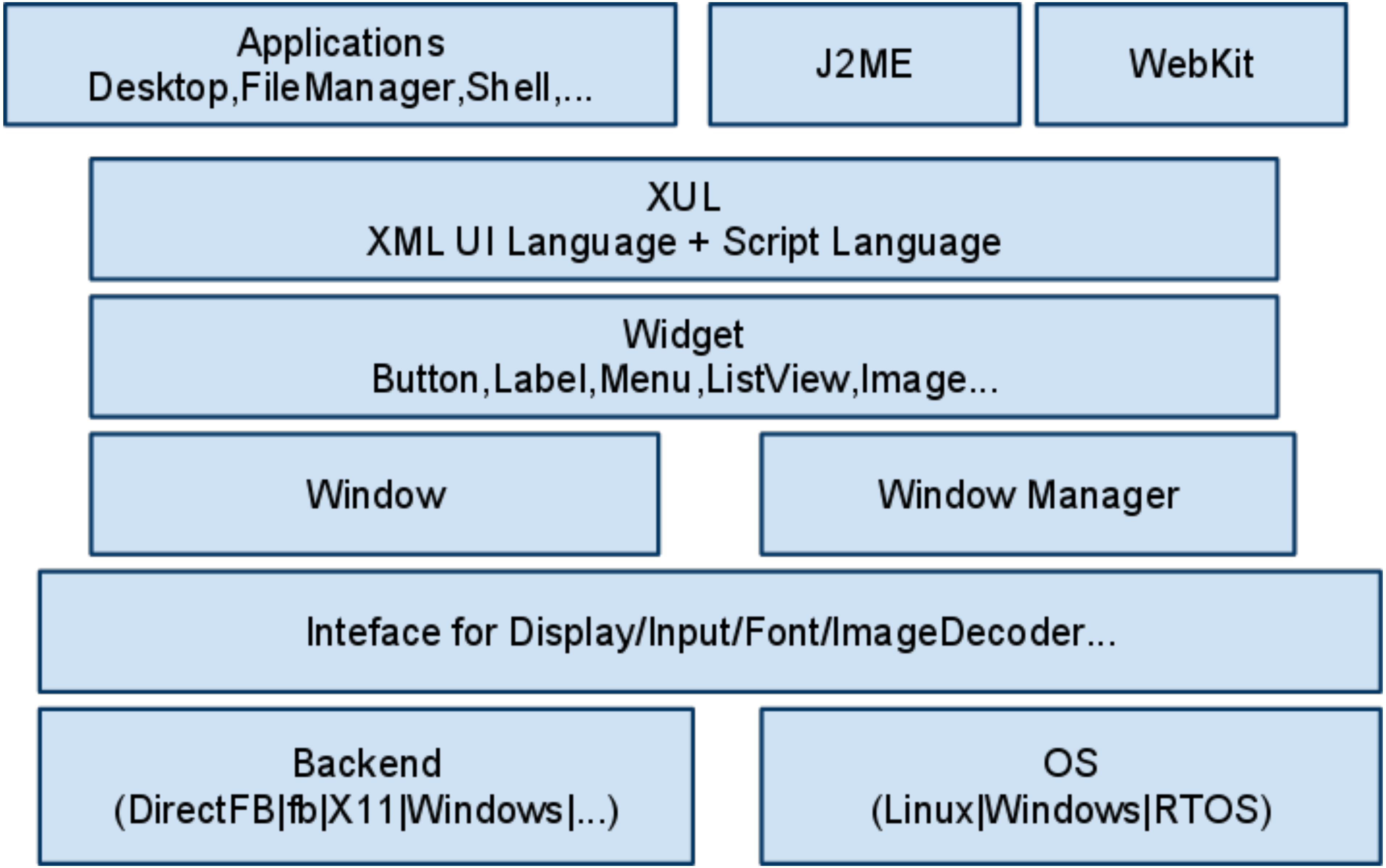
General Features

1. Lightweght.
2. Beautiful look and feel.
3. High code quality: design pattern, good code style.
4. Stable: code review, unit test, stress test, valgrind checked.
5. Full gui features: window, dialog, panel, button, menu...
6. Good portability: Unix, Windows, RTOS...
7. Release under LGPL license

Modern features

1. Window animation.
2. Alpha channel to implement transparent/translucent window.
3. Guesture recognition.
4. XML UI description language.
5. Script binding.
6. InputMethod with Handwrite
7. Screen rotation.
8. Theme.

Architecture



Applications
Desktop,FileManager,Shell,...

J2ME

WebKit

XUL
XML UI Language + Script Language

Widget
Button,Label,Menu,ListView,Image...

Window

Window Manager

Inteface for Display/Input/Font/ImageDecoder...

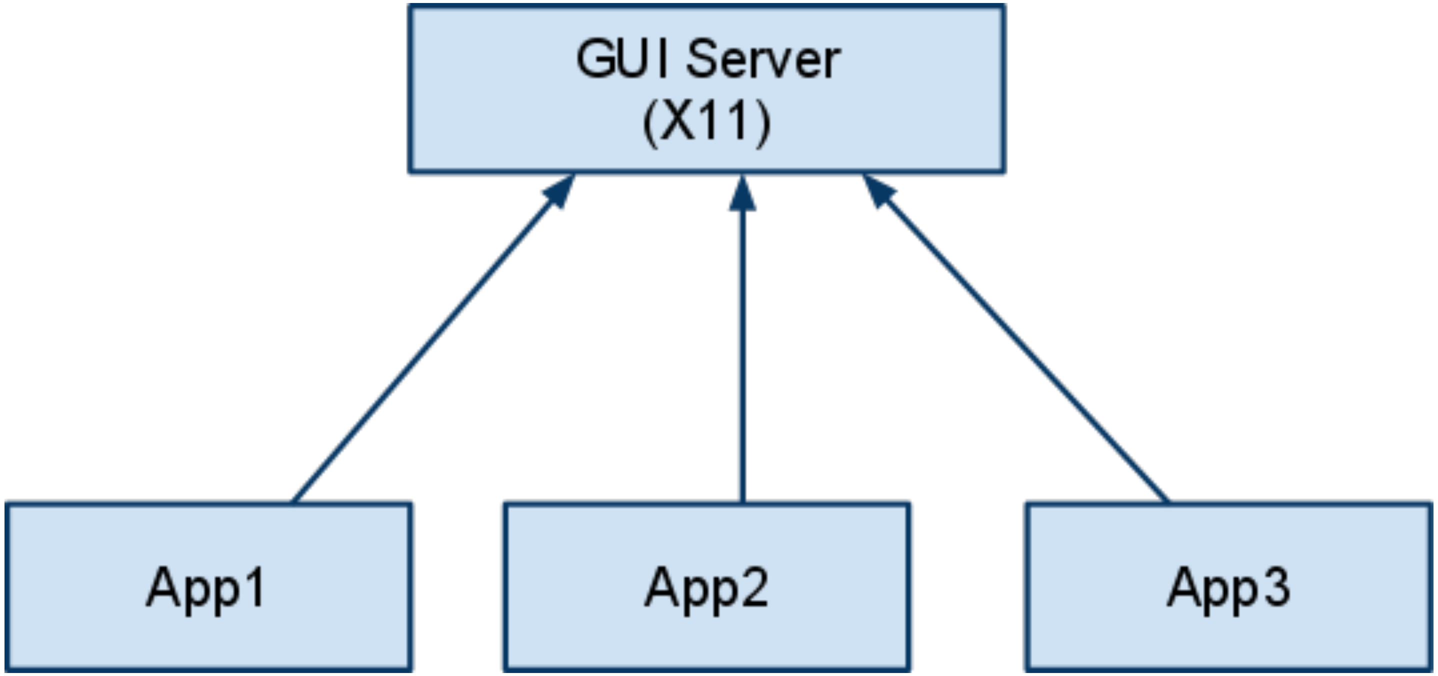
Backend
(DirectFB|fb|X11|Windows|...)

OS
(Linux|Windows|RTOS)

Two GUI Application models

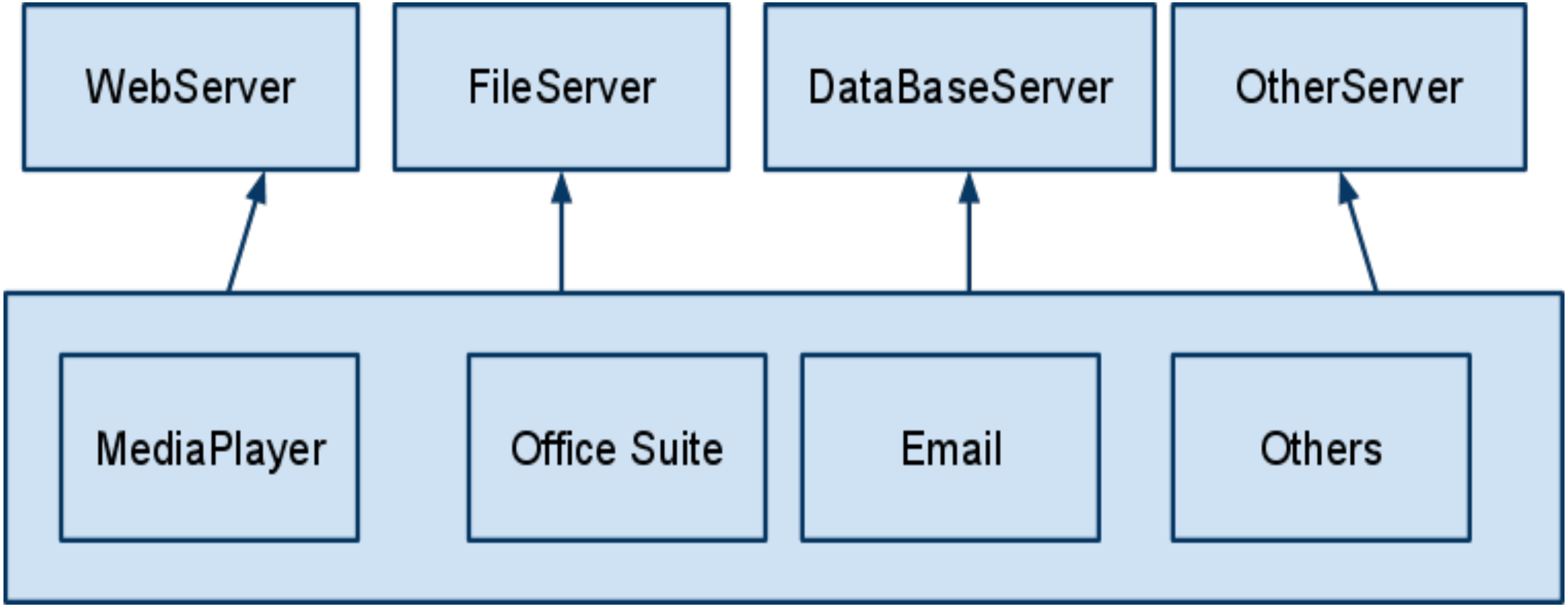
1. Tranditional
2. Browser based

Tranditional GUI Application model



1. Each application run in its own process.
2. All the applications share the single GUI Server.

Browser based application model



1. All applications run in a single process.
2. Use script + XML to develop applications.
3. FTK use the model.

Download and Build

o **download**:

```
svn checkout http://ftk.googlecode.com/svn/trunk/ ftk-read-only
```

