

Entrega 06
Sistema Académico de Formación Empresarial - SAFE



Elaborado por:
Error 404

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Bogotá, 2025

1. Nombre de las herramientas utilizadas

Se utilizaron dos herramientas principales de análisis estático:

1.1. Ruff

Linter moderno y de alto desempeño escrito en Rust, que reemplaza a flake8, isort y parte de pylint.

Se usó para:

- Detección de errores de estilo
- Imports no utilizados
- Líneas demasiado largas
- Código muerto
- Errores sintácticos comunes

Ruff fue ejecutado mediante los comandos:

```
ruff check .
ruff check . --fix
```

1.2. Mypy

Analizador estático de tipos para Python, que verifica que las funciones, parámetros y retornos correspondan a los tipos esperados.

Se usó principalmente para:

- Detectar incoherencias en tipos
- Errores comunes de uso de funciones Django
- Identificar posibles accesos inválidos

2. Configuración aplicada

2.1. Ruff

Ruff se ejecutó con su configuración por defecto.

No se creó un archivo `ruff.toml` personalizado.

Las únicas acciones realizadas fueron:

- `ruff check .` → análisis
- `ruff check . --fix` → corrección automática

Esto cumple con el requerimiento del linter sin sobrecargar el proyecto con reglas avanzadas.

2.2. Mypy

Se configuró el archivo `mypy.ini` para habilitar el análisis estático de tipos en un entorno Django.

La configuración usada fue:

```
[mypy]
python_version = 3.12
plugins = mypy_django_plugin.main
ignore_missing_imports = true
follow_imports = silent

strict_optional = true

[mypy.plugins.djangoproject-stubs]
django_settings_module = "config.settings"

# Ignorar migraciones porque son ruido
[mypy-*/*migrations/*]
ignore_errors = true

# Ignorar tests porque no necesitan tipos estrictos
[mypy-*/*tests/*]
ignore_errors = true
```

Resumen de esta configuración:

- Se habilita el plugin oficial para Django (`django-stubs`)
- Se evita que `mypy` se queje por módulos externos sin tipos
- Se ignoran migraciones y tests para no llenar el reporte con ruido
- Se activa `strict_optional` para detectar posibles `None` peligrosos

3. Resultados Obtenidos

3.1 Ruff:

```
F401 [*] `django.contrib.admin` imported but unused  
--> accounts/admin.py:1:28
```

```
|  
1 | from django.contrib import admin  
|     ^^^^^^  
|  
|  
help: Remove unused import: `django.contrib.admin`
```

```
F401 [*] `django.db.models` imported but unused  
--> administration/models.py:1:23
```

```
|  
1 | from django.db import models  
|     ^^^^^^  
2 |  
3 | # Create your models here.  
|  
help: Remove unused import: `django.db.models`
```

```
F401 [*] `django.test.TestCase` imported but unused  
--> administration/tests.py:1:25
```

```
|  
1 | from django.test import TestCase  
|     ^^^^^^^^^^  
2 |  
3 | # Create your tests here.  
|  
help: Remove unused import: `django.test.TestCase`
```

```
F401 [*] `django.views.decorators.http.require_POST` imported but unused  
--> administration/views.py:1:42
```

```
|  
1 | from django.views.decorators.http import require_POST  
|     ^^^^^^^^^^^^^^  
2 | from django.shortcuts import render, redirect, get_object_or_404  
3 | from django.contrib.auth.decorators import login_required  
|  
help: Remove unused import: `django.views.decorators.http.require_POST`
```

```
F401 [*] `django.shortcuts.redirect` imported but unused  
--> administration/views.py:2:38
```

```
|  
1 | from django.views.decorators.http import require_POST  
2 | from django.shortcuts import render, redirect, get_object_or_404  
|     ^^^^^^  
3 | from django.contrib.auth.decorators import login_required
```

```
4 | from django.http import HttpResponseRedirect  
|  
help: Remove unused import: `django.shortcuts.redirect`
```

```
F401 [*] `courses.models.Content` imported but unused  
--> administration/views.py:5:44  
|  
3 | from django.contrib.auth.decorators import login_required  
4 | from django.http import HttpResponseRedirect  
5 | from courses.models import Course, Module, Content  
|  
6 | from accounts.models import AppUser  
|  
help: Remove unused import: `courses.models.Content`
```

```
F401 [*] `django.contrib.admin` imported but unused  
--> config/urls.py:17:28  
|  
15 |     2. Add a URL to urlpatterns: path('blog/', include('blog.urls'))  
16 | """  
17 | from django.contrib import admin  
|  
18 | from django.urls import path, include  
19 | from .health import db_health  
|  
help: Remove unused import: `django.contrib.admin`
```

```
F401 [*] `django.contrib.admin` imported but unused  
--> courses/admin.py:1:28  
|  
1 | from django.contrib import admin  
|  
2 |  
3 | # Register your models here.  
|  
help: Remove unused import: `django.contrib.admin`
```

```
F401 [*] `learning_paths.models.CourseInPath` imported but unused  
--> courses/services/access.py:4:49  
|  
2 | from courses.models import Course, Content  
3 | from enrollments.models import CourseInscription  
4 | from learning_paths.models import LearningPath, CourseInPath  
|  
5 | from teams.models import TeamUser  
|  
help: Remove unused import: `learning_paths.models.CourseInPath`
```

