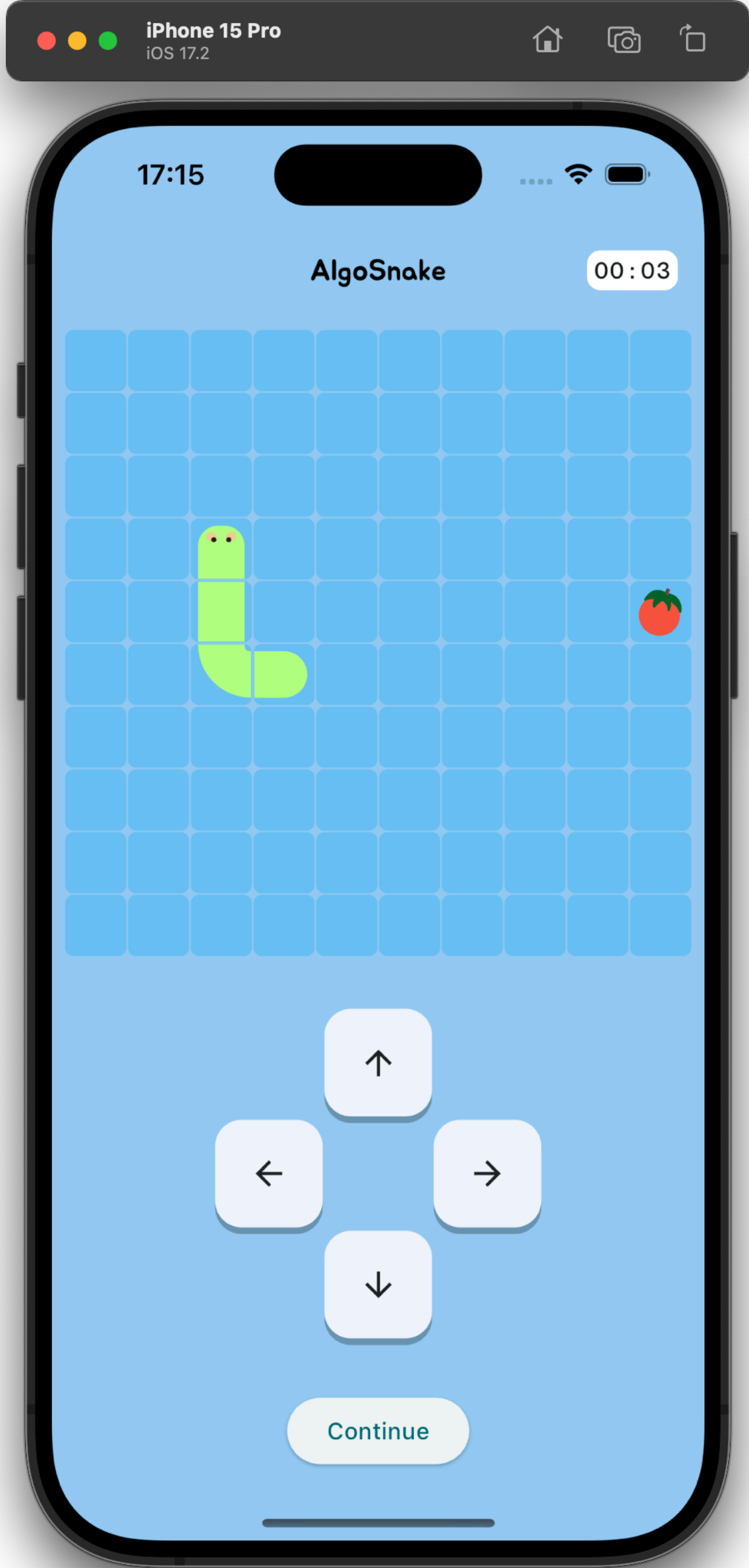
