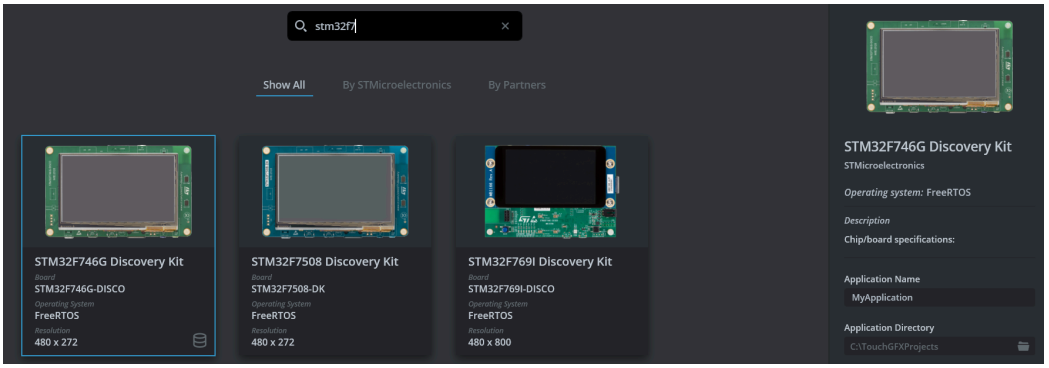
TouchGFX | Shapes, Animations, Scroll Menu

This project showcases how to create personalized letters using widget shapes, add movement through interactions, and implement a simple scroll menu.