o **configure**:

```
cd ftk-read-only
./autogen.sh
./configure --with-backend=linux-x11:320x480
(run ./configure --help for more options)
```

o **build**:

```
make
```

o **run**:

```
cd src/demos
./demo_button
```

Cross compile

see tools/cross-build/README

Hello World

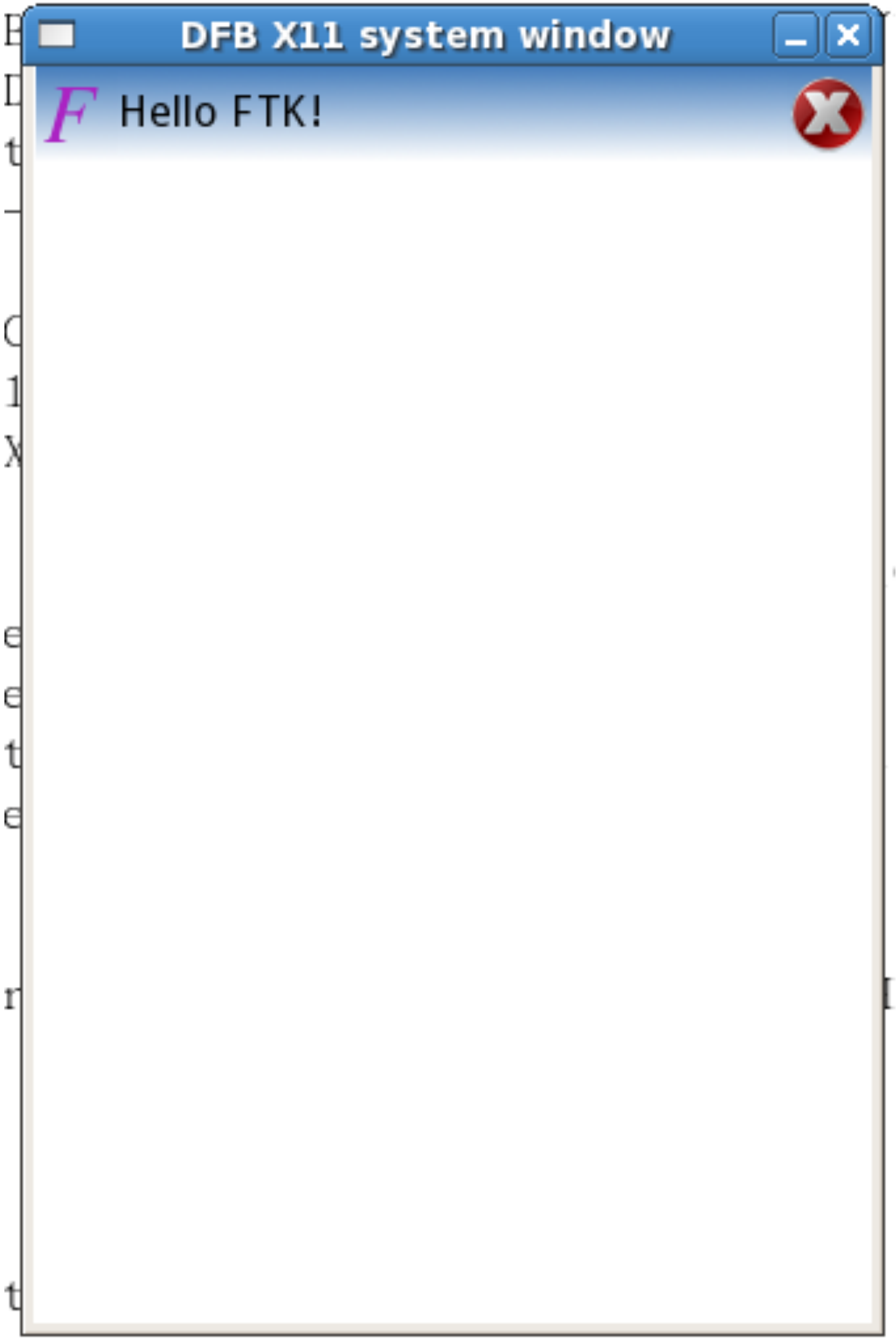
```
#include "ftk.h"

int main(int argc, char* argv[])
{
    FtkWidget* win = NULL;

    ftk_init(argc, argv);
    win = ftk_app_window_create();
    ftk_widget_set_text(win, "Hello FTK!");
    ftk_widget_show(win, 1);

    ftk_run();

    return 0;
}
```


DFB X11 system window
Hello FTK!

XUL = XML UI Language

```
<?xml version="1.0" encoding="utf-8"?>
<window value="Entry Label" animator="$FTK_ANI_TO_UP" visible="1">
   <label  id="1" x="5" y="5" w="$ww/4" h="30" value="Name" />
   <entry  id="2" x="$ww/4+5" y="5" w="3*$ww/4-15" h="30" value="Li
XianJing" />

   <label  id="3" x="5" y="40" w="$ww/4" h="30" value="EMail" />
   <entry  id="4" x="$ww/4+5" y="40" w="3*$ww/4-15" h="30" value="
xianjimli@hotmail.com" />

   <label  id="5" x="5" y="75" w="$ww/4" h="30" value="Mobile" />
   <entry  id="6" x="$ww/4+5" y="75" w="3*$ww/4-15" h="30" value="
+8613911112222" />

   <button id="99" x="5" y="3*$wh/4" w="$ww/2-5" h="50"
attr="$FTK_ATTR_INSENSITIVE" value="Save" />
   <button id="100" x="$ww/2" y="3*$wh/4" w="$ww/2-5" h="50"
attr="$FTK_ATTR_FOCUSED" value="Quit" />
</window>
```

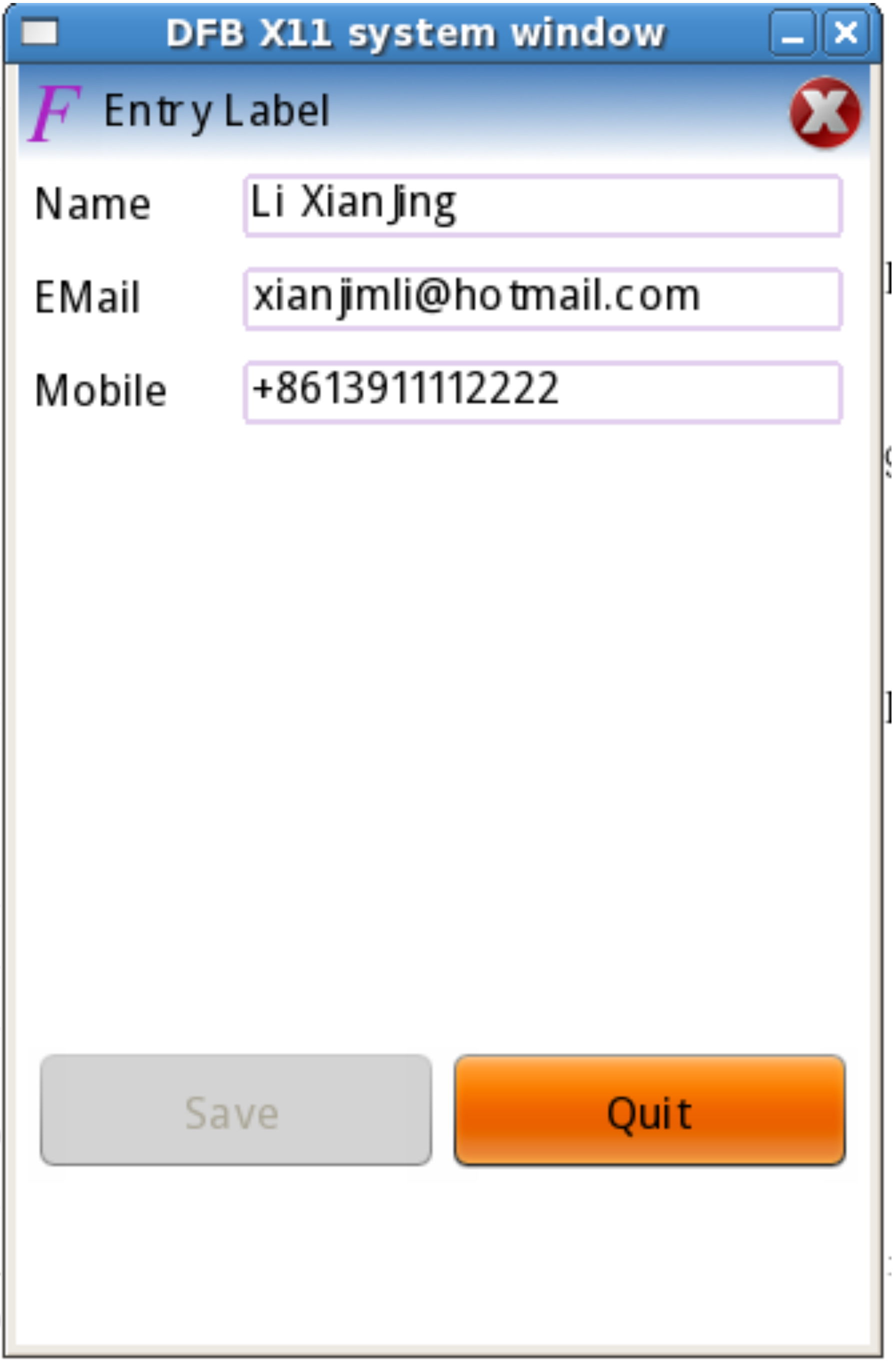
lua binding

```
function button_quit_on_clicked(button)
    ftk_quit()
    print("button_quit_on_clicked")
    return 0
end
function button_save_on_clicked(button)
    print("button_save_on_clicked")
    return 0
end

ftk_init()

win=ftk_xul_load(xml)
ftk_widget_show_all(win, 1)
quit=ftk_widget_lookup(win, 99)
ftk_button_set_clicked_listener(quit, "button_save_on_clicked")
quit=ftk_widget_lookup(win, 100)
ftk_button_set_clicked_listener(quit, "button_quit_on_clicked")

ftk_run()
```