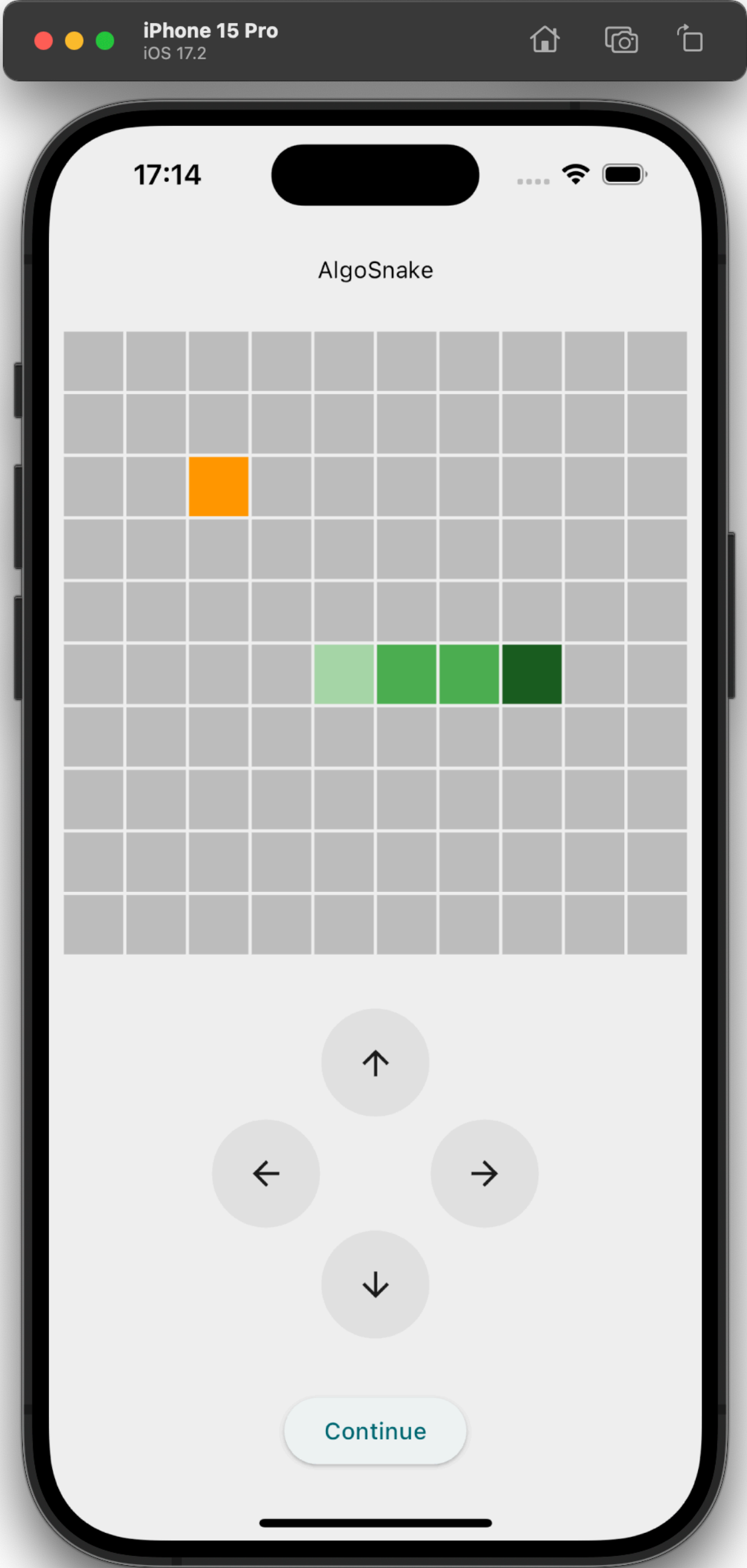