F401 [*] `django.views.decorators.http.require_POST` imported but unused
--> courses/views.py:1:42

```
|  
1 | from django.views.decorators.http import require_POST  
|           ^^^^^^^^^^  
2 | from django.shortcuts import render, redirect, get_object_or_404  
3 | from django.contrib.auth.decorators import login_required  
|  
help: Remove unused import: `django.views.decorators.http.require_POST`
```

F401 [*] `django.shortcuts.redirect` imported but unused

--> courses/views.py:2:38

```
|  
1 | from django.views.decorators.http import require_POST  
2 | from django.shortcuts import render, redirect, get_object_or_404  
|           ^^^^^^  
3 | from django.contrib.auth.decorators import login_required  
4 | from django.http import HttpResponseRedirect  
|  
help: Remove unused import
```

F401 [*] `django.shortcuts.get_object_or_404` imported but unused

--> courses/views.py:2:48

```
|  
1 | from django.views.decorators.http import require_POST  
2 | from django.shortcuts import render, redirect, get_object_or_404  
|           ^^^^^^^^^^^^^^  
3 | from django.contrib.auth.decorators import login_required  
4 | from django.http import HttpResponseRedirect  
|  
help: Remove unused import
```

F401 [*] `django.contrib.auth.decorators.login_required` imported but unused

--> courses/views.py:3:44

```
|  
1 | from django.views.decorators.http import require_POST  
2 | from django.shortcuts import render, redirect, get_object_or_404  
3 | from django.contrib.auth.decorators import login_required  
|           ^^^^^^^^^^  
4 | from django.http import HttpResponseRedirect  
5 | from .models import Course, Module, Content  
|  
help: Remove unused import: `django.contrib.auth.decorators.login_required`
```

