

An Introduction to Game Development with Flame

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Who am I?

- ❑ Lukas Klingsbo, or Spydon online.
- ❑ Part of the Flame engine core team and the Blue Fire open source collective.
- ❑ Worked at Dice (Part of EA).
- ❑ Not a gamer.
- ❑ Organizer of the Flutter & Friends conference.



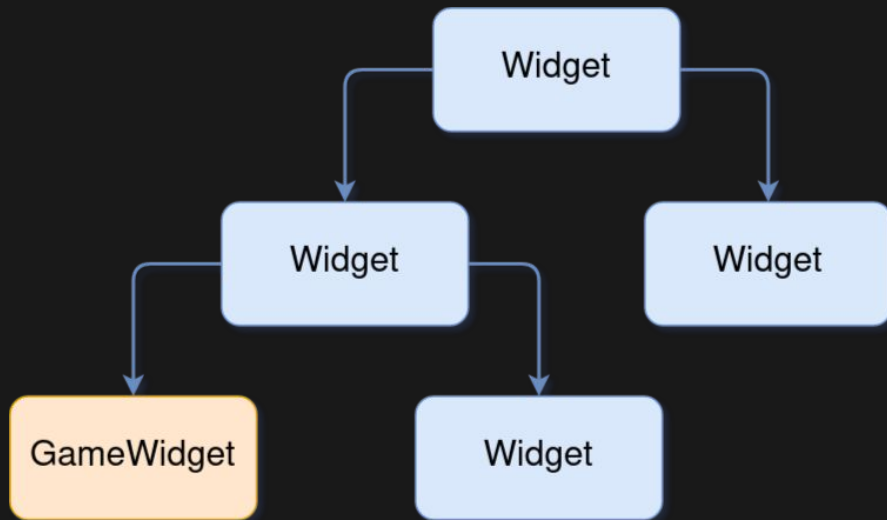
What is FLAME?

- ❑ The most popular game engine for Flutter
- ❑ Just a Flutter widget
- ❑ 7800 stars, 3000 commits, 760 forks and 160 contributors over 4 years
- ❑ v1.8.0 just released!

Flutter is perfect for game development

- ❑ Direct access to the graphical context of the platform
- ❑ High rendering performance
- ❑ Mature Ecosystem
- ❑ Multi-platform

What is FLAME?



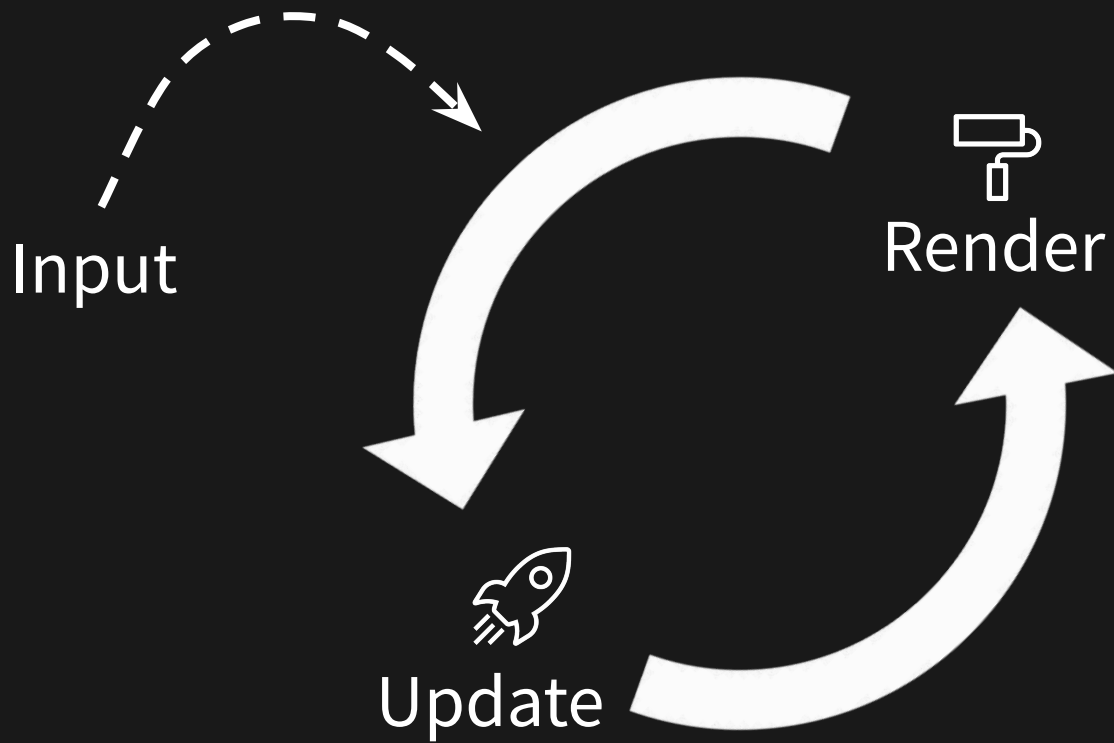
Boilerplate code

```
class MyGame extends FlameGame {  
    Future<void> onLoad() {  
        // Load assets for example  
        add(myComponent);  
    }  
}
```