Flutter Workshop

Snake game

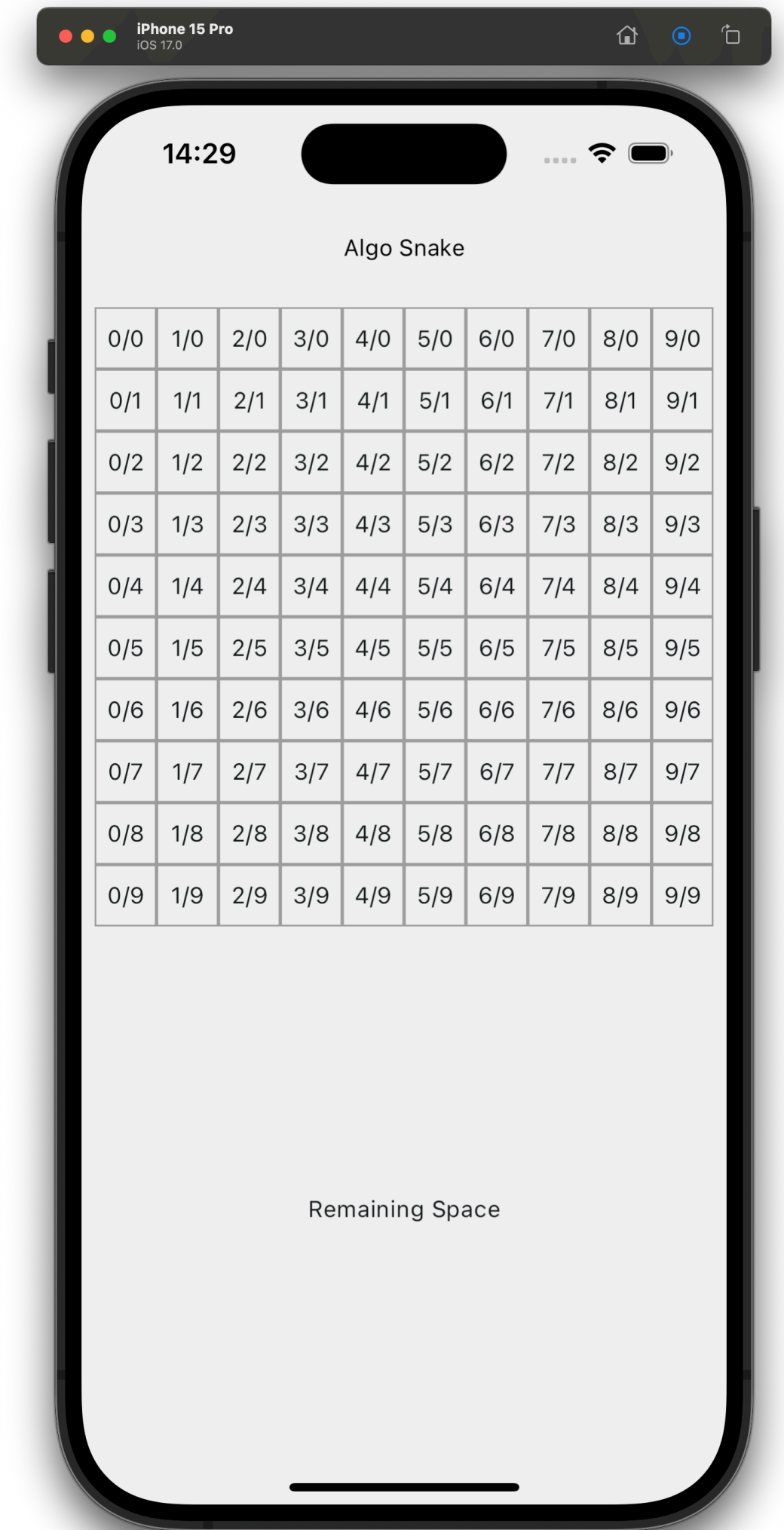
Sébastien Gruhier - 2024



Step 1

Minimal layout and models

- Create a new project
`flutter create APPNAME --empty`
- Create three models
 - TileModel (with x,y coordinate)
 - BoardModel (list of Tiles and nbRows, nbColumns)
 - GameModel (board, fruit, snake)
- Add a riverpod StateNotifierProvider with a GameModel



Step 1

Minimal layout and models

- Create a new project
flutter create APPNAME
- Create a Board widget

```
return GridView.builder(  
  padding: EdgeInsets.zero,  
  shrinkWrap: true,  
  physics: const NeverScrollableScrollPhysics(),  
  gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(  
    crossAxisCount: ...,  
  ),  
  itemCount: ...,  
  itemBuilder: (BuildContext context, int index) {  
    return ...;  
  },  
);
```