F401 [*] `django.http.HttpResponse` imported but unused

--> courses/views.py:4:25

```
|  
2 | from django.shortcuts import render, redirect, get_object_or_404
```

```
3 | from django.contrib.auth.decorators import login_required
4 | from django.http import HttpResponseRedirect
|           ^^^^^^^^^^^^^^
5 | from .models import Course, Module, Content
6 | def catalog(request):
|
help: Remove unused import: `django.http.HttpResponse`
```

```
F401 [*] `.models.Course` imported but unused
--> courses/views.py:5:21
|
3 | from django.contrib.auth.decorators import login_required
4 | from django.http import HttpResponseRedirect
5 | from .models import Course, Module, Content
|           ^^^^^^
6 | def catalog(request):
7 |     return render(request, "courses/catalog.html")
|
help: Remove unused import
```

```
F401 [*] `.models.Module` imported but unused
--> courses/views.py:5:29
|
3 | from django.contrib.auth.decorators import login_required
4 | from django.http import HttpResponseRedirect
5 | from .models import Course, Module, Content
|           ^^^^^^
6 | def catalog(request):
7 |     return render(request, "courses/catalog.html")
|
help: Remove unused import
```

```
F401 [*] `.models.Content` imported but unused
--> courses/views.py:5:37
|
3 | from django.contrib.auth.decorators import login_required
4 | from django.http import HttpResponseRedirect
5 | from .models import Course, Module, Content
|           ^^^^^^
6 | def catalog(request):
7 |     return render(request, "courses/catalog.html")
|
help: Remove unused import
```

```
F401 [*] `django.contrib.admin` imported but unused
--> enrollments/admin.py:1:28
|
1 | from django.contrib import admin
```

```
|      ^^^^^^
2 |
3 | # Register your models here.
| 
help: Remove unused import: `django.contrib.admin`
```

```
F401 [*] `django.test.TestCase` imported but unused
--> enrollments/tests.py:1:25
|
1 | from django.test import TestCase
|      ^^^^^^^^^^
2 |
3 | # Create your tests here.
| 
help: Remove unused import: `django.test.TestCase`
```

```
F401 [*] `django.shortcuts.redirect` imported but unused
--> enrollments/views.py:1:38
|
1 | from django.shortcuts import render, redirect
|      ^^^^^^^^^^
2 | from django.views.decorators.http import require_POST
3 | from . import models
| 
help: Remove unused import: `django.shortcuts.redirect`
```

```
F401 [*] `django.views.decorators.http.require_POST` imported but unused
--> enrollments/views.py:2:42
|
1 | from django.shortcuts import render, redirect
2 | from django.views.decorators.http import require_POST
|      ^^^^^^^^^^^^^^
3 | from . import models
| 
help: Remove unused import: `django.views.decorators.http.require_POST`
```

```
F401 [*] `models` imported but unused
--> enrollments/views.py:3:15
|
1 | from django.shortcuts import render, redirect
2 | from django.views.decorators.http import require_POST
3 | from . import models
|      ^^^^^^
4 |
5 | def home(request):
| 
help: Remove unused import: `models`
```

F401 [*] `django.contrib.admin` imported but unused
--> learning_paths/admin.py:1:28

```
|  
1 | from django.contrib import admin  
|     ^^^^^^  
2 |  
3 | # Register your models here.  
|  
help: Remove unused import: `django.contrib.admin`
```

F401 [*] `enrollments.models.PathInscription` imported but unused
--> learning_paths/services/access.py:3:32

```
|  
1 | from accounts.models import AppUser  
2 | from learning_paths.models import LearningPath  
3 | from enrollments.models import PathInscription  
|     ^^^^^^^^^^^^^^  
4 | from teams.models import TeamUser  
|  
help: Remove unused import: `enrollments.models.PathInscription`
```

F401 [*] `django.urls.path` imported but unused
--> learning_paths/urls.py:1:25

```
|  
1 | from django.urls import path  
|     ^^^^  
2 | from . import views  
|  
help: Remove unused import: `django.urls.path`
```

F401 [*] `.views` imported but unused
--> learning_paths/urls.py:2:15

```
|  
1 | from django.urls import path  
2 | from . import views  
|     ^^^^  
3 |  
4 | urlpatterns = [  
|  
help: Remove unused import: `.views`
```

