

Développement d'Application Mobile - Flybirds

Hajanirina RANDIMBISOA N° 38007151

Encadré par Etienne PAYET

Présentation Projet Développement Mobile

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Plan de l'exposé

- 1 Introduction
- 2 Plateforme Android
- 3 Plateforme iOS
- 4 Résultat
- 5 Conclusion

Introduction

- Titre : Application Flybirds
- Outils utilisés : Android Studio, xCode, overleaf
- Langage : Java et Swift

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Plateforme Android

MainActivity

```
public class MainActivity extends AppCompatActivity {
    private boolean isMute;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        getWindow().setFlags(WindowManager.LayoutParams.FLAG_FULLSCREEN, WindowManager.LayoutParams.FLAG_FULLSCREEN);

        findViewById(R.id.play).setOnClickListener((view) -> {
            startActivity(new Intent( packageContext: MainActivity.this, GameActivity.class));
        });

        TextView highScoreTxt = findViewById(R.id.highScoreTxt);
        final SharedPreferences prefs = getSharedPreferences( name: "game", MODE_PRIVATE);
        highScoreTxt.setText("HighScore: " + prefs.getInt( key: "highscore", defValue: 0));

        isMute = prefs.getBoolean( key: "isMute", defValue: false);
        final ImageView volumeCtrl = findViewById(R.id.volumeCtrl);

        if (isMute)
            volumeCtrl.setImageResource(R.drawable.ic_volume_off_black_24dp);
        else
            volumeCtrl.setImageResource(R.drawable.ic_volume_up_black_24dp);
        volumeCtrl.setOnClickListener((v) -> {
            isMute = !isMute;
            if (isMute)
                volumeCtrl.setImageResource(R.drawable.ic_volume_off_black_24dp);
            else
                volumeCtrl.setImageResource(R.drawable.ic_volume_up_black_24dp);

            SharedPreferences.Editor editor = prefs.edit();
            editor.putBoolean("isMute", isMute);
            editor.apply();
        });
    }
}
```

Plateforme Android

GameActivity

```
public class GameActivity extends AppCompatActivity {  
    private GameView gameView;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
  
        getWindow().setFlags(WindowManager.LayoutParams.FLAG_FULLSCREEN, WindowManager.LayoutParams.FLAG_FULLSCREEN);  
  
        Point point = new Point();  
        getWindowManager().getDefaultDisplay().getSize(point);  
  
        gameView = new GameView( activity: this, point.x, point.y);  
  
        setContentView(gameView);  
    }  
  
    @Override  
    protected void onPause() {  
        super.onPause();  
        gameView.pause();  
    }  
  
    @Override  
    protected void onResume() {  
        super.onResume();  
        gameView.resume();  
    }  
}
```

Plateforme Android

```
Flight(GameView gameView, int screenY, Resources res) {

    this.gameView = gameView;

    flight1 = BitmapFactory.decodeResource(res, R.drawable.fly1);
    flight2 = BitmapFactory.decodeResource(res, R.drawable.fly2);

    width = flight1.getWidth();
    height = flight1.getHeight();

    width /= 4;
    height /= 4;

    width *= (int) screenRatioX;
    height *= (int) screenRatioY;

    flight1 = Bitmap.createScaledBitmap(flight1, width, height, filter: false);
    flight2 = Bitmap.createScaledBitmap(flight2, width, height, filter: false);

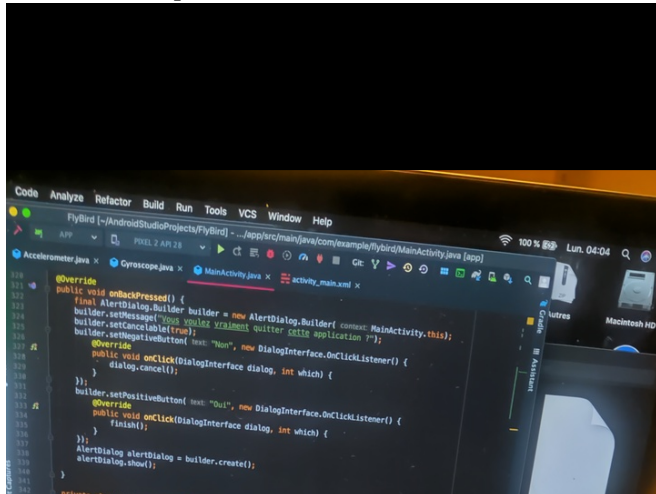
    shoot1 = BitmapFactory.decodeResource(res, R.drawable.shoot1);
    shoot2 = BitmapFactory.decodeResource(res, R.drawable.shoot2);
    shoot3 = BitmapFactory.decodeResource(res, R.drawable.shoot3);
    shoot4 = BitmapFactory.decodeResource(res, R.drawable.shoot4);
    shoot5 = BitmapFactory.decodeResource(res, R.drawable.shoot5);

    shoot1 = Bitmap.createScaledBitmap(shoot1, width, height, filter: false);
    shoot2 = Bitmap.createScaledBitmap(shoot2, width, height, filter: false);
    shoot3 = Bitmap.createScaledBitmap(shoot3, width, height, filter: false);
    shoot4 = Bitmap.createScaledBitmap(shoot4, width, height, filter: false);
    shoot5 = Bitmap.createScaledBitmap(shoot5, width, height, filter: false);

    dead = BitmapFactory.decodeResource(res, R.drawable.dead);
```