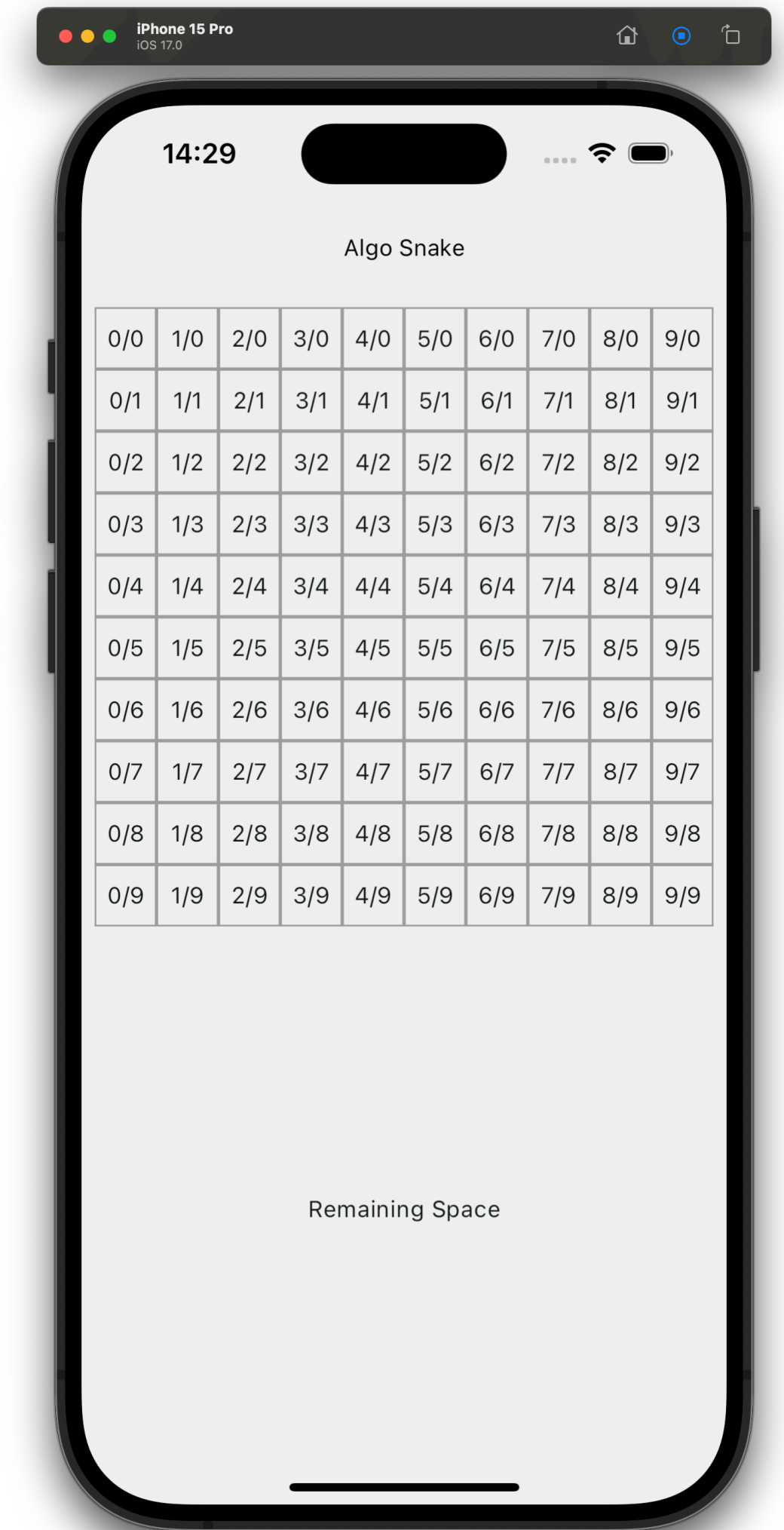
Column

AppBar

Grid

create a Board widget

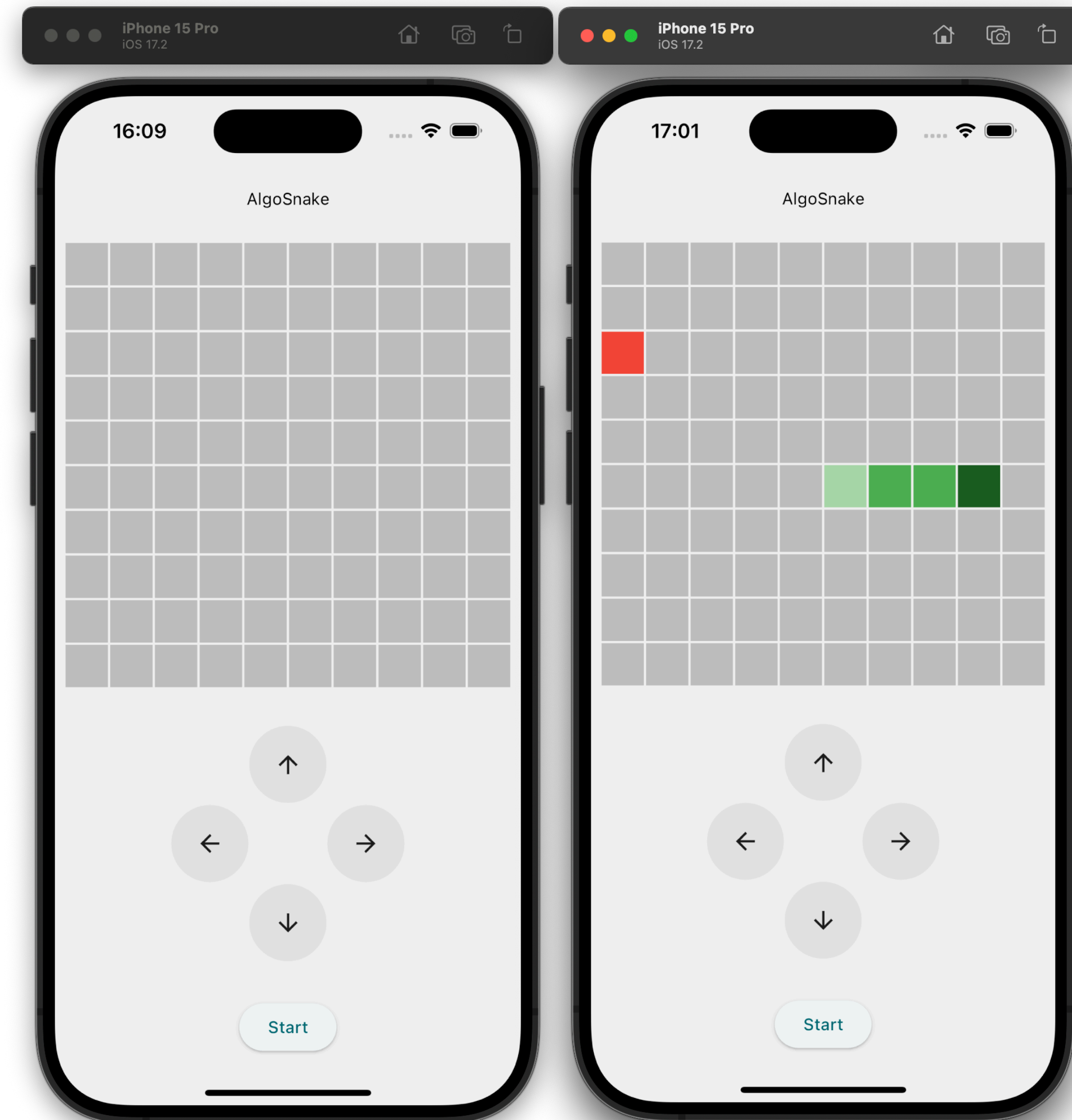
Container



Step 2