F401 [*] `django.shortcuts.render` imported but unused
--> learning_paths/views.py:1:30

```
|  
1 | from django.shortcuts import render, redirect  
|     ^^^^^^  
2 | from django.views.decorators.http import require_POST  
3 | from . import models
```

```
|  
help: Remove unused import  
  
F401 [*] `django.shortcuts.redirect` imported but unused  
--> learning_paths/views.py:1:38  
|  
1 | from django.shortcuts import render, redirect  
|           ^^^^^^  
2 | from django.views.decorators.http import require_POST  
3 | from . import models  
|  
help: Remove unused import  
  
F401 [*] `django.views.decorators.http.require_POST` imported but unused  
--> learning_paths/views.py:2:42  
|  
1 | from django.shortcuts import render, redirect  
2 | from django.views.decorators.http import require_POST  
|           ^^^^^^^^^^  
3 | from . import models  
|  
help: Remove unused import: `django.views.decorators.http.require_POST`  
  
F401 [*] `models` imported but unused  
--> learning_paths/views.py:3:15  
|  
1 | from django.shortcuts import render, redirect  
2 | from django.views.decorators.http import require_POST  
3 | from . import models  
|           ^^^^  
|  
help: Remove unused import: `models`  
  
F401 [*] `django.contrib.admin` imported but unused  
--> notifications/admin.py:1:28  
|  
1 | from django.contrib import admin  
|           ^^^^^  
2 |  
3 | # Register your models here.  
|  
help: Remove unused import: `django.contrib.admin`  
  
F401 [*] `django.db.models` imported but unused  
--> notifications/models.py:1:23  
|  
1 | from django.db import models  
|           ^^^^^
```

```
2 |
3 | # Create your models here.
| 
help: Remove unused import: `django.db.models`  
  
F401 [*] `django.test.TestCase` imported but unused
--> notifications/tests.py:1:25
|
1 | from django.test import TestCase
|         ^^^^^^^^
2 |
3 | # Create your tests here.
| 
help: Remove unused import: `django.test.TestCase`  
  
F401 [*] `django.shortcuts.render` imported but unused
--> notifications/views.py:1:30
|
1 | from django.shortcuts import render, redirect
|         ^^^^^^
2 | from django.views.decorators.http import require_POST
3 | from . import models
| 
help: Remove unused import: `django.shortcuts.render`  
  
F401 [*] `django.views.decorators.http.require_POST` imported but unused
--> notifications/views.py:2:42
|
1 | from django.shortcuts import render, redirect
2 | from django.views.decorators.http import require_POST
|         ^^^^^^^^^^^^^^
3 | from . import models
| 
help: Remove unused import: `django.views.decorators.http.require_POST`  
  
F401 [*] `models` imported but unused
--> notifications/views.py:3:15
|
1 | from django.shortcuts import render, redirect
2 | from django.views.decorators.http import require_POST
3 | from . import models
|         ^^^^^^
4 |
5 | def notifications(request):
| 
help: Remove unused import: `models`  
  
F401 [*] `django.contrib.admin` imported but unused
```

```
--> teams/admin.py:1:28
|
1 | from django.contrib import admin
|     ^
2 |
3 | # Register your models here.
|
help: Remove unused import: `django.contrib.admin`
```

```
F401 [*] `django.test.TestCase` imported but unused
--> teams/tests.py:1:25
|
1 | from django.test import TestCase
|     ^^^^^^^^
2 |
3 | # Create your tests here.
|
help: Remove unused import: `django.test.TestCase`
```

```
F401 [*] `django.urls.path` imported but unused
--> teams/urls.py:1:25
|
1 | from django.urls import path
|     ^
2 | from . import views
|
help: Remove unused import: `django.urls.path`
```

```
F401 [*] `.views` imported but unused
--> teams/urls.py:2:15
|
1 | from django.urls import path
2 | from . import views
|     ^
3 |
4 | urlpatterns = [
|
help: Remove unused import: `.views`
```

```
F401 [*] `django.shortcuts.render` imported but unused
--> teams/views.py:1:30
|
1 | from django.shortcuts import render, redirect
|     ^
2 | from django.views.decorators.http import require_POST
3 | from . import models
|
help: Remove unused import
```

```
F401 [*] `django.shortcuts.redirect` imported but unused
--> teams/views.py:1:38
|
1 | from django.shortcuts import render, redirect
|           ^^^^^^^^
2 | from django.views.decorators.http import require_POST
3 | from . import models
|
help: Remove unused import
```

```
F401 [*] `django.views.decorators.http.require_POST` imported but unused
--> teams/views.py:2:42
|
1 | from django.shortcuts import render, redirect
2 | from django.views.decorators.http import require_POST
|           ^^^^^^^^^^^^^^
3 | from . import models
|
help: Remove unused import: `django.views.decorators.http.require_POST`
```

```
F401 [*] `.models` imported but unused
--> teams/views.py:3:15
|
1 | from django.shortcuts import render, redirect
2 | from django.views.decorators.http import require_POST
3 | from . import models
|           ^^^^^^
|
help: Remove unused import: `.`.models`
```

Found 44 errors.
[*] 44 fixable with the `--fix` option.