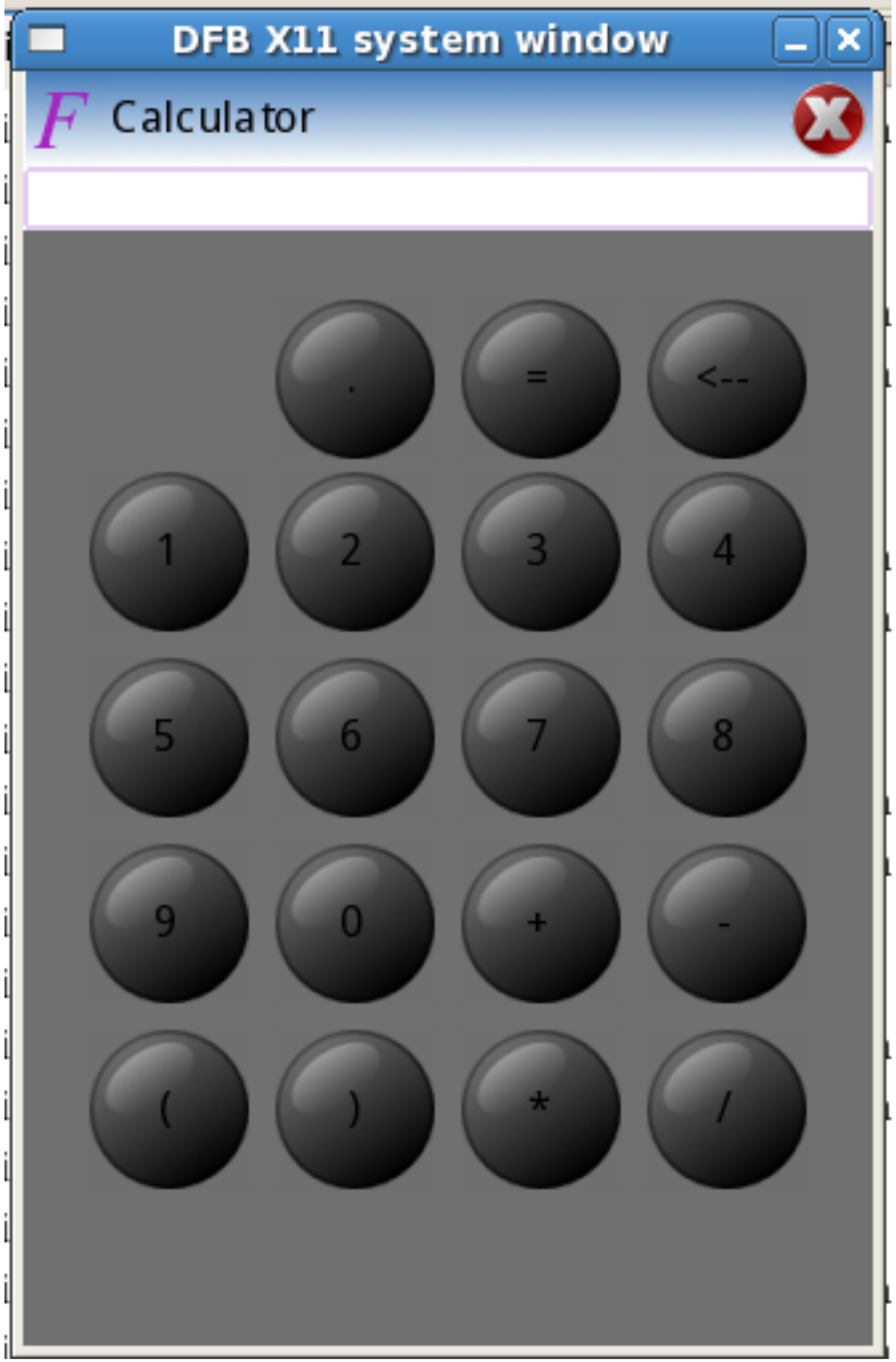
Name Li XianJing

EMail xianjimli@hotmail.com

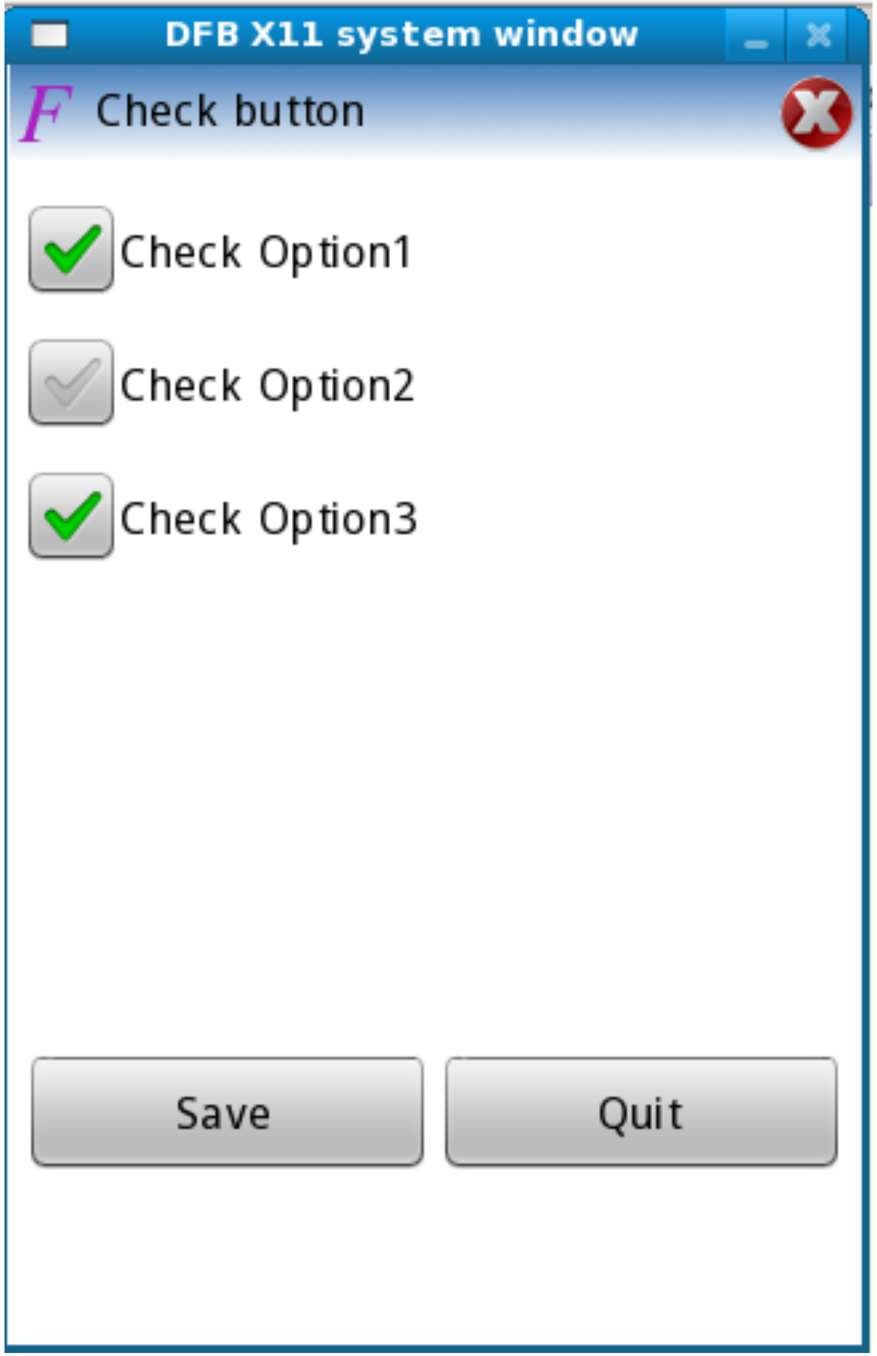
Mobile +8613911112222

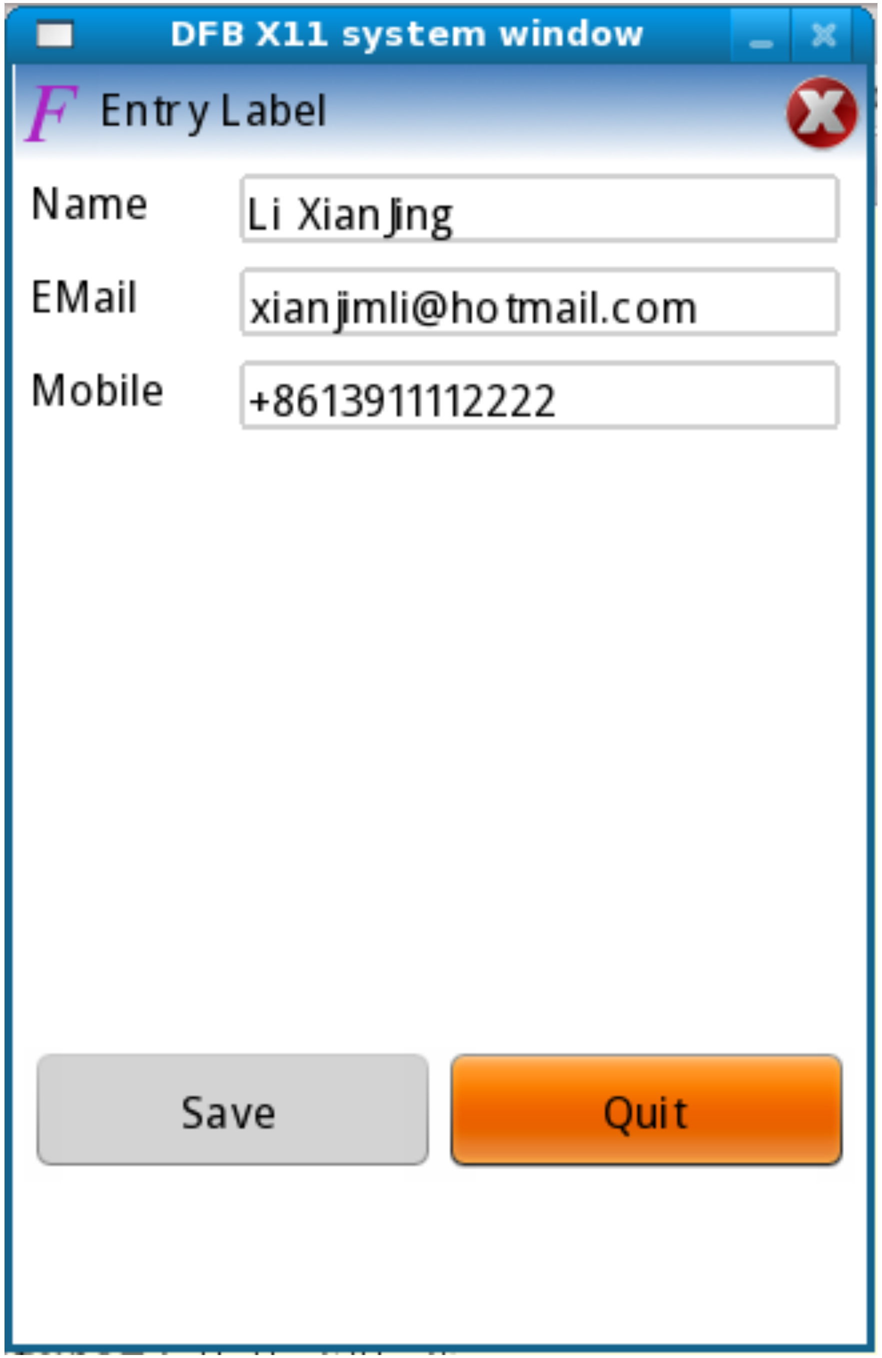
Calculator

A sample application