More UI + riverpod

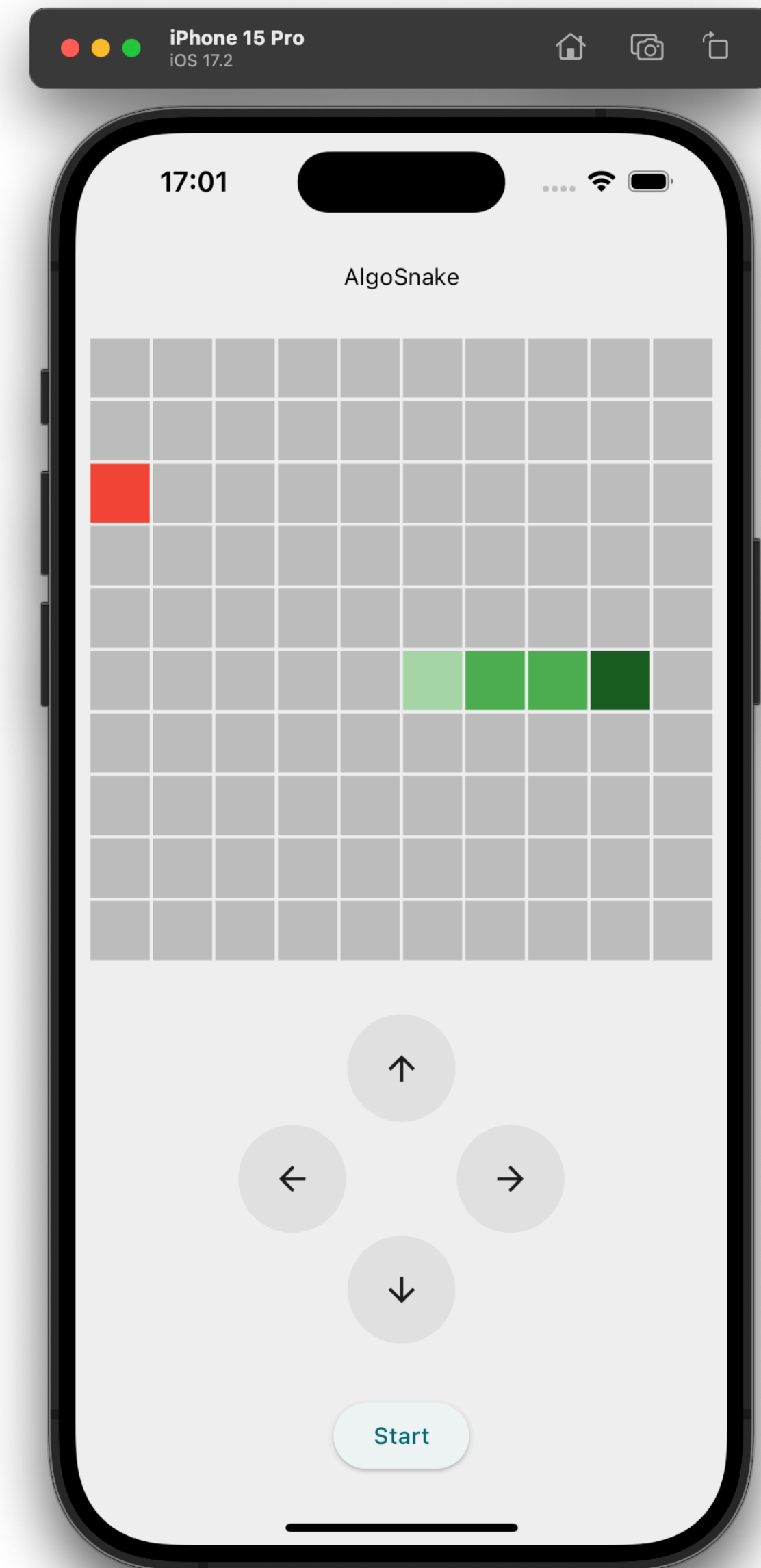
- Create JoystickKey and a Joystick
- Update Game model to setup a snake of 4 tiles, placed in center
- Update Game model to generate a valid random position for the fruit
- Display them on the Board when you click on start