3.2 Mypy:

```
manage.py:11: error: Skipping analyzing "django.core.management": module is installed, but
missing library stubs or py.typed marker [import-untyped]
teams/urls.py:2: error: Need type annotation for "urlpatterns" (hint: "urlpatterns: list[<type>] = ...
") [var-annotated]
teams/models.py:1: error: Skipping analyzing "django.db": module is installed, but missing
library stubs or py.typed marker [import-untyped]
teams/models.py:2: error: Skipping analyzing "django.conf": module is installed, but missing
library stubs or py.typed marker [import-untyped]
teams/apps.py:1: error: Skipping analyzing "django.apps": module is installed, but missing
library stubs or py.typed marker [import-untyped]
teams/migrations/0001_initial.py:3: error: Skipping analyzing "django.db.models.deletion":
module is installed, but missing library stubs or py.typed marker [import-untyped]
```

teams/migrations/0001_initial.py:3: error: Skipping analyzing "django.db.models": module is installed, but missing library stubs or py.typed marker [import-untyped]
teams/migrations/0001_initial.py:3: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]
teams/migrations/0001_initial.py:3: error: Skipping analyzing "django": module is installed, but missing library stubs or py.typed marker [import-untyped]
teams/migrations/0001_initial.py:4: error: Skipping analyzing "django.conf": module is installed, but missing library stubs or py.typed marker [import-untyped]
notifications/views.py:1: error: Skipping analyzing "django.shortcuts": module is installed, but missing library stubs or py.typed marker [import-untyped]
notifications/apps.py:1: error: Skipping analyzing "django.apps": module is installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/urls.py:2: error: Need type annotation for "urlpatterns" (hint: "urlpatterns: list[<type>] = ...") [var-annotated]
learning_paths/apps.py:1: error: Skipping analyzing "django.apps": module is installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/migrations/0001_initial.py:3: error: Skipping analyzing "django.db.models.deletion": module is installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/migrations/0001_initial.py:3: error: Skipping analyzing "django.db.models": module is installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/migrations/0001_initial.py:3: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/migrations/0001_initial.py:3: error: Skipping analyzing "django": module is installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/migrations/0001_initial.py:4: error: Skipping analyzing "django.conf": module is installed, but missing library stubs or py.typed marker [import-untyped]
enrollments/views.py:1: error: Skipping analyzing "django.shortcuts": module is installed, but missing library stubs or py.typed marker [import-untyped]
enrollments/apps.py:1: error: Skipping analyzing "django.apps": module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/views.py:1: error: Skipping analyzing "django.shortcuts": module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/models.py:1: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/models.py:2: error: Skipping analyzing "django.conf": module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/apps.py:1: error: Skipping analyzing "django.apps": module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/migrations/0001_initial.py:3: error: Skipping analyzing "django.db.models.deletion": module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/migrations/0001_initial.py:3: error: Skipping analyzing "django.db.models": module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/migrations/0001_initial.py:3: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]

```
courses/migrations/0001_initial.py:4: error: Skipping analyzing "django.conf": module is
installed, but missing library stubs or py.typed marker [import-untyped]
config/wsgi.py:12: error: Skipping analyzing "django.core.wsgi": module is installed, but
missing library stubs or py.typed marker [import-untyped]
config/health.py:1: error: Skipping analyzing "django.http": module is installed, but missing
library stubs or py.typed marker [import-untyped]
config/health.py:2: error: Skipping analyzing "django.db": module is installed, but missing
library stubs or py.typed marker [import-untyped]
config/health.py:3: error: Skipping analyzing "django.db.utils": module is installed, but
missing library stubs or py.typed marker [import-untyped]
config/asgi.py:12: error: Skipping analyzing "django.core.asgi": module is installed, but
missing library stubs or py.typed marker [import-untyped]
administration/apps.py:1: error: Skipping analyzing "django.apps": module is installed, but
missing library stubs or py.typed marker [import-untyped]
accounts/models.py:1: error: Skipping analyzing "django.db": module is installed, but missing
library stubs or py.typed marker [import-untyped]
accounts/models.py:2: error: Skipping analyzing "django.contrib.auth.models": module is
installed, but missing library stubs or py.typed marker [import-untyped]
accounts/apps.py:1: error: Skipping analyzing "django.apps": module is installed, but missing
library stubs or py.typed marker [import-untyped]
accounts/migrations/0003_alter_rolechangelog_old_role.py:3: error: Skipping analyzing
"django.db": module is installed, but missing library stubs or py.typed marker
[import-untyped]
accounts/migrations/0002_rolechangelog.py:3: error: Skipping analyzing
"django.db.models.deletion": module is installed, but missing library stubs or py.typed marker
[import-untyped]
accounts/migrations/0002_rolechangelog.py:3: error: Skipping analyzing
"django.db.models": module is installed, but missing library stubs or py.typed marker
[import-untyped]
accounts/migrations/0002_rolechangelog.py:3: error: Skipping analyzing "django.db":
module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/migrations/0002_rolechangelog.py:3: error: Skipping analyzing "django": module is
installed, but missing library stubs or py.typed marker [import-untyped]
accounts/migrations/0002_rolechangelog.py:4: error: Skipping analyzing "django.conf":
module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/migrations/0001_initial.py:3: error: Skipping analyzing
"django.contrib.auth.models": module is installed, but missing library stubs or py.typed
marker [import-untyped]
accounts/migrations/0001_initial.py:3: note: See
https://mypy.readthedocs.io/en/stable/running\_mypy.html#missing-imports
accounts/migrations/0001_initial.py:3: error: Skipping analyzing "django.contrib.auth":
module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/migrations/0001_initial.py:3: error: Skipping analyzing "django.contrib": module is
installed, but missing library stubs or py.typed marker [import-untyped]
accounts/migrations/0001_initial.py:3: error: Skipping analyzing "django": module is installed,
but missing library stubs or py.typed marker [import-untyped]
```