DFB X11 system window
Calculator
.
=
<--
1
2
3
4
5
6
7
8
9
0
+
-
(
)
*
/

Run on DirectFB





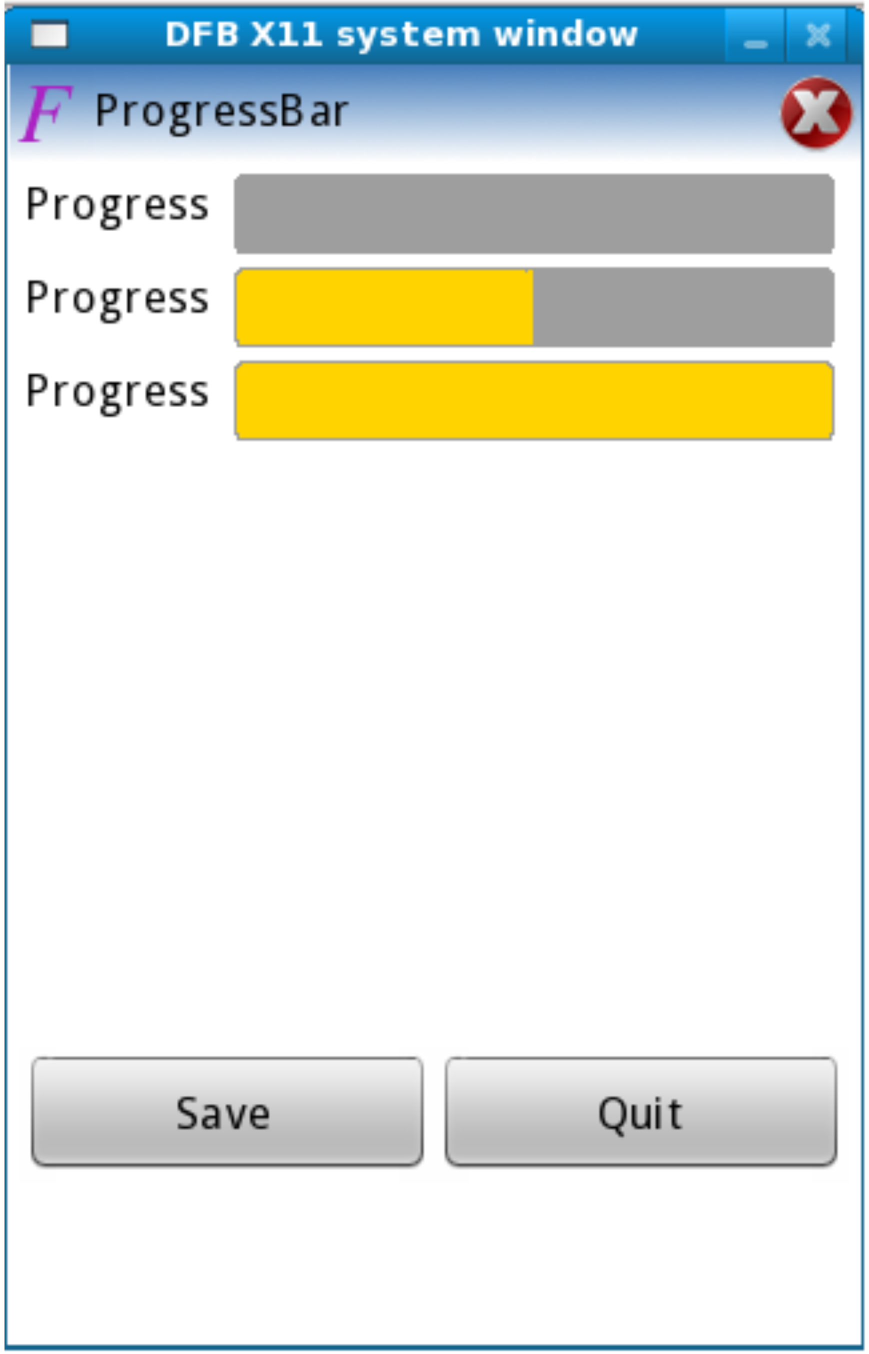
DFB X11 system window

Entry Label

Name: Li Xian Jing

