

Développement Mobile - Démineur

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30 avril 2018

1 Introduction

2 Android

3 iOS

4 Conclusion

Définition

UML : Unified modeling language

Conception UML

Diagramme de classe

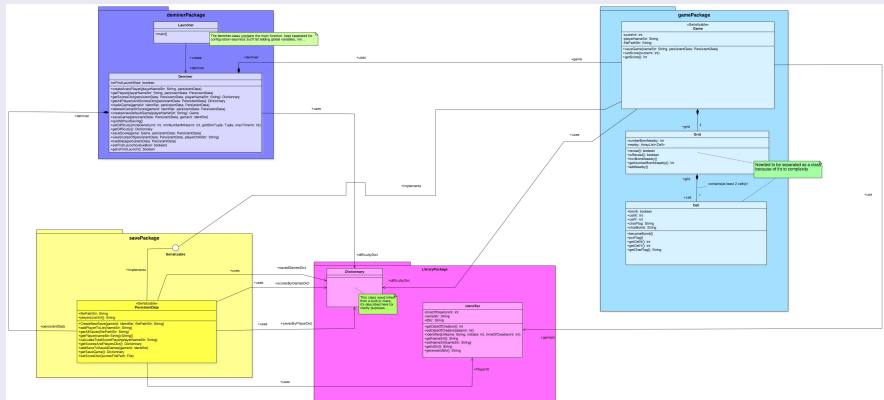
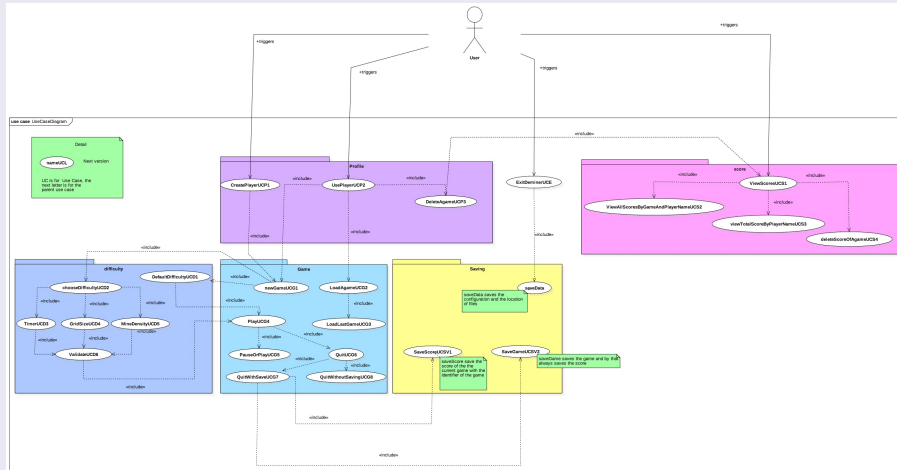
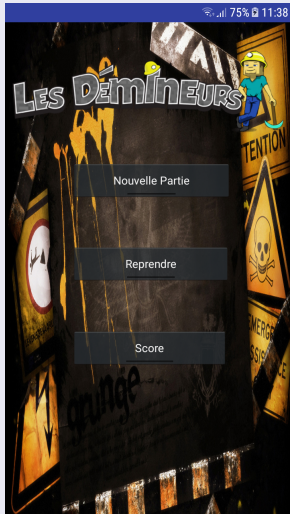


Diagramme de cas d'utilisations

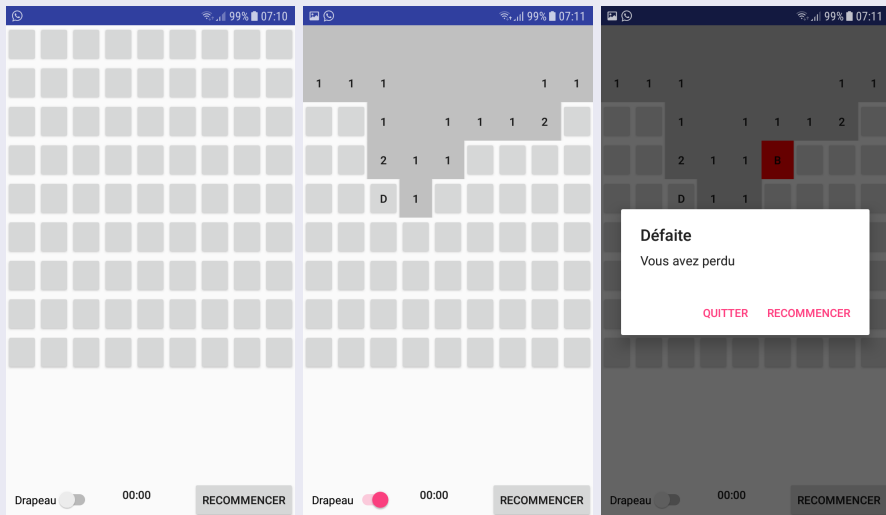


Présentation



But : il vous faut déterminer l'emplacement de toutes les mines.