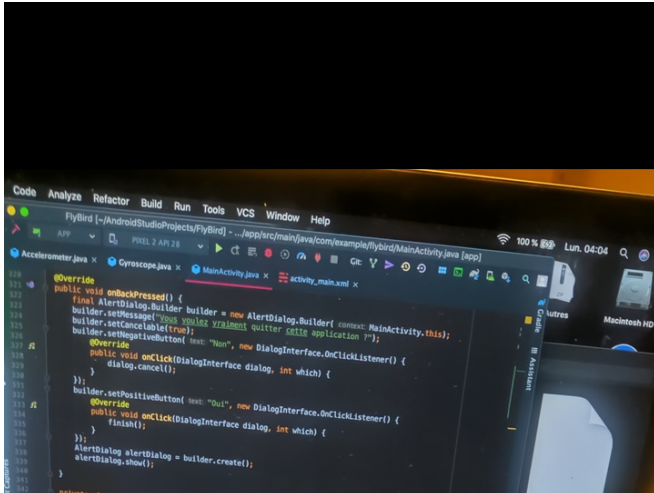

Plateforme Android

Demande de permission camera



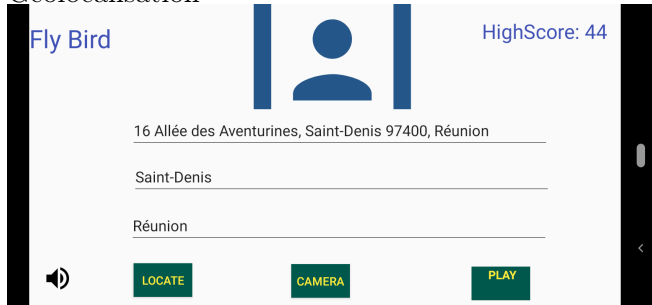
Plateforme Android

Capture Appareil photo



Plateforme Android

Géolocalisation



Plateforme Android

Internationalisation

FlyBird [~/AndroidStudioProjects/FlyBird] - .../app/Translations Editor

APP | PIXEL 2 API 28

Accelerometer.java × Gyroscope.java × MainActivity.java × Translations Editor × activity_main.xml ×

SHOW ALL KEYS SHOW ALL LOCALES

Key	Resource Folder	Untranslatable	Default Value	French (...)
address	app/src/main/res	<input type="checkbox"/>	Address	Adresse
app_name	app/src/main/res	<input type="checkbox"/>	FlyBird	vol d'oisea
city_name	app/src/main/res	<input type="checkbox"/>	City	Ville
country_name	app/src/main/res	<input type="checkbox"/>	Country	Pays
fly_Bird_game	app/src/main/res	<input type="checkbox"/>	Fly Bird Game	Jeu vol d'o
high_score	app/src/main/res	<input type="checkbox"/>	High Score	Score élevi
locate	app/src/main/res	<input type="checkbox"/>	Locate	Localiser
play	app/src/main/res	<input type="checkbox"/>	Play	Jouer
toast	app/src/main/res	<input type="checkbox"/>	click play to play the game and	cliquez sui

Plateforme iOS

Parametrage fond - gameactivity

```
public class Background {  
    int x = 0, y = 0;  
    Bitmap background;  
  
    Background(int screenX, int screenY, Resources res) {  
        background = BitmapFactory.decodeResource(res, R.drawable.background);  
        background = Bitmap.createScaledBitmap(background, screenX, screenY, false);  
    }  
}
```

Plateforme iOS

Création objets

```
func fireBullet() {  
    let bullet = SKSpriteNode(imageNamed: "bullet")  
    bullet.setScale(1)  
    bullet.position = player.position  
    bullet.zPosition = 1  
    self.addChild(bullet)  
  
    let moveBullet = SKAction.moveTo(y: self.size.height + bullet.size.height, duration: 1)  
    let deleteBullet = SKAction.removeFromParent()  
    let bulletSequence = SKAction.sequence([bulletSound, moveBullet, deleteBullet])  
    bullet.run(bulletSequence)  
}
```

Plateforme iOS

GameViewController

```
class GameViewController: UIViewController {  
  
    override func viewDidLoad() {  
        super.viewDidLoad()  
  
        if let view = self.view as! SKView? {  
            // Load the SKScene from 'GameScene.sks'  
            let scene = GameScene(size: CGSize(width: 1536, height: 2048))  
            // Set the scale mode to scale to fit the window  
            scene.scaleMode = .aspectFill  
  
            // Present the scene  
            view.presentScene(scene)  
  
            view.ignoresSiblingOrder = true  
  
            view.showsFPS = true  
            view.showsNodeCount = true  
        }  
    }  
  
    override var shouldAutorotate: Bool {  
        return true  
    }  
  
    override var supportedInterfaceOrientations: UIInterfaceOrientationMask {  
        if UIDevice.current.userInterfaceIdiom == .phone {  

```

Plateforme iOS

Capture Appareil photo

Plateforme iOS

Géolocalisation

Plateforme iOS

Internationalisation

Résultat

Tâches	Point de vue général
Réalisation du projet	2/3
Documentation	Fourni, Google, Enseignant
Expériences acquises	Plusieurs, Instructives
Encadrement	Bien, Spacieux
Communication	Bien, Bonne ambiance
Gestion de temps	Manque

FIGURE – Tableau récapitulatif bilan

Bilan

Fruit de travail

Conclusion

Conclusion