Développement d'Application Mobile - Flybirds

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Présentation Projet Développement Mobile

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Plan de l'exposé

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

Capture Appareil photo

Plateforme Android

Géolocalisation

Plateforme Android

Internationnalisation

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, filter: 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

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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

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