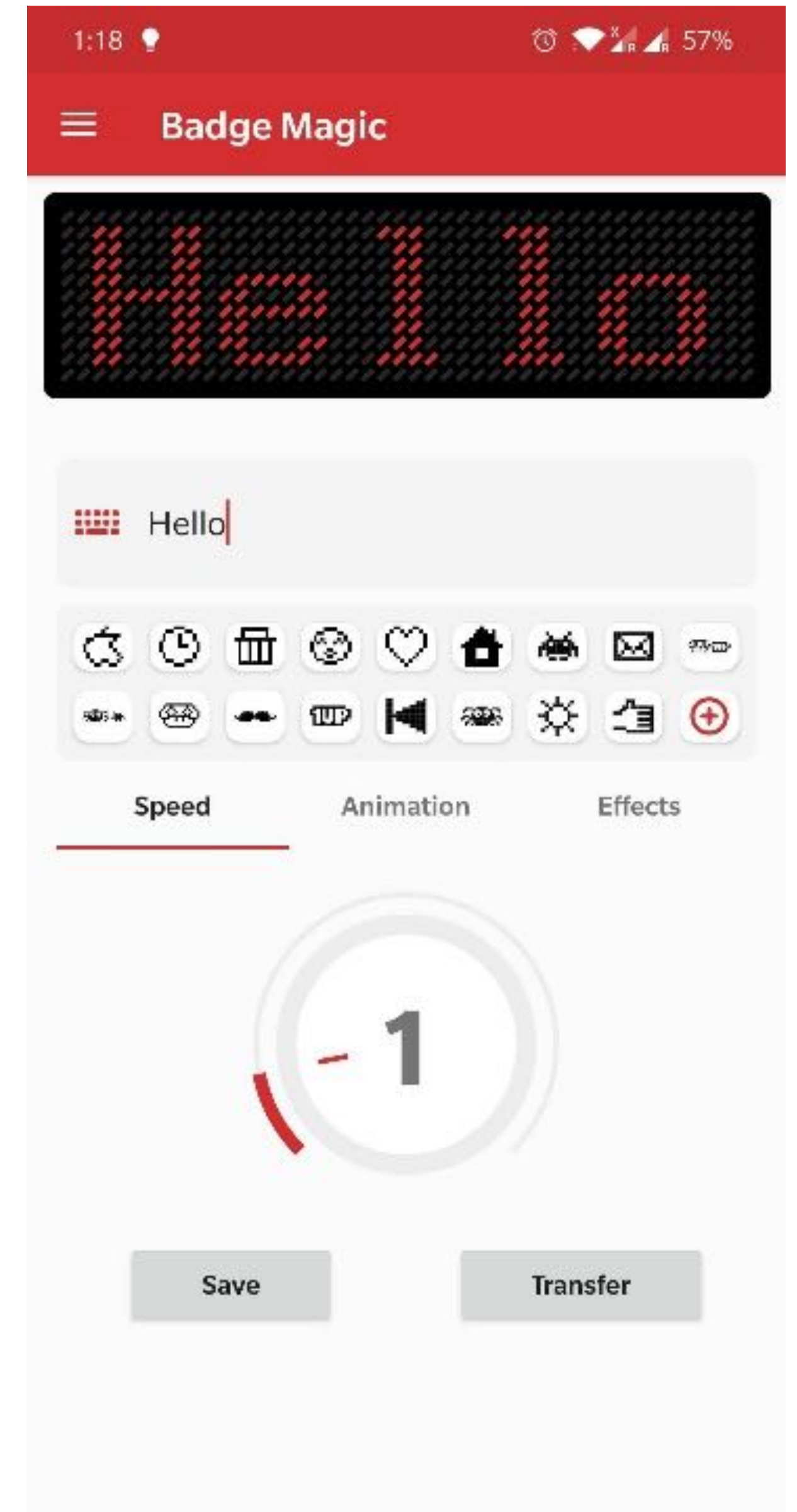


Idea

BadgeMagic for LinuxMobile

- App for Linux Mobile
- Program LED Name Badges via Bluetooth
- Template: BadgeMagic (Android)



Bluetooth

BadgeMagic for LinuxMobile

```
#[tokio::main]
async fn main() -> Result<(), Box<dyn Error>> {
    let manager = Manager::new().await?;

    // get adapter
    let adapters = manager.adapters().await?;
    let central = adapters.into_iter().nth(0).unwrap();

    // start scanning for devices
    central.start_scan(ScanFilter::default()).await?;
    time::sleep(duration: Duration::from_secs(2)).await;

    let badge = find_badge(&central).await.expect("No badge found");

    // connect to the device
    badge.connect().await?;
    time::sleep(duration: Duration::from_secs(3)).await;
```

```
async fn find_badge(central: &Adapter) -> Option<btplug::platform::Peripheral> {
    for p in central.peripherals().await.unwrap() {
        if p.properties()
            .await
            .unwrap()
            .unwrap()
            .local_name
            .iter()
            .any(|name| name.contains("LSLED"))
        {
            return Some(p);
        }
    }
    None
}
```