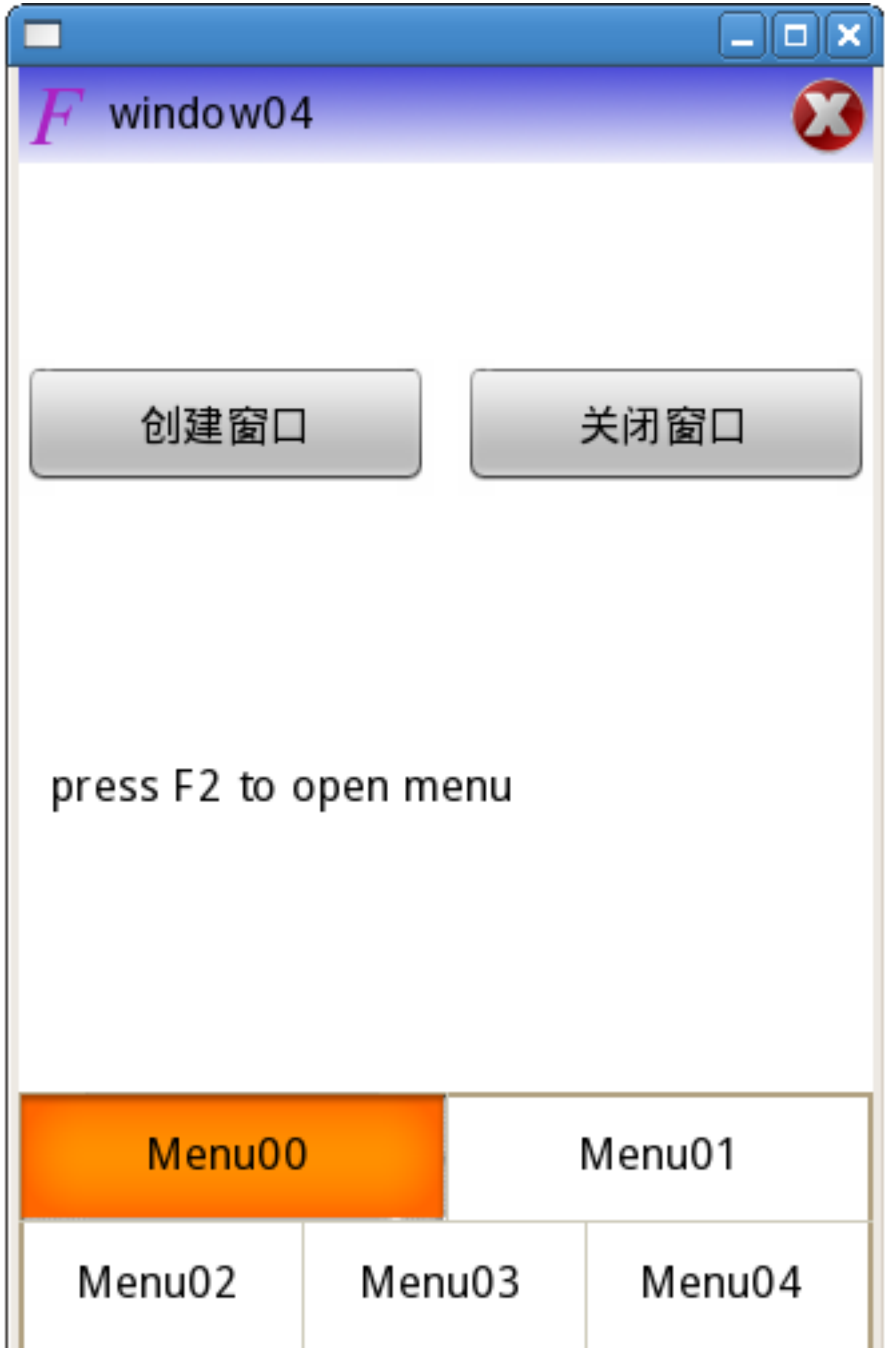
EMail: xianjimli@hotmail.com

Mobile: +8613911112222

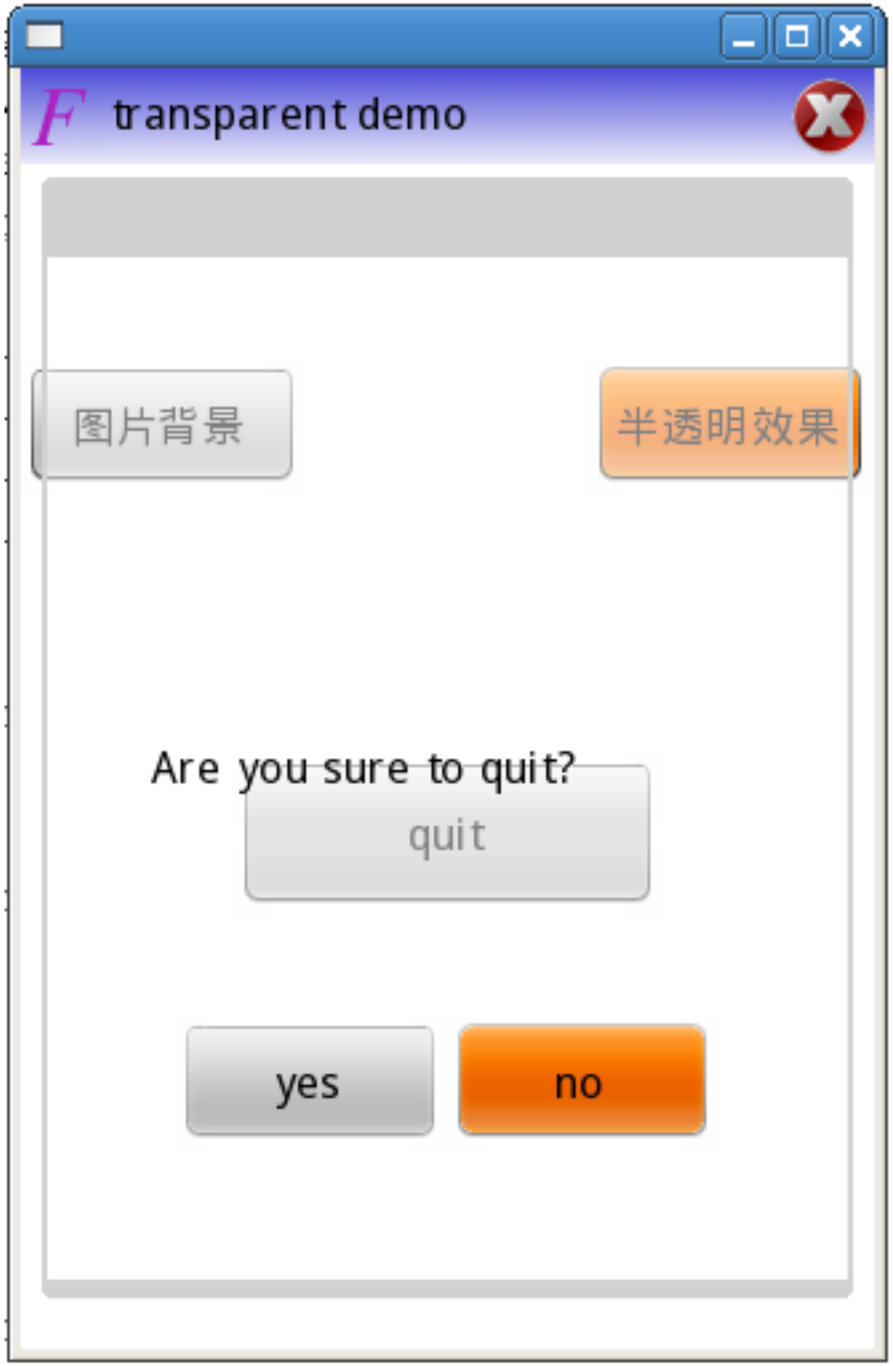


DFB X11 system window
ProgressBar
Progress
Progress
Progress
Save
Quit

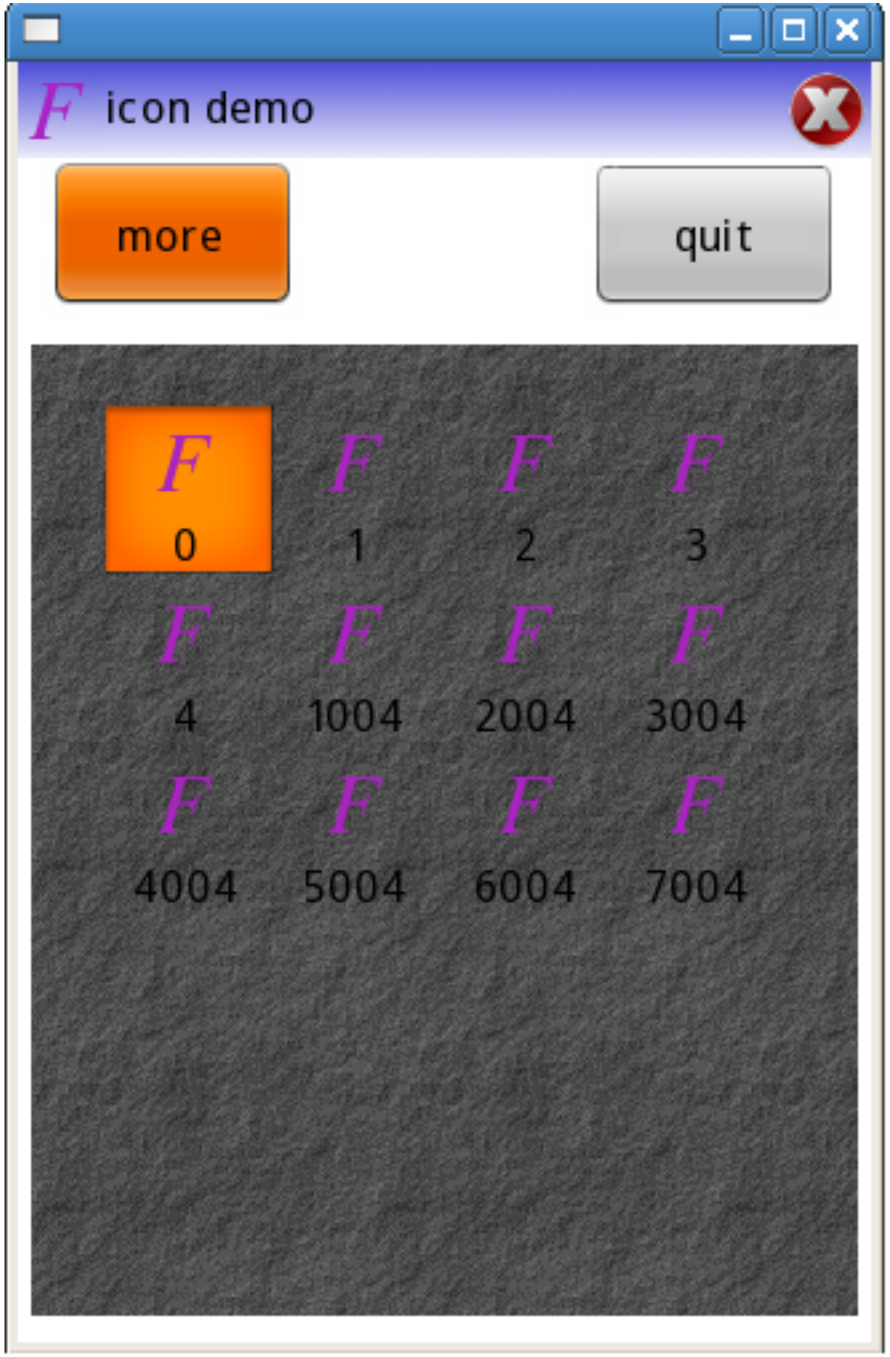