Présentation



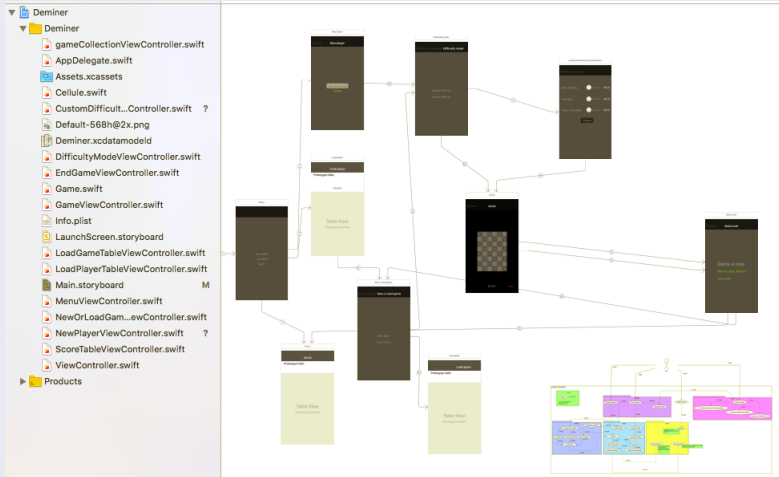
Portion de code

```
203  /**
204   * Place les bombes sur le plateau
205   */
206  private void addBombes(){
207      int cptBombe = bombe;
208      while (cptBombe>0){
209          Random gen = new Random();
210          int x = gen.nextInt(taille);
211          int y = gen.nextInt(taille);
212
213          if(!plateau[x][y].isBombe()){
214              plateau[x][y].devenirBombe();
215              cptBombe--;
216          }
217      }
218  }
219
```

```
305
306  /**
307   * Vérifie si la partie est terminée
308   */
309  private void testVictoire(){
310      for(int i=0; i<taille; i++) {
311          for (int j = 0; j < taille; j++) {
312              if ((!plateau[i][j].isRevele()) && (!plateau[i][j].isBombe())) {
313                  return;
314              }
315          }
316      }
317      victoire();

```


Storyboard et programmation : MVC



Storyboard et programmation

The image shows the Xcode development environment with two panels. The left panel displays the Swift source code for `GameViewController`, and the right panel shows a storyboard preview of the game's user interface.

Swift Code (GameViewController.swift):

```

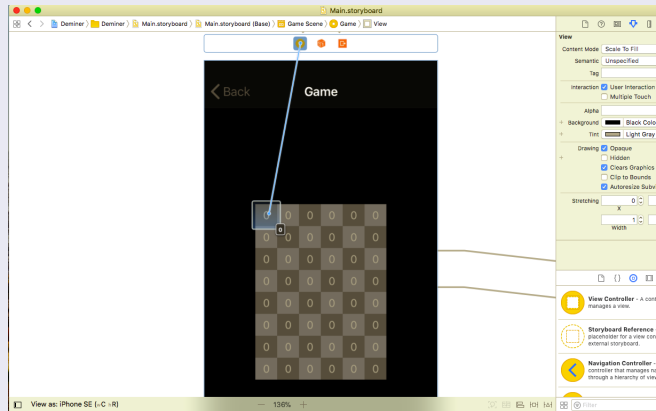
39 // BRUTE FORCE : OUTLET COLLECTION BY HAND
40 @IBOutlet var cells: [UIButton]!
41
42
43 // TODO AUTOMATED VERSION
44 private func makeAbutton (text : String, x : Float , y : Float ,
45                          w: Int , h: Int) -> UIButton
46 {
47     let button = UIButton(type: UIButtonType.system)
48     let x = CGFloat(x)
49     let y = CGFloat(y)
50     let w = CGFloat(w)
51     let h = CGFloat(h)
52     button.frame = CGRect(x:x, y:y, width:w, height:h)
53     button.backgroundColor = UIColor.darkGray
54     button.setTitle("text", for: UIControlState.normal)
55     button.setTitleColor(UIColor.lightGray, for:
56                         UIControlState.normal)
57     button.addTarget(self, action:
58                     #selector(GameViewController.cellTouched(_:)),
59                     for: .touchUpInside)
60     button.tag = numberOfButton
61     self.numberOfButton += 1
62     self.view.addSubview(button)
63     return button
64 }
65
66 @objc private func insertOutlet, Action, or Outlet Collection {}
67 {
68     print("button \(sender.tag) touched")
69 }

```

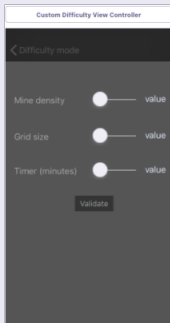
Storyboard Preview:

The storyboard shows a view for an iPhone SE. At the top, there is a navigation bar with a "Back" button and a title "Game". Below the navigation bar is a 10x10 grid of buttons, each containing the text "0". A blue line connects the `cells` outlet in the Swift code to the grid of buttons in the storyboard. The status bar at the bottom indicates the device is an iPhone SE (C, R) and the zoom level is 83%.

Storyboard et programmation



Persistance des données



```

8
9 import UIKit
10
11 class CustomDifficultyViewController: UIViewController {
12     let defaultSave = UserDefaults.standard
13
14     override func viewDidLoad() {
15         super.viewDidLoad()
16         self.resetValues()
17     }
18
19     @IBAction func onDensityChanged(_ sender: UISlider)
20     { densityLabel.text = String(Int(densitySlider.value))
21     }
22
23     @IBAction func onGridSizeChanged(_ sender: UISlider)
24     { gridLabel.text = String(Int(sizeSlider.value))
25     }
26
27
28     @IBAction func onTimerChanged(_ sender: UISlider)
29     { timerLabel.text = String(Int(timerSlider.value))
30     }
31
32     @IBAction func onValidateTouched(_ sender: UIButton)
33     { defaultSave.set(Int(timerSlider.value), forKey: "timerValue")
34       defaultSave.set(Int(densitySlider.value), forKey: "densityValue")
35       defaultSave.set(Int(sizeSlider.value), forKey: "sizeValue")
36       defaultSave.synchronize()
37     }
38
39     private func resetValues ()
40     { defaultSave.set(1, forKey: "timerValue")
41       defaultSave.set(1, forKey: "densityValue")
42       defaultSave.set(1, forKey: "sizeValue")

```

Démonstration

The End