

# RepaintBoundary?



optimize performance when the complex widgets that update frequently





## Difference between rebuilds and repaints

### 1- Rebuild:

- \* Happens when the widget tree is reconstructed.
- \* Triggered by setState, parent widget changes, etc.
- \* The **build()** method of widgets is called.

### 2- Repaint:

- \* Happens when the widget needs to be **redrawn** on the screen.
- \* Triggered by changes in RenderObject (e.g., color, size, animation).



## RepaintBoundary Widget

- \* It Prevents unnecessary repaints **Does NOT** prevent rebuilds widgets under a RepaintBoundary can still rebuild.
- \* Only prevents their render objects from repainting unless needed.



## How to Use ?

Set `debugRepaintRainbowEnabled = true` in **Main** Function



```
1 void main() async {  
2   WidgetsFlutterBinding.ensureInitialized();  
3   /* to enable debug repaint rainbow (Overlay a rotating set of colors when repainting layers in debug mode.)  
4   debugRepaintRainbowEnabled = true;  
5 }
```

The green box animates smoothly and only itself repaints, while the red box stays static and does not repaint unnecessarily

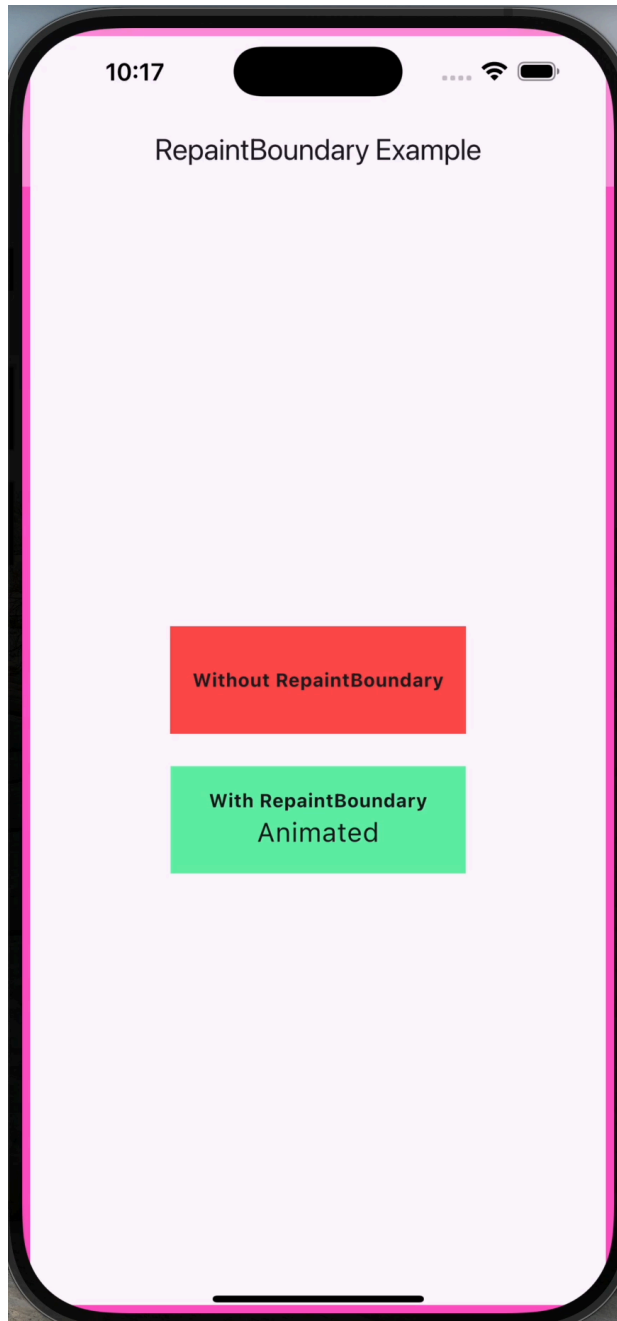


```
1 Column(  
2   mainAxisAlignment: MainAxisAlignment.center,  
3   children: [  
4     /* Without RepaintBoundary  
5     Container(  
6       width: 220,  
7       height: 80,  
8       color: Colors.redAccent,  
9       alignment: Alignment.center,  
10      child: const Text('Without RepaintBoundary', style: TextStyle(fontWeight: FontWeight.bold)),  
11    ),  
12  
13    const SizedBox(height: 24),  
14    /* With RepaintBoundary and animation == the red box will not repaint  
15    const RepaintBoundary(  
16      child: AnimatedGreenBox(),  
17    ),  
18  ],  
19 ),
```

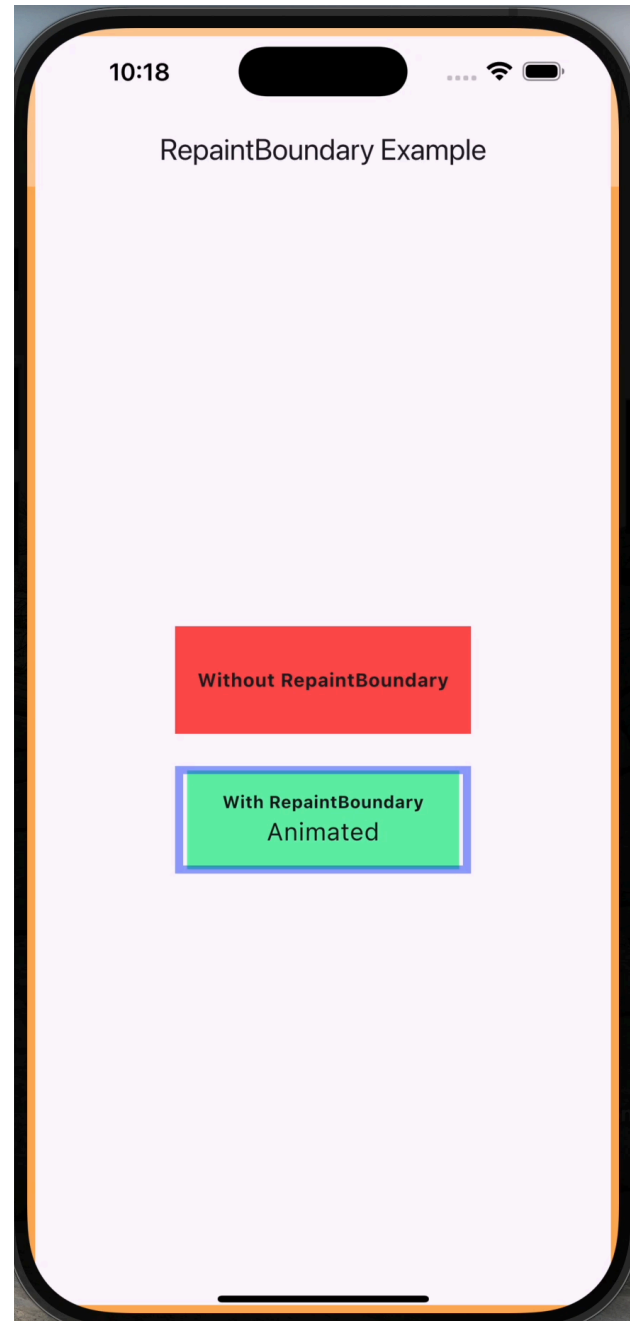


## How to Use ?

with the RepaintBoundary on  
the AnimatedGreenBox ...  
only Green Box will Repain



with the RepaintBoundary  
on the AnimatedGreenBox ...  
only Green Box will Repain





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**THANK YOU**



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