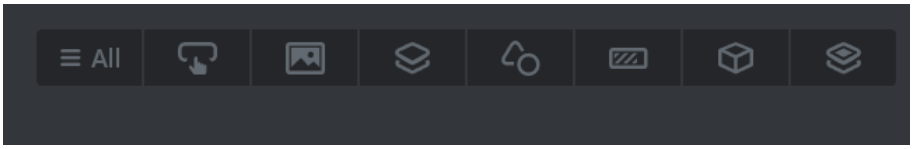
Project Setup

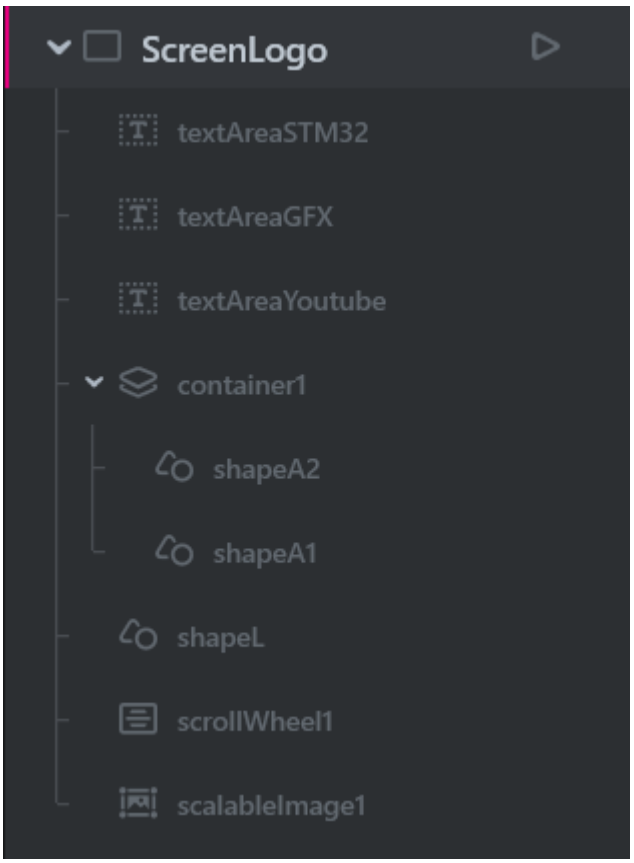
1. Create a New Application

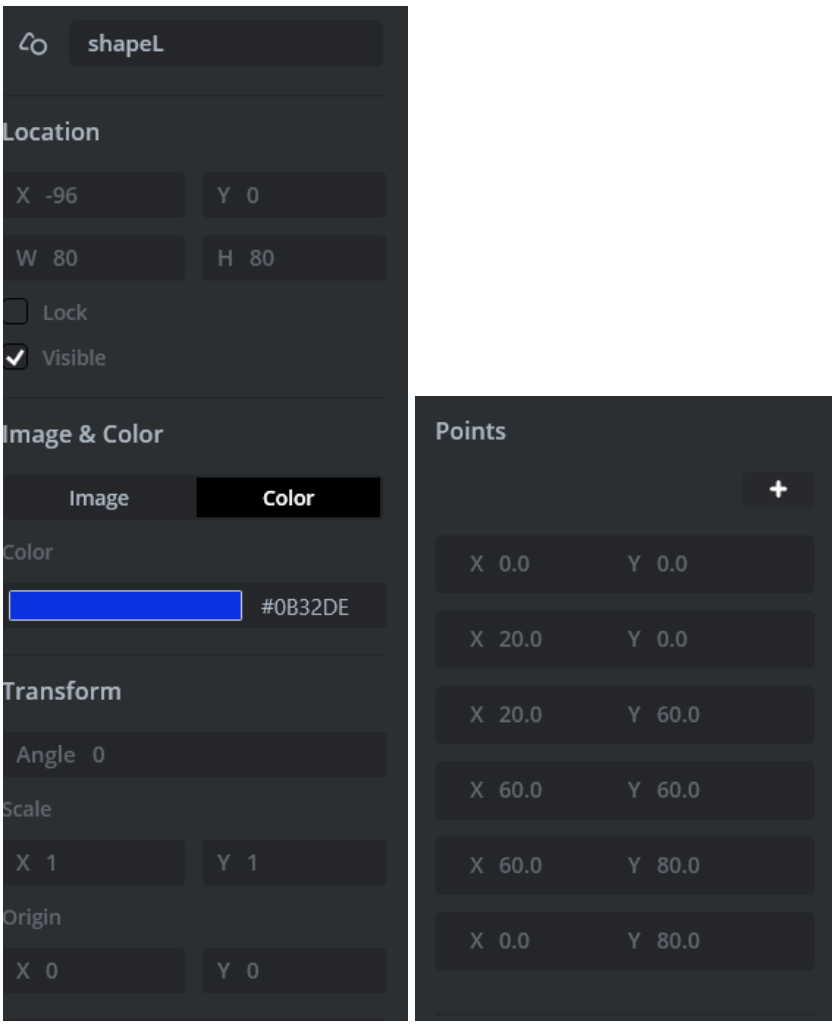
- Launch **TouchGFX Designer**.
- Select your **target board**.
- Click **Create** to start a new project.

