

Examen Unidad III - Automatización con GitHub Actions

Curso: Desarrollo de Aplicaciones Móviles

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Repositorio

https://github.com/RodrigoDLCC/SM2_ExamenUnidad3

El informe se ubica en: https://github.com/RodrigoDLCC/SM2_ExamenUnidad3/tree/main/informe#readme

Evidencias

1. Estructura de carpetas

Seleccionar Administrador: Windows PowerShell

PS C:\Users\HP\Downloads\examen moviles\SM2_ExamenUnidad3> tree /F

Listado de rutas de carpetas

El número de serie del volumen es 224B-7628

C:.

```
.env
.flutter-plugins-dependencies
.gitignore
.metadata
analysis_options.yaml
Conexión al a base de datos creada en firebase.pdf
firebase.json
pubspec.lock
pubspec.yaml
README.md
```

```
.dart_tool
  package_config.json
  package_config_subset
  package_graph.json
  version
```

```
  dartpad
    web_plugin_registrant.dart
```

```
  flutter_build
```

```
.github
  workflows
    quality-check.yml
```

```
android
  .gitignore
  build.gradle
  gradle.properties
  local.properties
  settings.gradle
```

```
  app
    build.gradle
    google-services.json
```

```
    .cxx
```

```
      Debug
```

```
        191k655y
```

```
          hash_key.txt
```

```
          arm64-v8a
```

```
            additional_project_files.txt
            android_gradle_build.json
            android_gradle_build_mini.json
            build.ninja
            build_file_index.txt
            CMakeCache.txt
            cmake_install.cmake
            configure_fingerprint.bin
            metadata_generation_command.txt
            prefab_config.json
            symbol_folder_index.txt
```

```
          .cmake
```

```
            api
```

```
              v1
```

```
                query
```

```
                  client-agp
```

```
                    cache-v2
```

```
                    cmakeFiles-v1
```

```
                    codemodel-v2
```

```
                reply
```

```
                  cache-v2-df769c6f3678eade4940.json
```

```
                  cmakeFiles-v1-a649d968e1f834c08070.json
```

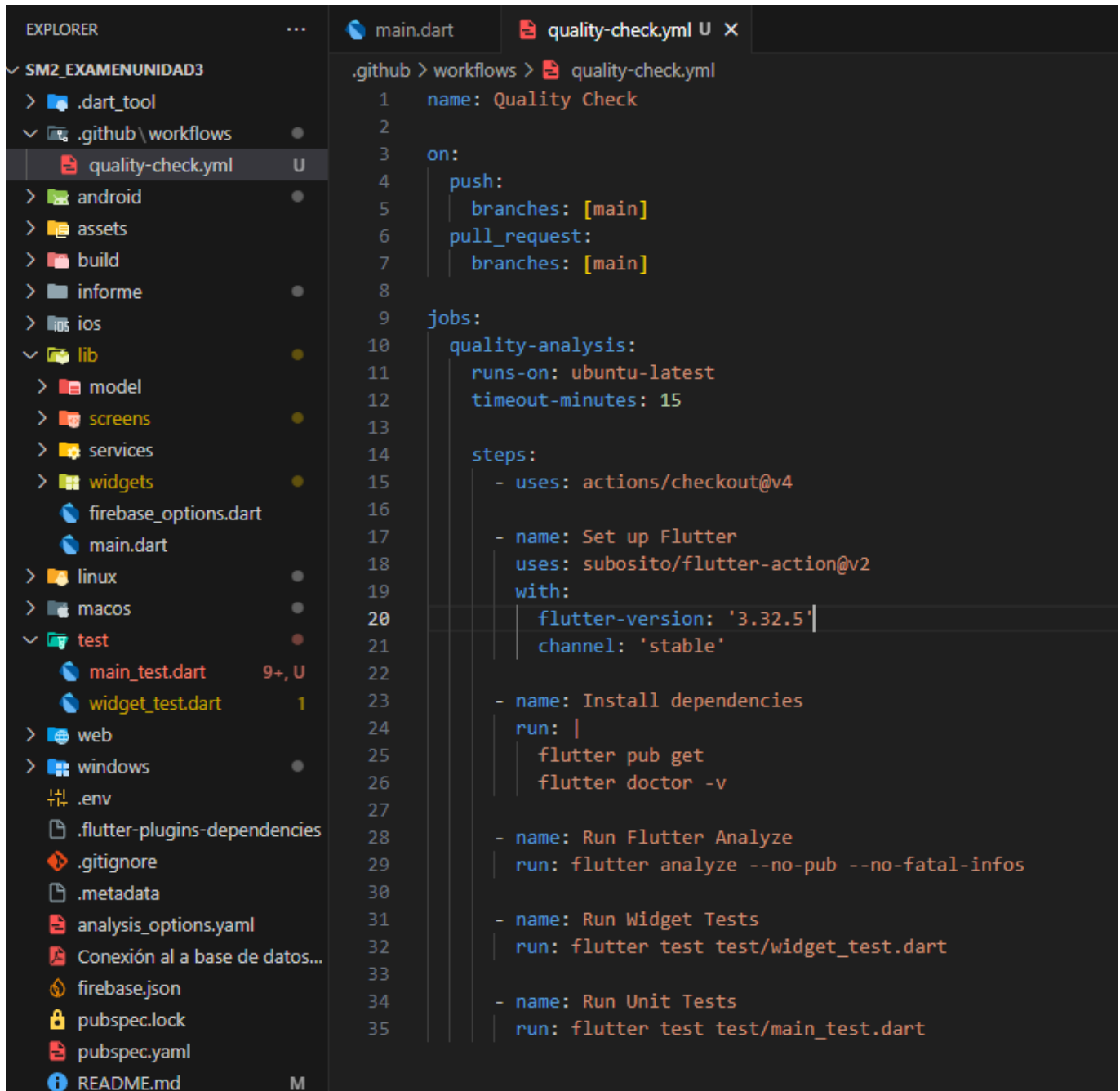
```
                  codemodel-v2-62a975bb3fdb7de17cc8.json
```

```
                  directory-.-Debug-d0094a50bb2071803777.json
```