Running on X11 emulator

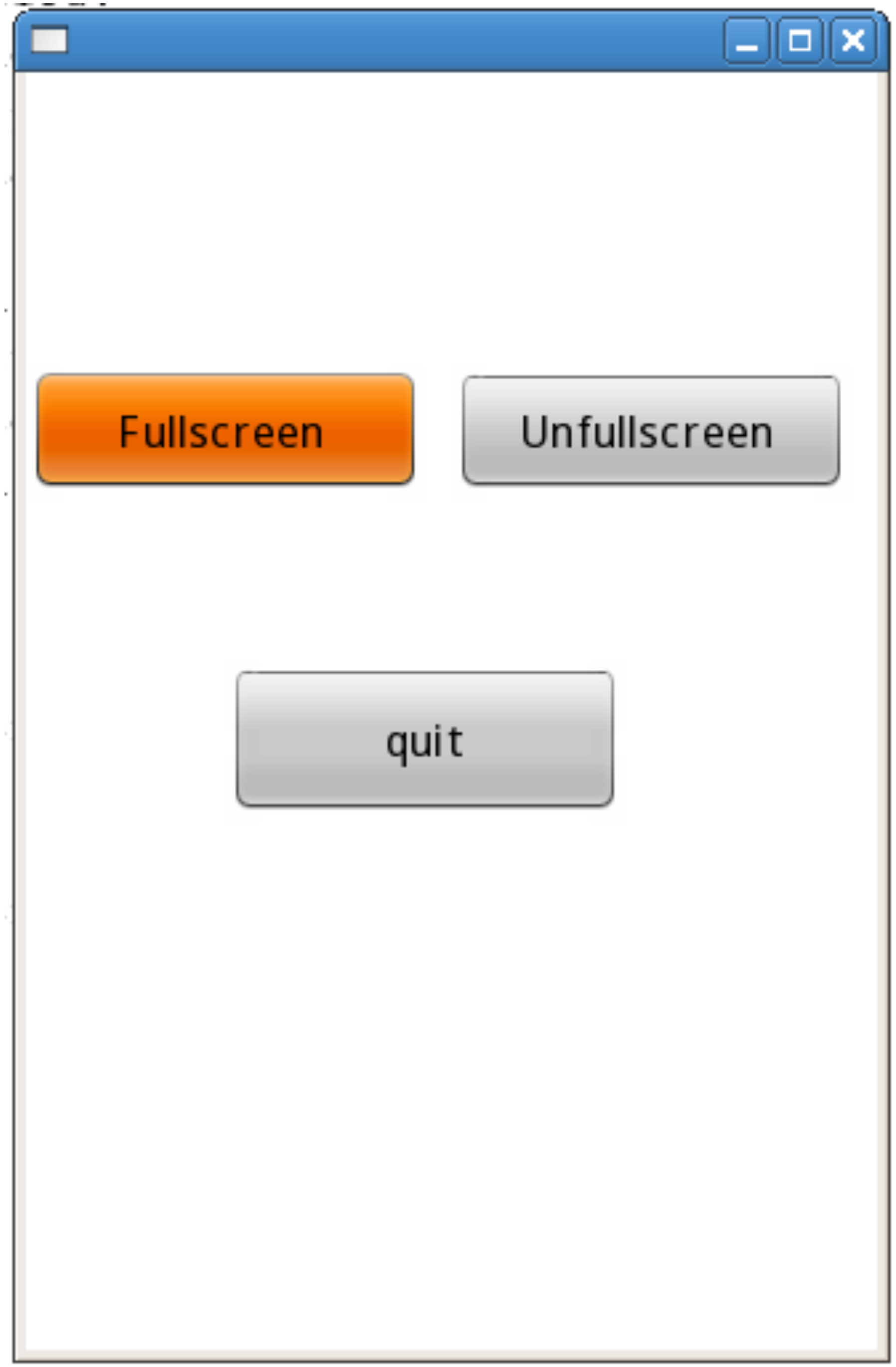


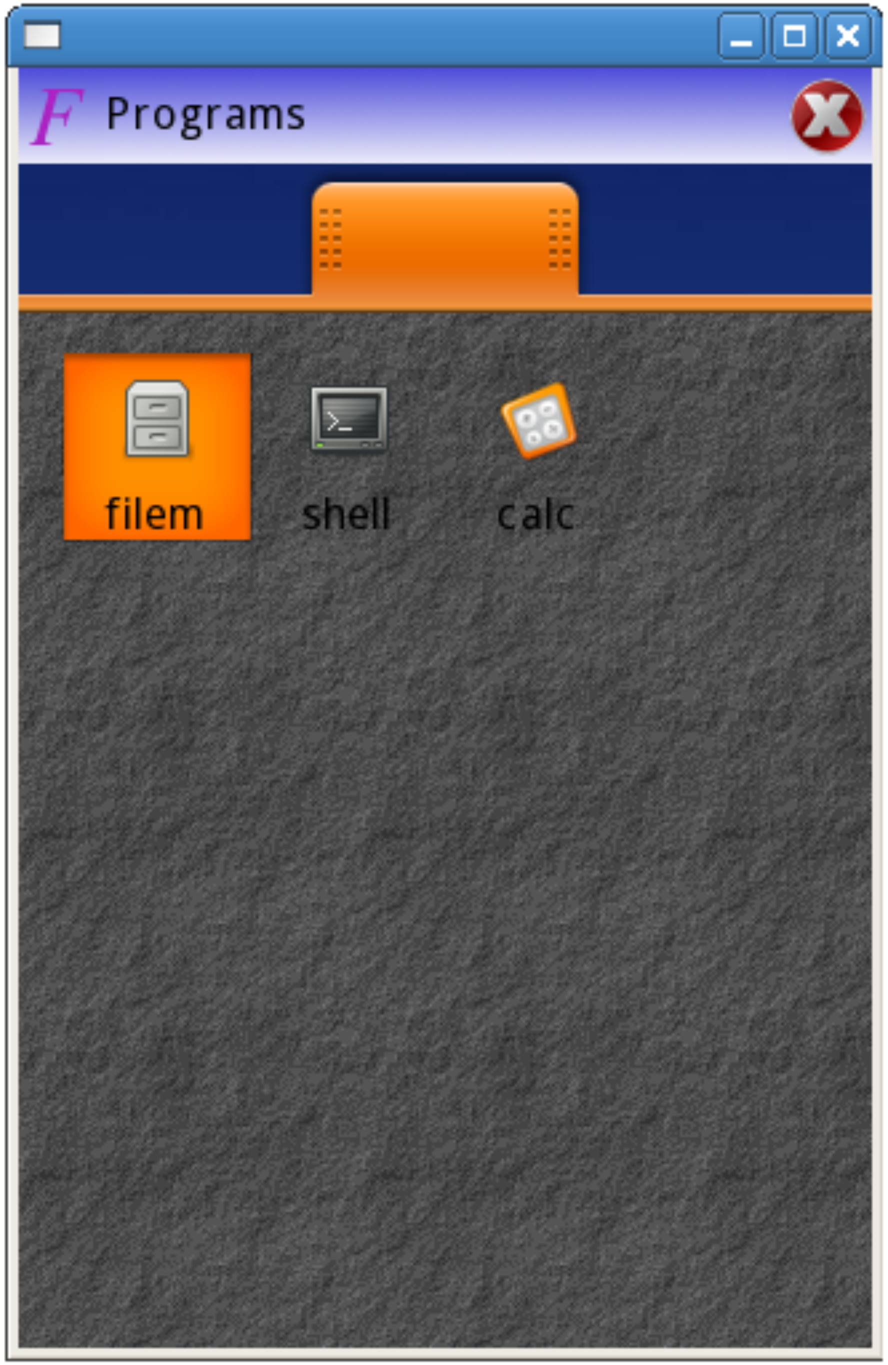
press F2 to open menu



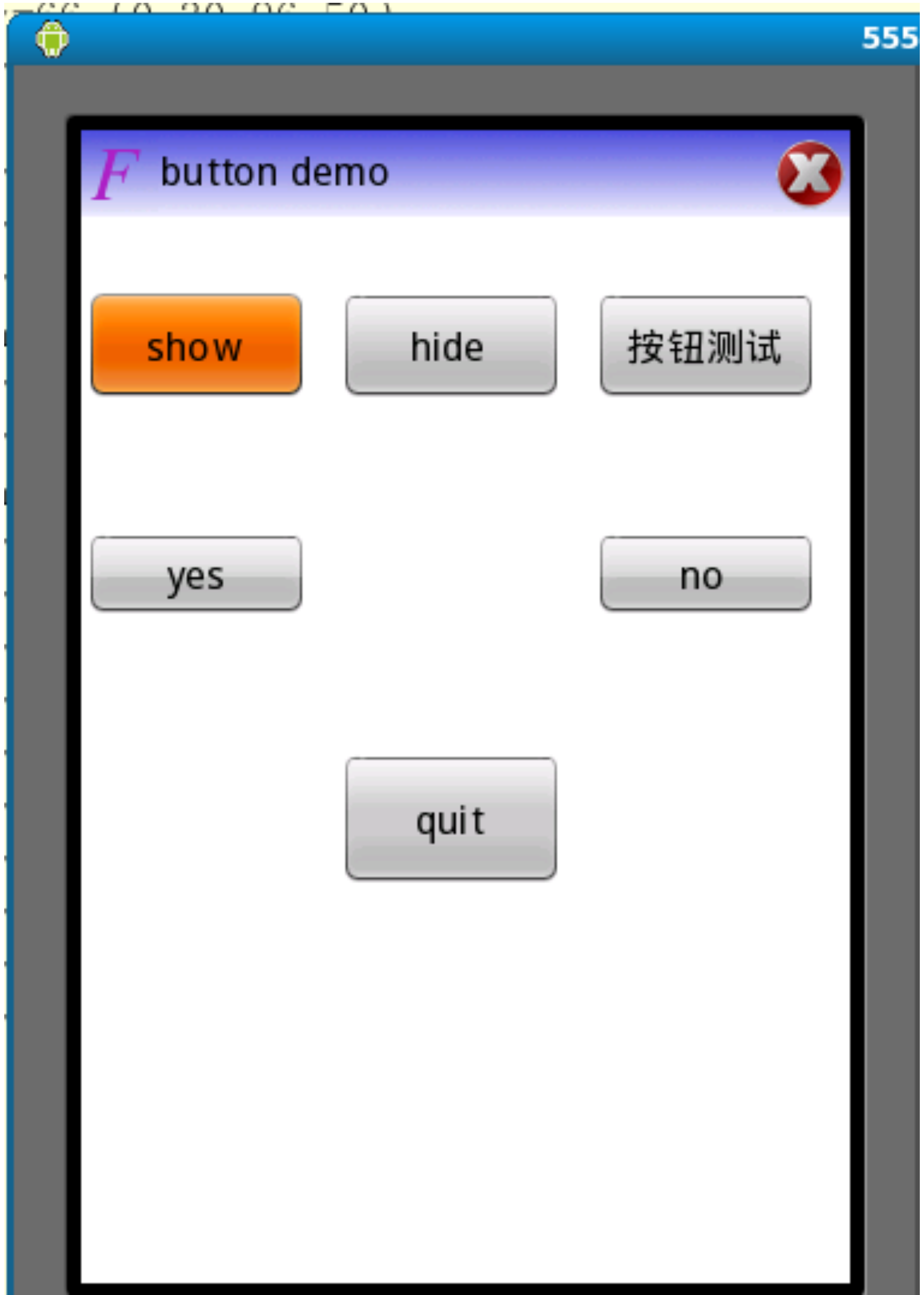
Are you sure to quit?