accounts/migrations/0001_initial.py:4: error: Skipping analyzing "django.contrib.auth.validators": module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/migrations/0001_initial.py:5: error: Skipping analyzing "django.utils.timezone": module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/migrations/0001_initial.py:5: error: Skipping analyzing "django.utils": module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/migrations/0001_initial.py:6: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]
notifications/urls.py:1: error: Skipping analyzing "django.urls": module is installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/models.py:1: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/models.py:2: error: Skipping analyzing "django.conf": module is installed, but missing library stubs or py.typed marker [import-untyped]
enrollments/urls.py:1: error: Skipping analyzing "django.urls": module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/urls.py:1: error: Skipping analyzing "django.urls": module is installed, but missing library stubs or py.typed marker [import-untyped]
config/urls.py:17: error: Skipping analyzing "django.urls": module is installed, but missing library stubs or py.typed marker [import-untyped]
administration/views.py:1: error: Skipping analyzing "django.shortcuts": module is installed, but missing library stubs or py.typed marker [import-untyped]
administration/views.py:2: error: Skipping analyzing "django.contrib.auth.decorators": module is installed, but missing library stubs or py.typed marker [import-untyped]
administration/views.py:3: error: Skipping analyzing "django.http": module is installed, but missing library stubs or py.typed marker [import-untyped]
administration/admin.py:1: error: Skipping analyzing "django.contrib": module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/views.py:1: error: Skipping analyzing "django.shortcuts": module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/views.py:2: error: Skipping analyzing "django.views.decorators.http": module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/views.py:3: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]
accounts/services.py:1: error: Skipping analyzing "django.core.exceptions": module is installed, but missing library stubs or py.typed marker [import-untyped]
enrollments/models.py:2: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]
enrollments/models.py:3: error: Skipping analyzing "django.conf": module is installed, but missing library stubs or py.typed marker [import-untyped]
enrollments/migrations/0001_initial.py:3: error: Skipping analyzing "django.db.models.deletion": module is installed, but missing library stubs or py.typed marker [import-untyped]
enrollments/migrations/0001_initial.py:3: error: Skipping analyzing "django.db.models": module is installed, but missing library stubs or py.typed marker [import-untyped]
enrollments/migrations/0001_initial.py:3: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]

```
enrollments/migrations/0001_initial.py:3: error: Skipping analyzing "django": module is
installed, but missing library stubs or py.typed marker [import-untyped]
enrollments/migrations/0001_initial.py:5: error: Skipping analyzing "django.conf": module is
installed, but missing library stubs or py.typed marker [import-untyped]
administration/urls.py:1: error: Skipping analyzing "django.urls": module is installed, but
missing library stubs or py.typed marker [import-untyped]
accounts/urls.py:1: error: Skipping analyzing "django.urls": module is installed, but missing
library stubs or py.typed marker [import-untyped]
accounts/tests/test_roles.py:1: error: Skipping analyzing "django.test": module is installed,
but missing library stubs or py.typed marker [import-untyped]
accounts/tests/test_roles.py:2: error: Skipping analyzing "django.core.exceptions": module is
installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/tests/test_access.py:1: error: Skipping analyzing "django.test": module is
installed, but missing library stubs or py.typed marker [import-untyped]
learning_paths/tests/test_access.py:2: error: Skipping analyzing "django.contrib.auth":
module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/tests/test_access_learning_paths_courses.py:1: error: Skipping analyzing
"django.test": module is installed, but missing library stubs or py.typed marker
[import-untyped]
courses/tests/test_access_learning_paths_courses.py:2: error: Skipping analyzing
"django.contrib.auth": module is installed, but missing library stubs or py.typed marker
[import-untyped]
courses/tests/test_access_courses.py:1: error: Skipping analyzing "django.test": module is
installed, but missing library stubs or py.typed marker [import-untyped]
courses/tests/test_access_courses.py:2: error: Skipping analyzing "django.contrib.auth":
module is installed, but missing library stubs or py.typed marker [import-untyped]
courses/tests/test_access_contents.py:1: error: Skipping analyzing "django.test": module is
installed, but missing library stubs or py.typed marker [import-untyped]
courses/tests/test_access_contents.py:2: error: Skipping analyzing "django.contrib.auth":
module is installed, but missing library stubs or py.typed marker [import-untyped]
Found 86 errors in 43 files (checked 81 source files)
```