Bluetooth

BadgeMagic for LinuxMobile

```
77616E670000000000000000000000000  
0005000000000000000000000000000000000  
00000000000000E10C07002031000000000  
000000000000000000000000000000000000  
00386CC6C6FEC6C6C6C600000000000000
```

0x00:	00000000	00000000
0x38:	00111000	00 111 000
0x6C:	01101100	0 1101 100
0xC6:	11000110	11000 110
0xC6:	11000110	11000 110
0xFE:	11111110	11111 110
0xC6:	11000110	11000 110
0xC6:	11000110	11000 110
0xC6:	11000110	11000 110
0xC6:	11000110	11000 110
0xC6:	11000110	11000 110
0x00:	00000000	00000000

Bluetooth

BadgeMagic for LinuxMobile

- Characteristic { uuid: 00002a00-0000-1000-8000-00805f9b34fb, service_uuid: 00001800-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a01-0000-1000-8000-00805f9b34fb, service_uuid: 00001800-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a04-0000-1000-8000-00805f9b34fb, service_uuid: 00001800-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a05-0000-1000-8000-00805f9b34fb, service_uuid: 00001801-0000-1000-8000-00805f9b34fb, properties: INDICATE }
- Characteristic { uuid: 00002a23-0000-1000-8000-00805f9b34fb, service_uuid: 0000180a-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a24-0000-1000-8000-00805f9b34fb, service_uuid: 0000180a-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a25-0000-1000-8000-00805f9b34fb, service_uuid: 0000180a-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a26-0000-1000-8000-00805f9b34fb, service_uuid: 0000180a-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a27-0000-1000-8000-00805f9b34fb, service_uuid: 0000180a-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a28-0000-1000-8000-00805f9b34fb, service_uuid: 0000180a-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a29-0000-1000-8000-00805f9b34fb, service_uuid: 0000180a-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a2a-0000-1000-8000-00805f9b34fb, service_uuid: 0000180a-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002a50-0000-1000-8000-00805f9b34fb, service_uuid: 0000180a-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 00002aa6-0000-1000-8000-00805f9b34fb, service_uuid: 00001800-0000-1000-8000-00805f9b34fb, properties: READ }
- Characteristic { uuid: 0000fee1-0000-1000-8000-00805f9b34fb, service_uuid: 0000fee0-0000-1000-8000-00805f9b34fb, properties: READ | WRITE | NOTIFY }