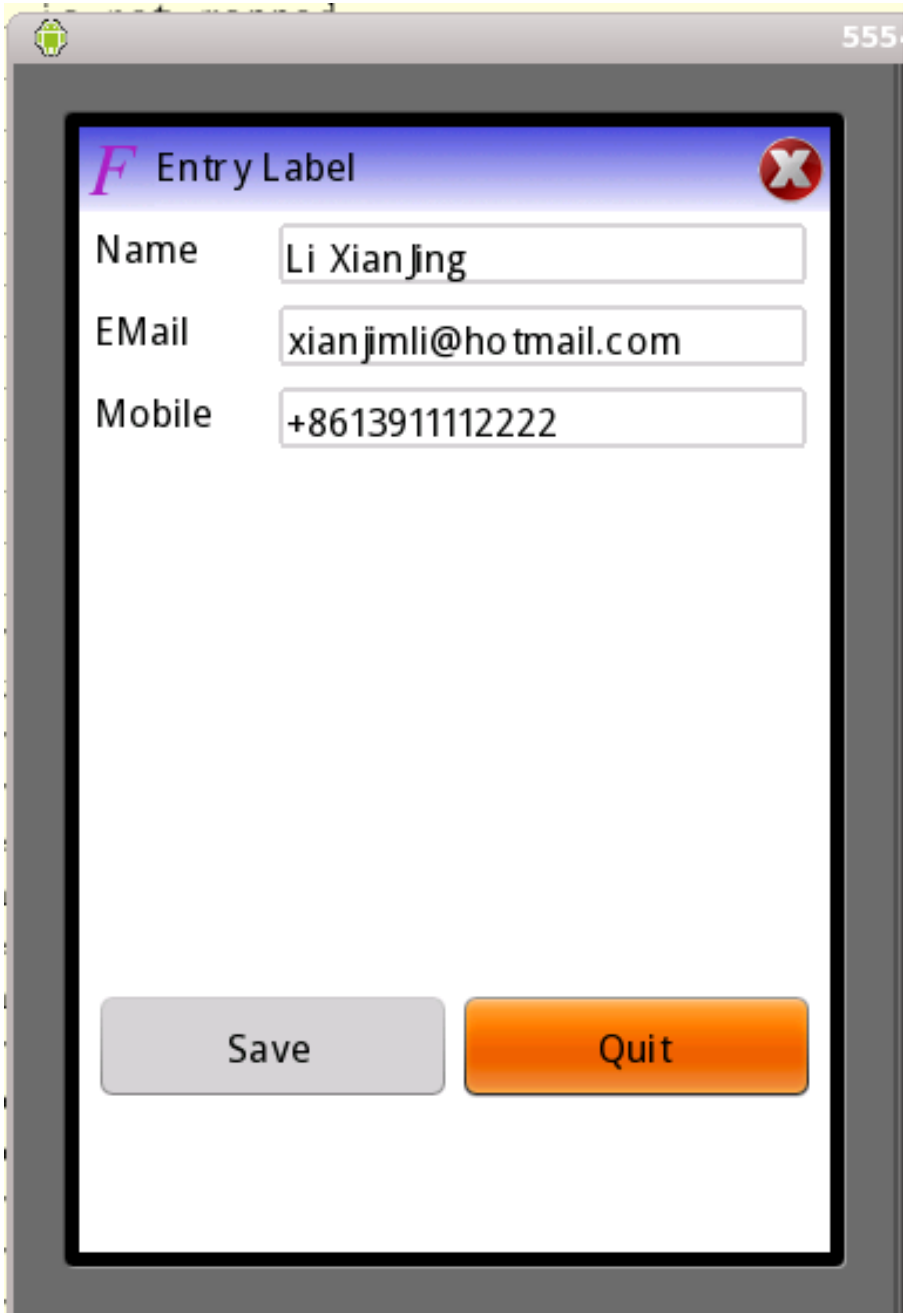

icon demo
more
quit
0
1
2
3
4
1004
2004
3004
4004
5004
6004
7004


Fullscreen
Unfullscreen
quit

Programs
filem
shell
calc

Running on android emulator



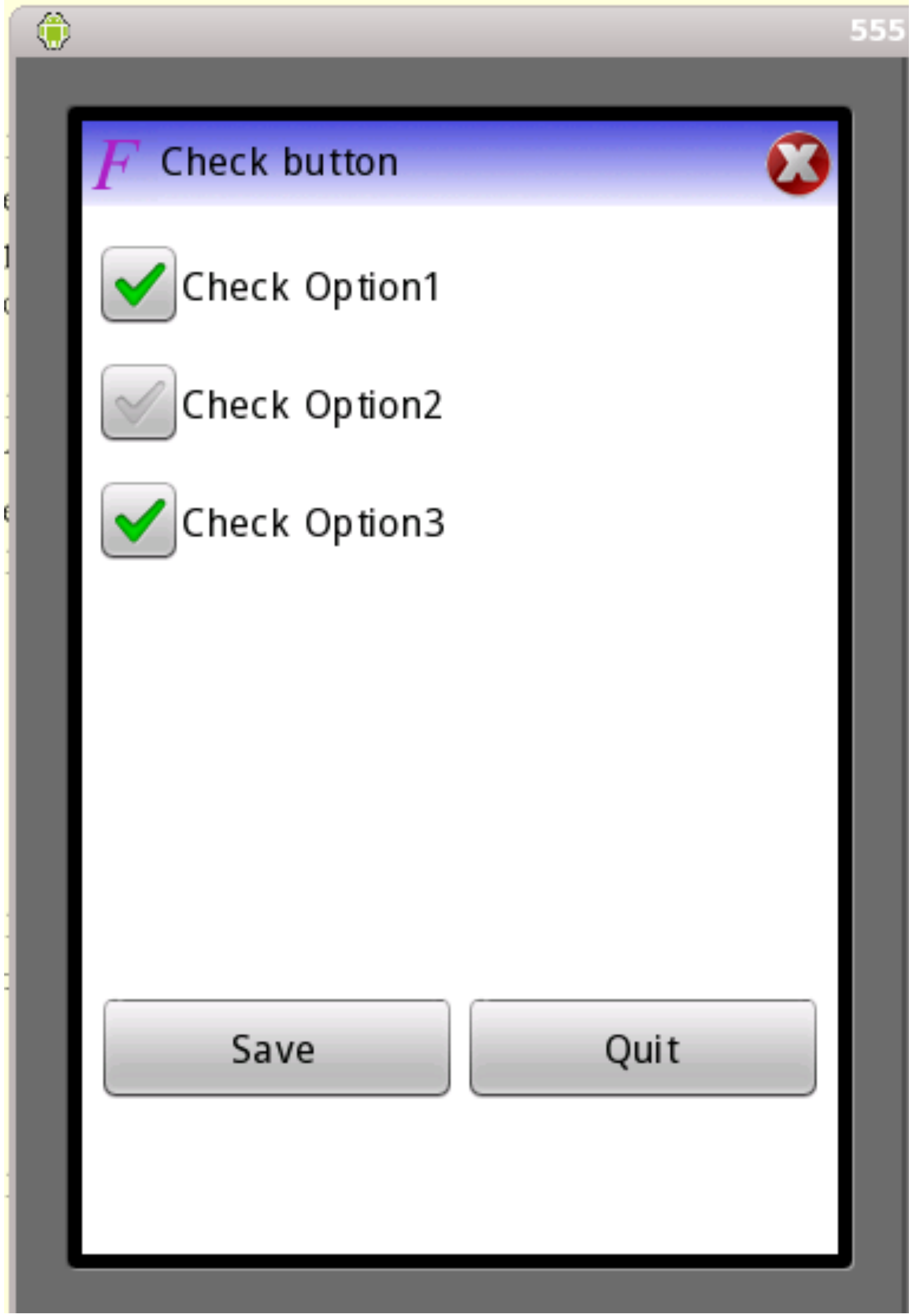


Entry Label

Name Li XianJing

EMail xianjimli@hotmail.com

Mobile +8613911112222



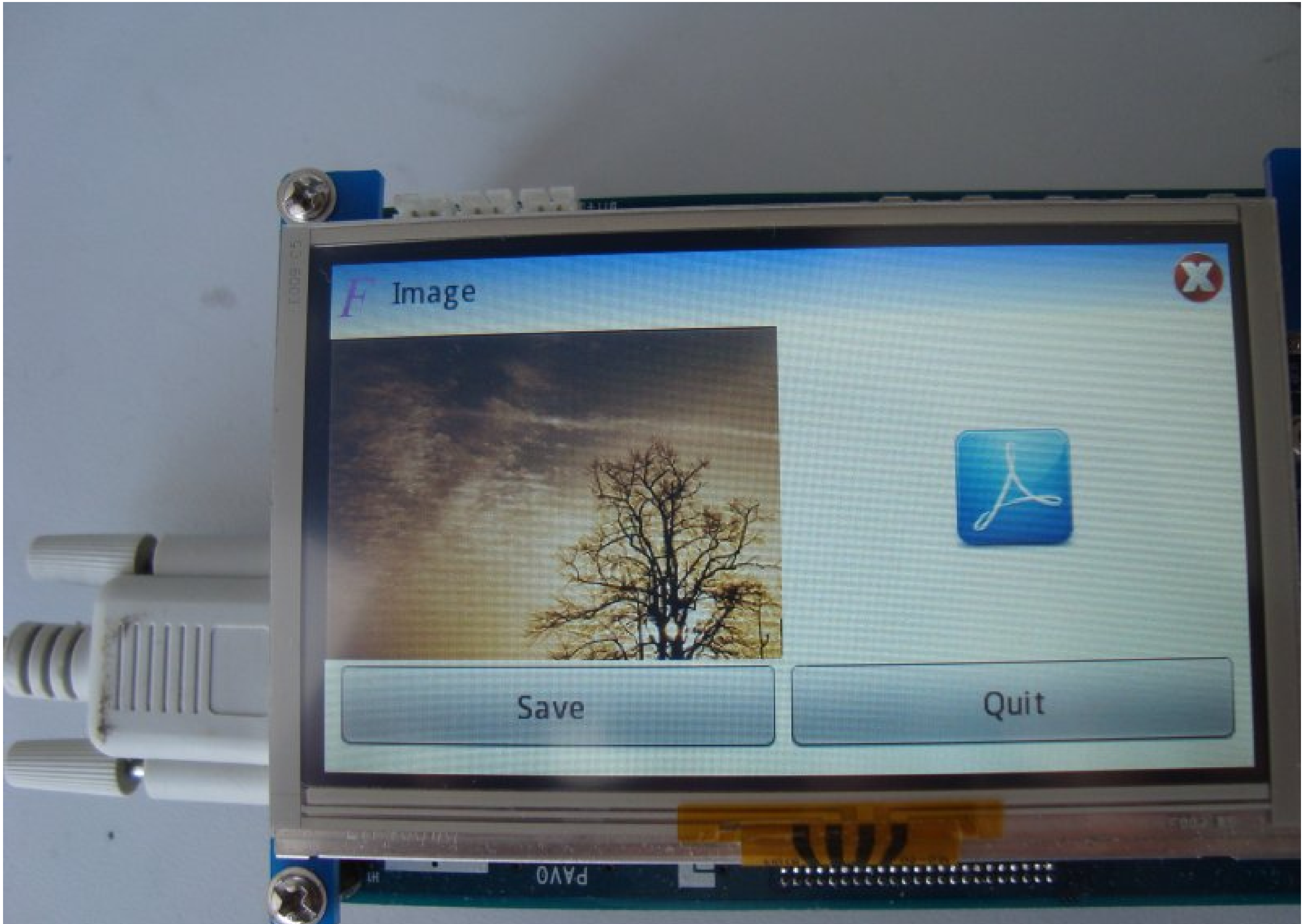
Check button