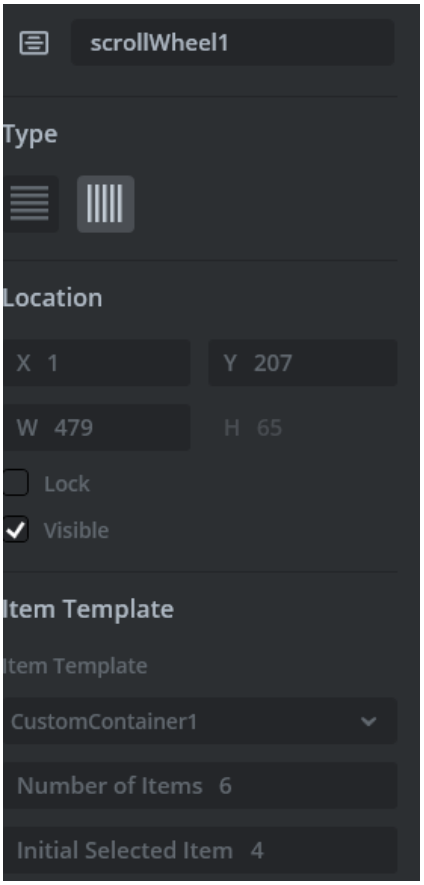


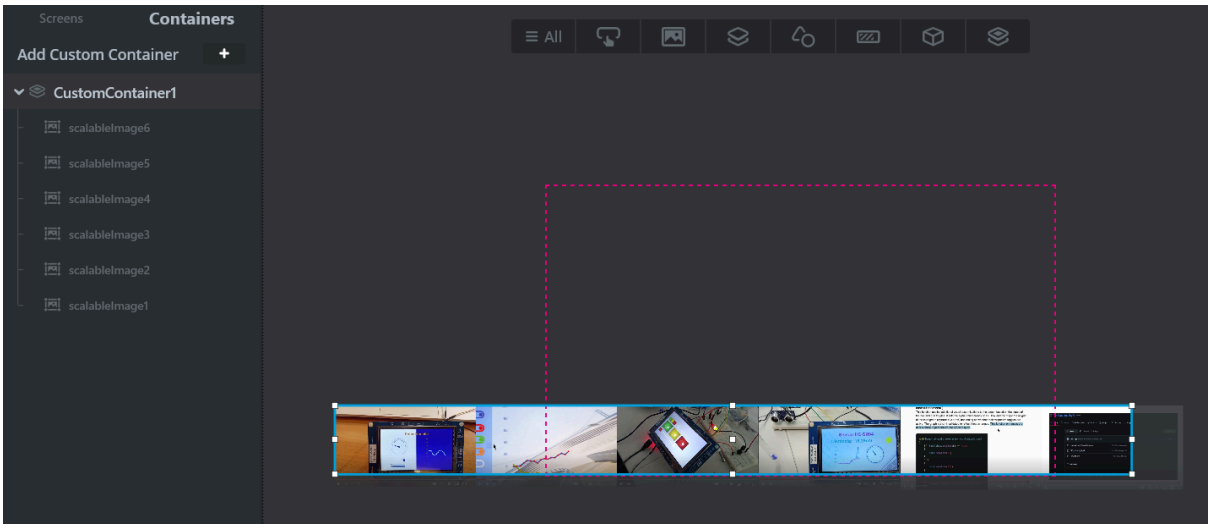
2. Add UI Elements



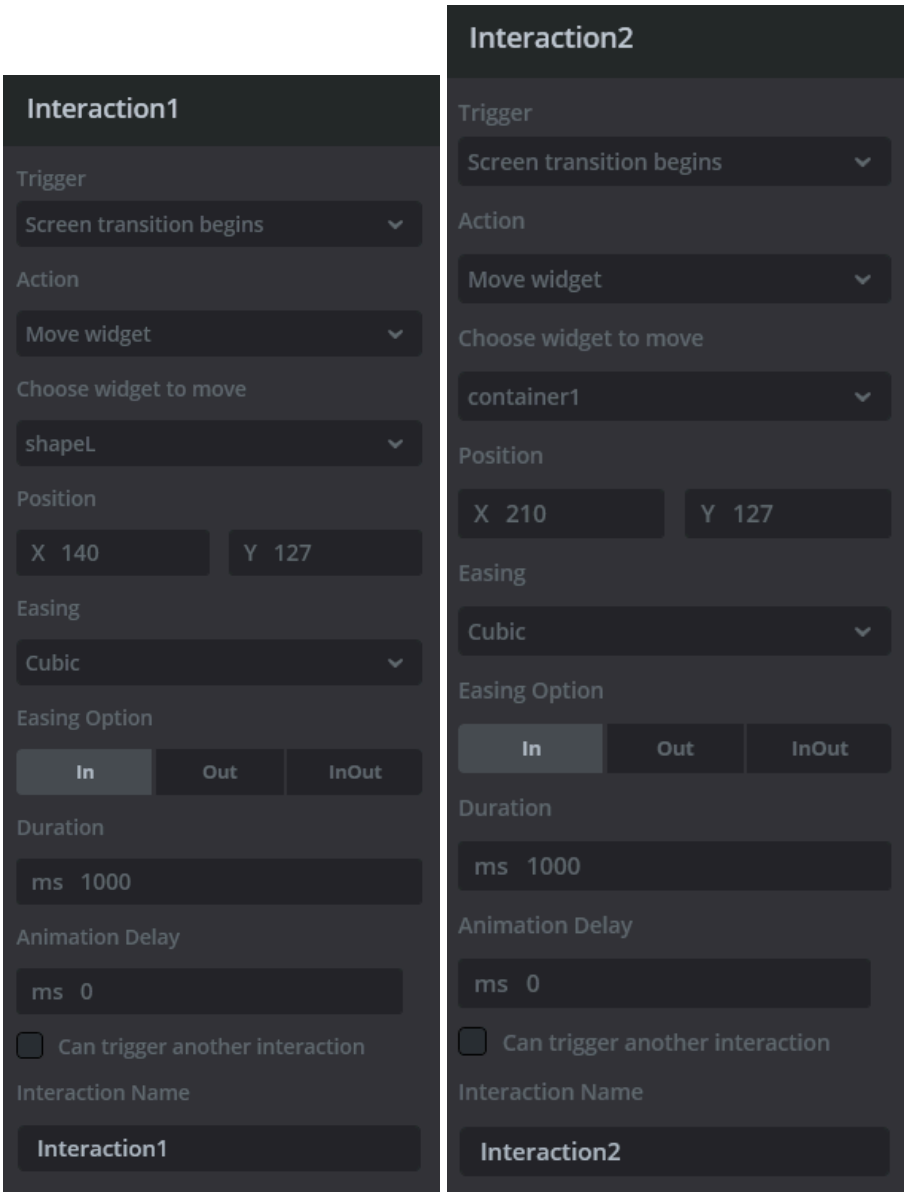

ScreenLogo
textAreaSTM32
textAreaGFX
textAreaYoutube
container1
shapeA2
shapeA1
shapeL
scrollWheel1
scalableImage1


shapeL
Location
X -96
Y 0
W 80
H 80
Lock
Visible
Image & Color
Image
Color
Color
#0B32DE
Transform
Angle 0
Scale
X 1
Y 1
Origin
X 0
Y 0
Points
X 0.0
Y 0.0
X 20.0
Y 0.0
X 20.0
Y 60.0
X 60.0
Y 60.0
X 60.0
Y 80.0
X 0.0
Y 80.0


scrollWheel1
Type
Location
X 1
Y 207
W 479
H 65
Lock
Visible
Item Template
Item Template
CustomContainer1
Number of Items 6
Initial Selected Item 4


Screens
Containers
Add Custom Container
CustomContainer1
scalableImage6
scalableImage5
scalableImage4
scalableImage3
scalableImage2
scalableImage1
All

Add Interactions: movement of letters L, A



Save and Generate Code

- Click **Save** and **Generate Code**.
- Open the project in STM32CubeIDE: C:\TouchGFXProjects\…\STM32CubeIDE\.cproject