Step 3

Connect joystick

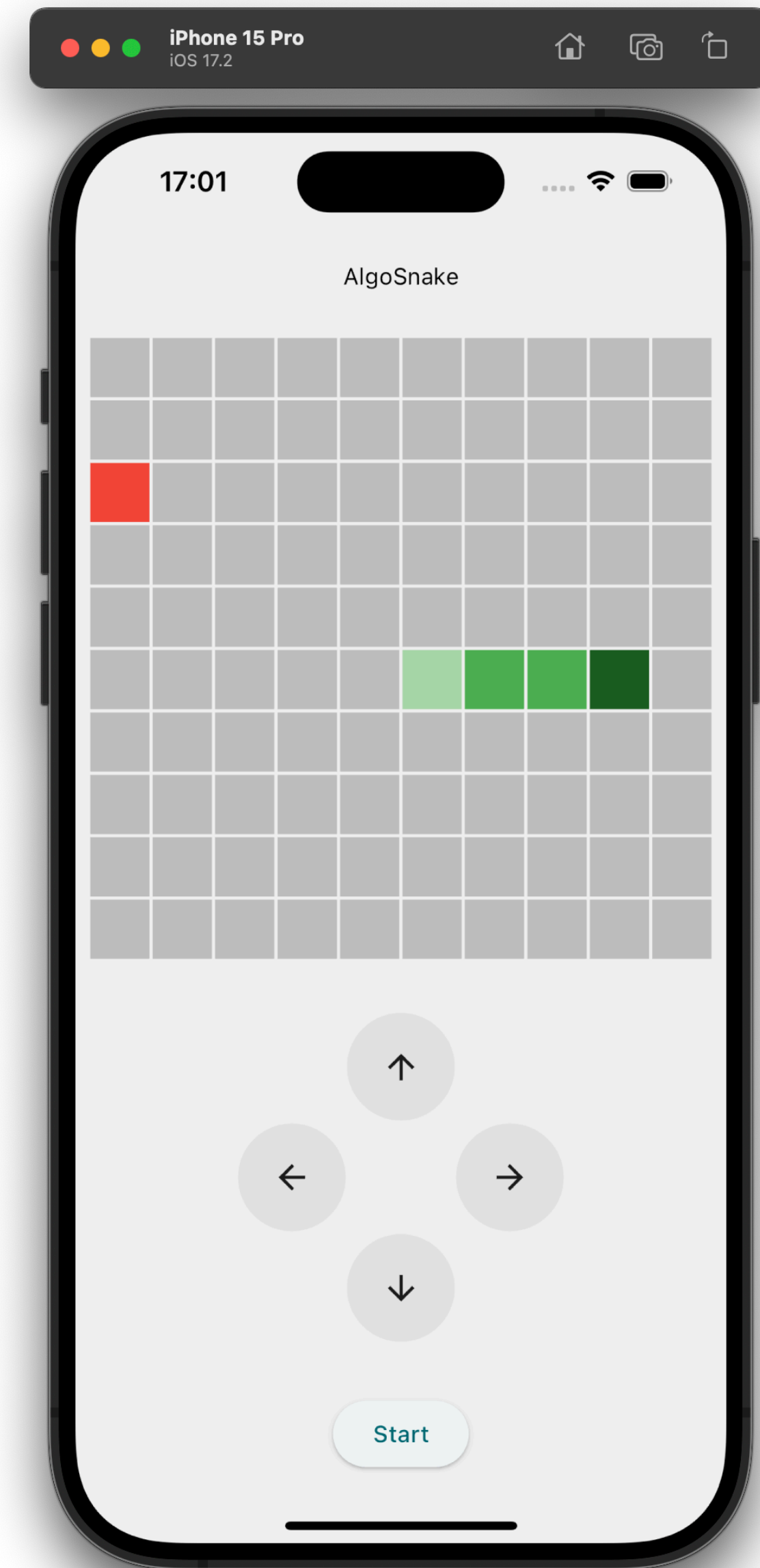
- Move the snake when you click on a key
- Think what has to be done, it's in fact pretty simple