Boilerplate code

```
void main() {  
    final myGame = MyGame();  
    runApp(  
        GameWidget(game: myGame),  
    );  
}
```

The game loop



Component

```
class MyComponent extends Component {  
    void update(double dt) {  
        // Component logic  
    }  
  
    void render(Canvas canvas) {  
        // Render code  
    }  
}
```

Component composition

```
class MyParent extends Component {  
    Future<void> onLoad() {  
        add(MyComponent());  
    }  
}
```

PositionComponent

```
public MyComponent extends PositionComponent {  
    Vector2 position;  
    Vector2 size;  
    Vector2 scale;  
    double angle;  
}
```

PositionComponents

- ❑ SpriteComponent
- ❑ SpriteAnimationComponent
- ❑ SpriteAnimationGroupComponent
- ❑ ParallaxComponent
- ❑ TextComponent
- ❑ ShapeComponent
- ❑ ...

SpriteComponent

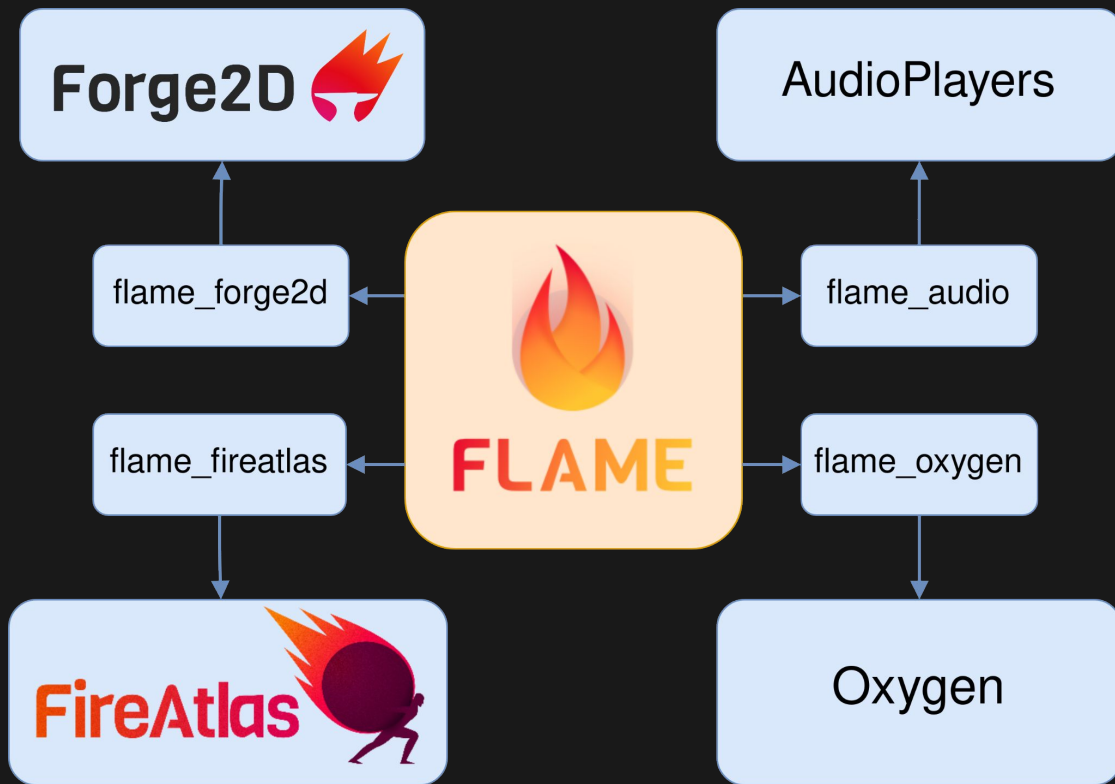


SpriteAnimationComponent



SpriteAnimationGroupComponent





Other notable features

- ❑ CameraComponent + Viewport
- ❑ Collision detection
- ❑ Effects
- ❑ Gesture/Input handling
- ❑ Sprite batching
- ❑ Particles
- ❑ Physics engine (through Forge2D)
- ❑ Built-in debug mode

How do I get started?

- ❑ Every feature has an example at:
examples.flame-engine.org
- ❑ Our docs:
docs.flame-engine.org
- ❑ Some short tutorials:
docs.flame-engine.org/latest/tutorials
- ❑ Many unofficial tutorials!

When you get stuck

- ❏ Great Community! ❤️
- ❏ StackOverflow tag Flame
- ❏ GitHub issues
- ❏ Discord with lots of activity
discord.gg/pxrBmy4

Questions?

Flutter & Friends
3-5th September
Stockholm, Sweden
<http://flutterfriends.dev>



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