Storage

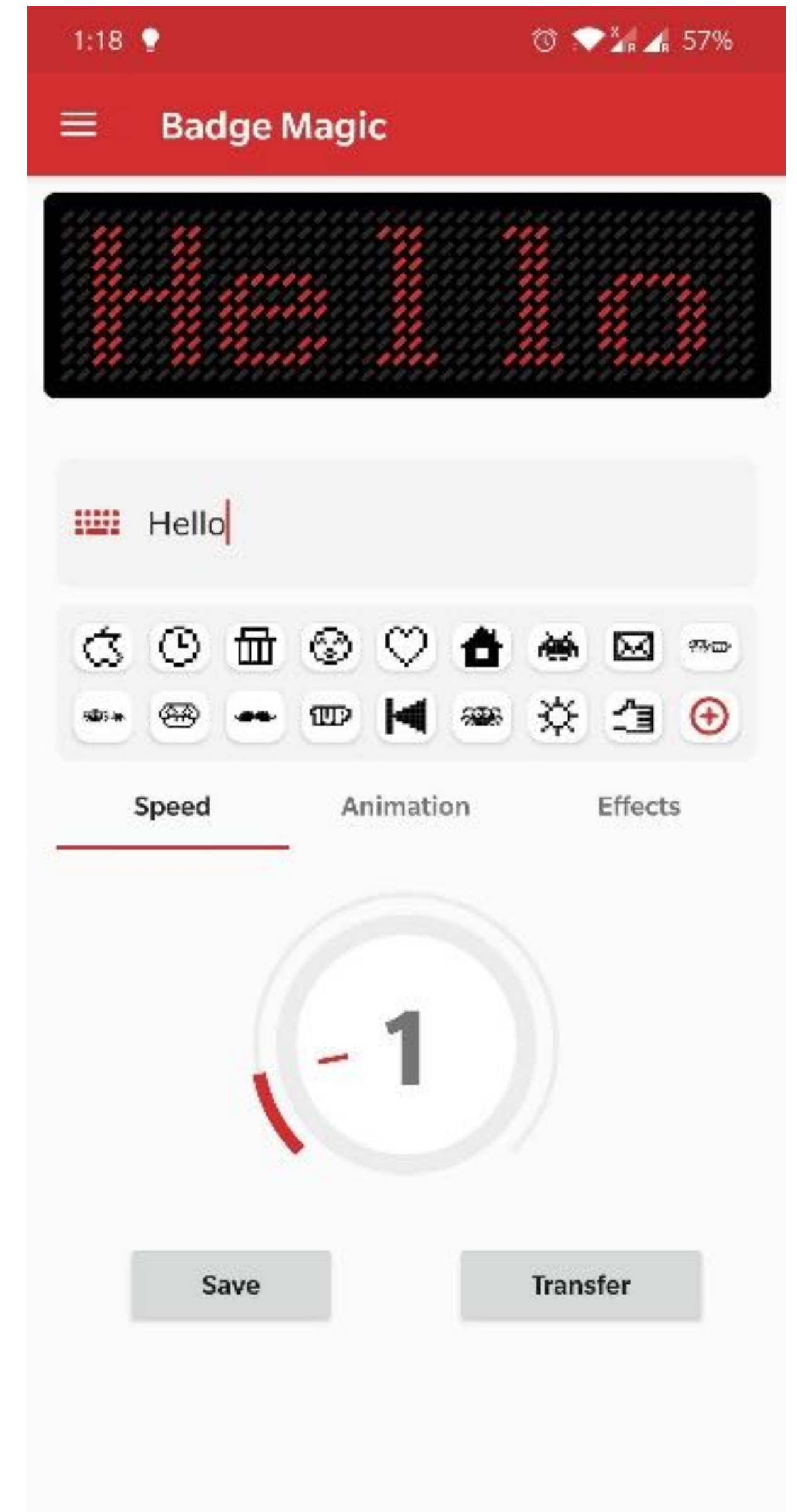
BadgeMagic for LinuxMobile

- Save already designed banners in subdirectory
- JSON file format
- Possible extension to PNG for custom clipart

Feature Roadmap

BadgeMagic for LinuxMobile

- Tier 0 (Must Have): Send Text via Bluetooth, Adjust Speed etc., save banners
- Tier 1: Add predefined images to banner
- Tier 2: Extend functionality to USB, make the App cross-platform: macOS, Windows
- Tier 3: Add custom clipart, convert images
- Tier 4: Share your banners, UI Improvements Animations



User Interface

BadgeMagic for LinuxMobile

```
pub fn build_effects_page() -> impl IsA<Widget> {  
    let effects_page : CenterBox = CenterBox::builder()  
        .margin_top(280) : CenterBoxBuilder  
        .margin_end(30) : CenterBoxBuilder  
        .margin_bottom(280) : CenterBoxBuilder  
        .margin_start(30) : CenterBoxBuilder  
        .css_classes(["button"]) : CenterBoxBuilder  
        .build();  
  
    let flash_button : ToggleButton = ToggleButton::builder().label("Flash").build();  
    let marquee_button : ToggleButton = ToggleButton::builder().label("Marquee").build();  
    let invert_button : ToggleButton = ToggleButton::builder().label("Invert").build();  
    effects_page.set_start_widget(Some(&flash_button));  
    effects_page.set_center_widget(Some(&marquee_button));  
    effects_page.set_end_widget(Some(&invert_button));  
    effects_page  
}
```

```
1 .button {  
2     font-size: x-large;  
3 }  
4  
5 .stack {  
6     font-size: x-large;  
7 }
```


User Interface

BadgeMagic for LinuxMobile

```
pub fn build_ui(app: &Application) {  
    let (entry_box : impl IsA<Widget>+Sized, entry : Entry) = entry_box::build_entry_box();  
    let (stack_switcher : StackSwitcher, stack : Stack, scale : Scale) = view_stack::build_view_stack();  
    let (bottom_box : impl IsA<Widget>+Sized, transfer_button : Button) = bottom_box::build_bottom_box(&entry);  
    let content : Box = Box::new(orientation: Orientation::Vertical, spacing: 0);  
    content.append(child: &HeaderBar::new());  
    content.append(child: &entry_box);  
    content.append(child: &stack_switcher);  
    content.append(child: &stack);  
    content.append(child: &bottom_box);  
    transfer_button.connect_clicked(move |_| { Command::new(program: "python").arg("/Users/jogehring/Docu");  
    let window : ApplicationWindow = window::create_window(&app, &content);  
    window.show();  
}
```

User Interface

BadgeMagic for LinuxMobile

```
1  mod ui;
2
3  use libadwaita::prelude::*;
4  use libadwaita::{Application};
5
6
7  ► fn main() {
8      let application : Application = Application::builder()
9          .application_id("com.badge_magic_linux") : ApplicationBuilder
10         .build();
11     application.connect_startup(|_| ui::load_css());
12     application.connect_activate(f: ui::build_ui);
13
14     application.run();
15 }
```

Live Demo