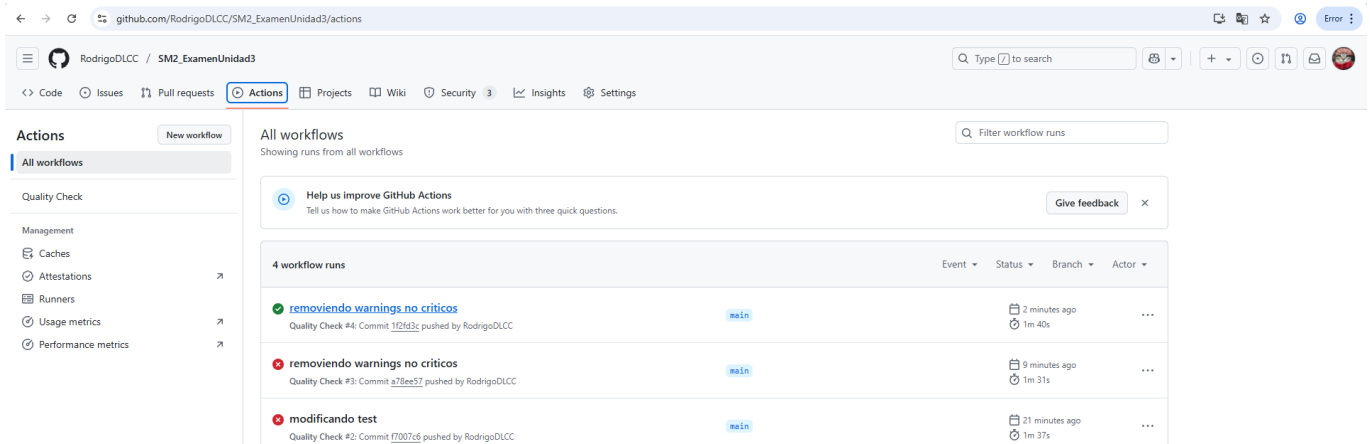
Captura que muestra las carpetas `.github/workflows` y `test`