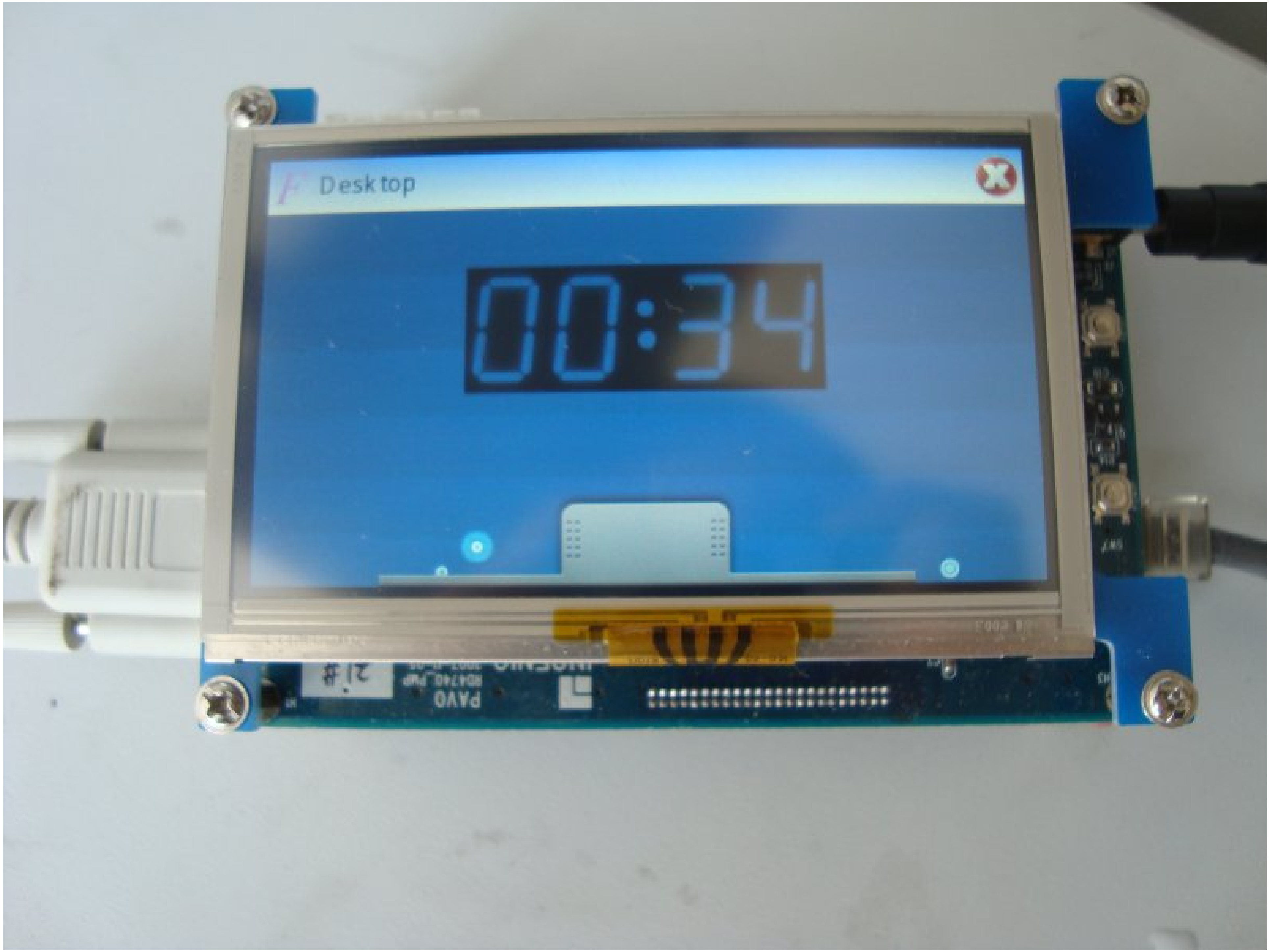
☑ Check Option1

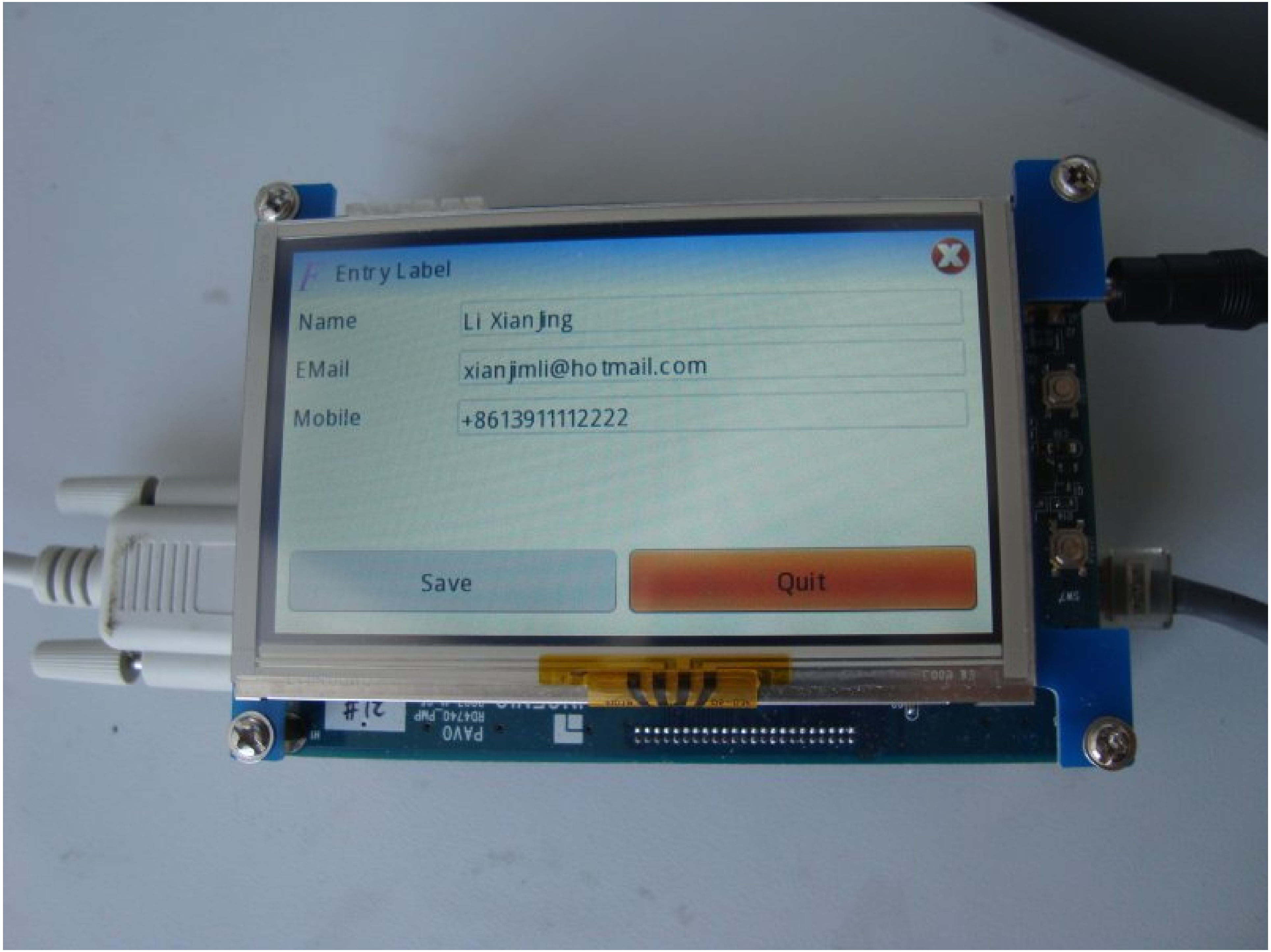
☐ Check Option2

☑ Check Option3

Running on JZ4740




Desktop
00:34
PAVO



Entry Label

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Mobile +8613911112222

Roadmap

1. port cairo to FTK
2. port phoneme(J2ME) to FTK
3. port webkit to FTK
4. Desktop Environment