Step 4

Game play

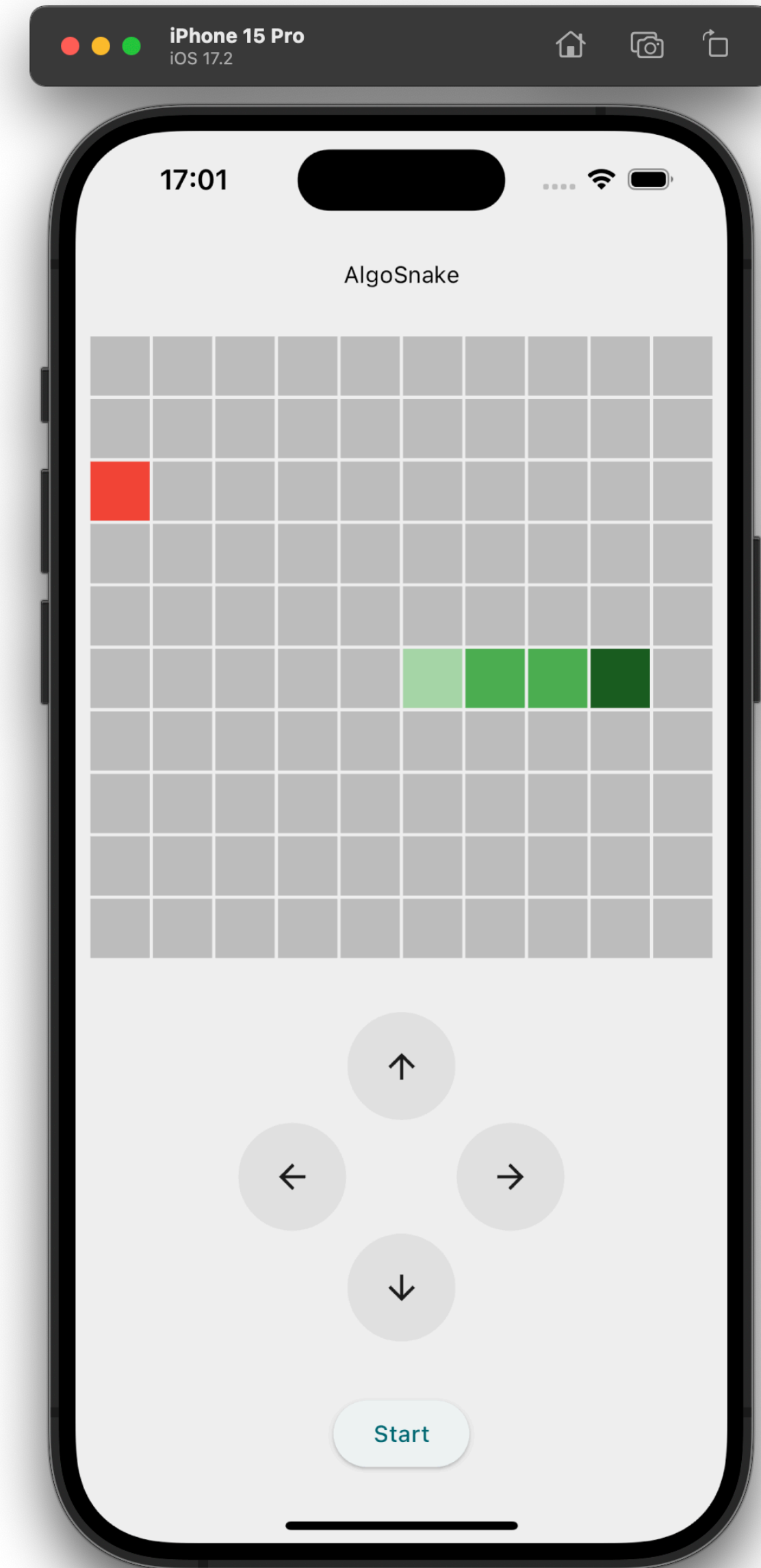
- Detect if after a move, it's game over.



Step 5

Game play

- Add a Timer to make the game a real playable game



- Dart Data Class Generator
<https://marketplace.visualstudio.com/items?itemName=dotup.dart-data-class-generator>
- VSCode: Open User Settings (JSON) and add:

```
"editor.codeActionsOnSave": {  
  "source.organizeImports": "explicit",  
  "source.fixAll": "explicit"  
},
```