Generated Code: Letters L, A; scroll menu

```
    shapeL.setPosition(-96, 0, 80, 80);
    shapeL.setOrigin(0.0f, 0.0f);
    shapeL.setScale(1.0f, 1.0f);
    shapeL.setAngle(0.0f);
    shapeLPainter.setColor(touchgfx::Color::getColorFromRGB(11, 50, 222));
    shapeL.setPainter(shapeLPainter);
    const touchgfx::AbstractShape::ShapePoint<float> shapeLPoints[6] = { { 0.0f, 0.0f }, { 20.0f, 0.0f }, { 20.0f, 60.0f }, { 60.0f, 60.0f }, { 60.0f, 80.0f }, { 0.0f, 80.0f } };
    shapeL.setShape(shapeLPoints);
    add(shapeL);
```

```
    container1.setPosition(200, 285, 80, 80);
    shapeA1.setPosition(0, 0, 80, 80);
    shapeA1.setOrigin(0.0f, 0.0f);
    shapeA1.setScale(1.0f, 1.0f);
    shapeA1.setAngle(0.0f);
    shapeA1Painter.setColor(touchgfx::Color::getColorFromRGB(11, 50, 222));
    shapeA1.setPainter(shapeA1Painter);
    const touchgfx::AbstractShape::ShapePoint<float> shapeA1Points[8] = { { 0.0f, 0.0f }, { 80.0f, 0.0f }, { 80.0f, 80.0f }, { 60.0f, 80.0f }, { 60.0f, 20.0f }, { 20.0f, 20.0f }, { 20.0f, 80.0f }, { 0.0f, 80.0f } };
    shapeA1.setShape(shapeA1Points);
    container1.add(shapeA1);

    shapeA2.setPosition(0, -22, 80, 85);
    shapeA2.setOrigin(0.0f, 0.0f);
    shapeA2.setScale(1.0f, 1.0f);
    shapeA2.setAngle(0.0f);
    shapeA2Painter.setColor(touchgfx::Color::getColorFromRGB(11, 50, 222));
    shapeA2.setPainter(shapeA2Painter);
    const touchgfx::AbstractShape::ShapePoint<float> shapeA2Points[4] = { { 0.0f, 60.0f }, { 80.0f, 60.0f }, { 80.0f, 80.0f }, { 0.0f, 80.0f } };
    shapeA2.setShape(shapeA2Points);
    container1.add(shapeA2);
```

```
    scrollWheel1.setPosition(1, 207, 479, 65);
    scrollWheel1.setHorizontal(true);
    scrollWheel1.setCircular(true);
    scrollWheel1.setEasingEquation(touchgfx::EasingEquations::backEaseOut);
    scrollWheel1.setSwipeAcceleration(10);
    scrollWheel1.setDragAcceleration(10);
    scrollWheel1.setNumberOfItems(6);
    scrollWheel1.setSelectedItemOffset(0);
    scrollWheel1.setOvershootPercentage(75);
    scrollWheel1.setDrawableSize(755, 0);
    scrollWheel1.setDrawables(scrollWheel1ListItems, updateItemCallback);
    scrollWheel1.animateToItem(4, 0);
    add(scrollWheel1);
```

User Code - “Letter” B

```
protected:
    touchgfx::PainterRGB565 shapeB1Painter;
    touchgfx::MoveAnimator< touchgfx::Shape<8> > shapeB1;
};
```

```
void ScreenLogoView::setupScreen()
{
    ScreenLogoViewBase::setupScreen();
    shapeB1.setPosition(490, 0, 80, 80);
    shapeB1.setOrigin(0.0f, 0.0f);
    shapeB1.setScale(1.0f, 1.0f);
    shapeB1.setAngle(0.0f);
    shapeB1Painter.setColor(touchgfx::Color::getColorFromRGB(11, 50, 222));
    shapeB1.setPainter(shapeB1Painter);
    const touchgfx::AbstractShape::ShapePoint<float> shapeB1Points[8] = { {
0.0f, 0.0f },{ 40.0f, 0.0f }, { 60.0f, 20.0f }, { 40.0f, 40.0f }, { 60.0f,
60.0f }, { 40.0f, 80.0f }, { 0.0f, 100.0f }, { 0.0f, 0.0f } };
    shapeB1.setShape(shapeB1Points);
    add(shapeB1);

    shapeB1.clearMoveAnimationEndedAction();
    shapeB1.startMoveAnimation(300, 127, 60,
touchgfx::EasingEquations::cubicEaseIn,
touchgfx::EasingEquations::cubicEaseIn);

}
```

Go to Designer and Run Simulator (or flash the code to your board).