

HelloWorld!

based on pinetime 0.11, upgrade will come soon

Create

src/displayapp/screens/HelloWorld.h:

```
#pragma once

#include <lvgl/src/lv_core/lv_obj.h>
#include <cstdint>
#include "Screen.h"

namespace Pinetime {
    namespace Applications {
        namespace Screens {
            class HelloWorld : public Screen {
            public:
                HelloWorld(DisplayApp* app);
                ~HelloWorld() override;
                bool Refresh() override;
                bool OnButtonPushed() override;
                bool OnTouchEvent(TouchEvents event) override;

            private:
                bool running = true;
                lv_obj_t * hello_world_label;
            };
        }
    }
}
```

Create

src/displayapp/screens/HelloWorld.cpp:

```
#include "HelloWorld.h"
#include <lvgl/lvgl.h>

using namespace Pinetime::Applications::Screens;

HelloWorld::HelloWorld(Pinetime::Applications::DisplayApp *app) : Screen(app) {

    hello_world_label = lv_label_create(lv_scr_act(), nullptr);
    lv_label_set_text(hello_world_label, "Hello World! ");
    lv_obj_set_auto_realign(hello_world_label, true);
    lv_obj_align(hello_world_label, nullptr, LV_ALIGN_CENTER, 0, 0);
}

HelloWorld::~HelloWorld() {
    lv_obj_clean(lv_scr_act());
}

bool HelloWorld::Refresh() {
    return running;
}

bool HelloWorld::OnButtonPushed() {
    running = false;
    return true;
}

bool HelloWorld::OnTouchEvent(Pinetime::Applications::TouchEvents event) {
    switch(event) {
        case TouchEvents::SwipeLeft:
        case TouchEvents::SwipeRight:
        default:
            return false;
    }
}
```

Edit src/displayapp/Apps.h :

Add HelloWorld to the Enum:

```
#pragma once

namespace Pinetime {
    namespace Applications {
        enum class Apps {None, Launcher, Clock, SysInfo, Meter, Gauge, Brightness, Music,
FirmwareValidation, Paint, Paddle, Notifications, Twos, HeartRate, Navigation, HelloWorld};
    }
}
```

Edit src/displayapp/DisplayApp.cpp :

- Add

```
#include "displayapp/screens/HelloWorld.h"
```

- Add Case Apps::HelloWorld to DisplayApp::RunningState()

```
void DisplayApp::RunningState() {
//  clockScreen.SetCurrentDateTime(dateTimeController.CurrentDateTime());

    if(!currentScreen->Refresh()) {
        currentScreen.reset(nullptr);
        lvgl.SetFullRefresh(Components::LittleVgl::FullRefreshDirections::Up);
        onClockApp = false;
        switch(nextApp) {
            case Apps::None:
            case Apps::Launcher: currentScreen.reset(new Screens::ApplicationList(this));
break;
            case Apps::Clock:
                currentScreen.reset(new Screens::Clock(this, dateTimeController, batteryController,
bleController, notificationManager, heartRateController));
                onClockApp = true;

```

```

        break;
//    case Apps::Test: currentScreen.reset(new Screens::Message(this)); break;
    case Apps::SysInfo: currentScreen.reset(new Screens::SystemInfo(this,
dateTimeController, batteryController, brightnessController, bleController, watchdog));
break;
    case Apps::Meter: currentScreen.reset(new Screens::Meter(this)); break;
    case Apps::Twos: currentScreen.reset(new Screens::Twos(this)); break;
    case Apps::Gauge: currentScreen.reset(new Screens::Gauge(this)); break;
    case Apps::Paint: currentScreen.reset(new Screens::InfiniPaint(this, lvgl));
break;
    case Apps::Paddle: currentScreen.reset(new Screens::Paddle(this, lvgl)); break;
    case Apps::Brightness : currentScreen.reset(new Screens::Brightness(this,
brightnessController)); break;
    case Apps::Music : currentScreen.reset(new Screens::Music(this,
systemTask.nimble().music())); break;
    case Apps::Navigation : currentScreen.reset(new Screens::Navigation(this,
systemTask.nimble().navigation())); break;
    case Apps::FirmwareValidation: currentScreen.reset(new
Screens::FirmwareValidation(this, validator)); break;
    case Apps::Notifications: currentScreen.reset(new Screens::Notifications(this,
notificationManager, Screens::Notifications::Modes::Normal)); break;
    case Apps::HeartRate: currentScreen.reset(new Screens::HeartRate(this,
heartRateController)); break;
    case Apps::HelloWorld: currentScreen.reset(new Screens::HelloWorld(this)); break;
}
nextApp = Apps::None;
}
lv_task_handler();
}

```

Edit:

src/displayapp/screens/ApplicationList.h:

- Increment ScreenList size
- Uncomment std::unique_ptr... CreateScreen3();

```
#pragma once
```

```

#include <memory>

#include "Screen.h"
#include "ScreenList.h"

namespace Pinetime {
    namespace Applications {
        namespace Screens {
            class ApplicationList : public Screen {
            public:
                explicit ApplicationList(DisplayApp* app);
                ~ApplicationList() override;
                bool Refresh() override;
                bool OnButtonPushed() override;
                bool OnTouchEvent(TouchEvents event) override;
            private:
                bool running = true;

                ScreenList<3> screens;
                std::unique_ptr<Screen> CreateScreen1();
                std::unique_ptr<Screen> CreateScreen2();
                std::unique_ptr<Screen> CreateScreen3();

            };
        }
    }
}

```

Edit:

src/displayapp/screens/ApplicationList.cpp:

Uncomment the createScreen3

```

ApplicationList::ApplicationList(Pinetime::Applications::DisplayApp *app) :
    Screen(app),
    screens{app, {
        [this]() -> std::unique_ptr<Screen> { return CreateScreen1();
},
        [this]() -> std::unique_ptr<Screen> { return CreateScreen2();

```

```
},  
    [this]() -> std::unique_ptr<Screen> { return CreateScreen3(); }  
}  
} {}
```

Edit CreateScreen3, edit Apps::HelloWorld

```
std::unique_ptr<Screen> ApplicationList::CreateScreen3() {  
    std::array<Screens::Tile::Applications, 6> applications {  
        {"H", Apps::HelloWorld},  
        {"B", Apps::Gauge},  
        {"C", Apps::Clock},  
        {"D", Apps::Music},  
        {"E", Apps::SysInfo},  
        {"F", Apps::Brightness}  
    }  
};
```

Edit CMakeLists.txt:

- Add .cpp to list(APPEND SOURCE_FILES
- Add .h to set(INCLUDE_FILES

```
list( APPEND SOURCE_FILES  
...  
    displayapp/screens/HelloWorld.cpp  
...  
set( INCLUDE_FILES  
...  
    displayapp/screens/HelloWorld.h  
...)
```

Compile

```
docker run --rm -it -v $(pwd):/sources pfeerick/infinite-build
```

DFU is then stored in `build/output`

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Created Thu, Feb 4, 2021 8:38 PM by [Romain](#)

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