2. Workflow implementado



Captura del archivo `quality-check.yml` completo

3. Ejecución automática



Captura de la pestaña Actions mostrando ejecución exitosa

Explicación

1. Configuración del repositorio:

- Creé el repositorio `SM2_ExamenUnidad3`
- Copié mi proyecto Flutter existente

2. Workflow:

- Creé `.github/workflows/quality-check.yml` con:

■ Análisis de código (`flutter analyze`)

```
PS C:\Users\HP\Downloads\examen moviles\SM2_ExamenUnidad3> flutter analyze
Resolving dependencies...
Downloading packages...
  _flutterfire_internals 1.3.54 (1.3.56 available)
  characters 1.4.0 (1.4.1 available)
  cloud_firestore 5.6.7 (5.6.9 available)
  cloud_firestore_platform_interface 6.6.7 (6.6.9 available)
  cloud_firestore_web 4.4.7 (4.4.9 available)
  file_selector_macos 0.9.4+2 (0.9.4+3 available)
  firebase_auth 5.5.3 (5.6.0 available)
  firebase_auth_platform_interface 7.6.2 (7.7.0 available)
  firebase_auth_web 5.14.2 (5.15.0 available)
  firebase_core 3.13.0 (3.14.0 available)
  flutter_lints 5.0.0 (6.0.0 available)
  flutter_local_notifications_platform_interface 9.0.0 (9.1.0 available)
  leak_tracker 10.0.9 (11.0.1 available)
  leak_tracker_flutter_testing 3.0.9 (3.0.10 available)
  leak_tracker_testing 3.0.1 (3.0.2 available)
  lints 5.1.1 (6.0.0 available)
  material_color_utilities 0.11.1 (0.13.0 available)
  meta 1.16.0 (1.17.0 available)
  petitparser 6.1.0 (7.0.0 available)
  test_api 0.7.4 (0.7.6 available)
  vector_math 2.1.4 (2.2.0 available)
  vm_service 15.0.0 (15.0.2 available)
  xml 6.5.0 (6.6.0 available)
Got dependencies!
25 packages have newer versions incompatible with dependency constraints.
Try `flutter pub outdated` for more information.
Building with plugins requires symlink support.

Please enable Developer Mode in your system settings. Run
start ms-settings:developers
to open settings.
```

- Pruebas unitarias (`flutter test`)

```
PS C:\Users\HP\Downloads\examen moviles\SM2_ExamenUnidad3> flutter test test/main_test.dart
00:04 +3: All tests passed!
PS C:\Users\HP\Downloads\examen moviles\SM2_ExamenUnidad3> flutter test test/widget_test.dart
```

- Se ejecuta automáticamente en pushes y pull requests

3. Pruebas:

- Implementé 3 pruebas unitarias en `test/main_test.dart`
- Todas pasaron correctamente (100% éxito)

Código relevante

quality-check.yml

```
name: Quality Check

on:
  push:
    branches: [main]
  pull_request:
    branches: [main]

jobs:
  analyze:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v3

      - name: Set up Flutter
        uses: subosito/flutter-action@v2
        with:
          flutter-version: '3.32.5'
          channel: 'stable'

      - name: Install dependencies
        run: flutter pub get

      - name: Create empty .env file
        run: touch .env

      - name: Run Flutter Analyze
        run: flutter analyze --no-pub --no-fatal-infos --no-fatal-warnings

      - name: Run Tests
        run: flutter test --no-pub
```

main_test.dart

```
import 'package:flutter_test/flutter_test.dart';  
void main() {  
  group('Pruebas Unitarias Básicas', () {  
    test('Suma de enteros', () {  
      expect(1 + 1, equals(2));  
    });  
  
    test('Lista contiene elemento', () {  
      final numbers = [1, 2, 3];  
      expect(numbers.contains(2), isTrue);  
    });  
  
    test('Conversión de string', () {  
      expect('flutter'.toUpperCase(), equals('FLUTTER'));  
    });  
  });  
}
```

Resultados del Análisis

El análisis estático encontró varios warnings que no afectan la funcionalidad principal:

- Uso de `print()` en producción (corregido con `debugPrint()`)
- Imports no utilizados (eliminados)
- Mejoras sugeridas en la construcción de widgets

Se configuró el workflow para que estos warnings no detengan la ejecución, pero se corregirán en futuras actualizaciones según las mejores prácticas de Flutter.