4. Evidencia de ejecución

```
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS 3 bash - app ▲ + ▾ □ 🗑 ... | ⌂ X
root@0a596379bcb7:/app# ruff check .
Found 44 errors.
[*] 44 fixable with the `--fix` option.
● root@0a596379bcb7:/app# ruff check . --fix
Found 44 errors (44 fixed, 0 remaining).
○ root@0a596379bcb7:/app# mypy .
manage.py:11: error: Skipping analyzing "django.core.management": module is installed, but missing library stubs or py.typed marker [import-untyped]
teams/urls.py:2: error: Need type annotation for "urlpatterns" (hint: "urlpatterns: list[<type>] = ...") [var-annotated]
teams/models.py:1: error: Skipping analyzing "django.db": module is installed, but missing library stubs or py.typed marker [import-untyped]
teams/models.py:2: error: Skipping analyzing "django.conf": module is installed, but missing library stubs or py.typed marker [import-untyped]
teams/apps.py:1: error: Skipping analyzing "django.apps": module is installed, b
```

```
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS 3 bash - app ▲ + ▾ □ 🗑 ... | ⌂ X
root@0a596379bcb7:/app# mypy .
ed]
enrollments/models.py:107: error: Need type annotation for "file" [var-annotated]
d]
enrollments/models.py:109: error: Need type annotation for "is_completed" [var-annotated]
Found 89 errors in 8 files (checked 81 source files)
● root@0a596379bcb7:/app# python --version
Python 3.12.12
○ root@0a596379bcb7:/app# mypy .
teams/urls.py:2: error: Need type annotation for "urlpatterns" (hint: "urlpatterns: list[<type>] = ...") [var-annotated]
learning_paths/urls.py:2: error: Need type annotation for "urlpatterns" (hint: "urlpatterns: list[<type>] = ...") [var-annotated]
Found 2 errors in 2 files (checked 81 source files)
○ root@0a596379bcb7:/app#
```

5. Evidencia de corrección:

La corrección que se realizó fue poner el archivo mypy que se mostro en la configuración del item 3 para poner restricciones que acepten las lecturas de código de django.

```
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS 3 bash - app ▲ + ▾ □ 🗑 ... | ⌂ X
mypy --version
○ root@0a596379bcb7:/app# ruff check .
F401 [*] `django.contrib.admin` imported but unused
--> accounts/admin.py:1:28
1 | from django.contrib import admin
      ^^^^^^
help: Remove unused import: `django.contrib.admin`

F401 [*] `django.db.models` imported but unused
--> administration/models.py:1:23
1 | from django.db import models
      ^^^^^^
2 |
```