Exercise brief

Design an API for a vending machine, allowing users with a "seller" role to add, update or remove products, while users with a "buyer" role can deposit coins into the machine and make purchases. Your vending machine should only accept 5, 10, 20, 50 and 100 cent coins

Tasks

- Framework of choices must be **FastAPI**
- REST API should be implemented consuming and producing "application/json"
- Implement CRUD for users (POST shouldn't require authentication)
- Implement CRUD for a product model (GET can be called by anyone, while POST, PUT and DELETE can be called only by the seller user who created the product)
- Implement /deposit endpoint so users with a "buyer" role can deposit 5, 10, 20, 50 and 100 cent coins into their vending machine account
- Implement /buy endpoint (accepts productId, amount of products) so users with a "buyer" role can buy products with the money they've deposited. API should return total they've spent, products they've purchased and their change if there's any (in 5, 10, 20, 50 and 100 cent coins)
- Implement /reset endpoint so users with a "buyer" role can reset their deposit

Take time to think about possible edge cases and access issues that should be solved

Evaluation criteria:

- Edge cases covered

Bonus:

- API tests
- Attention to security
- Dockerised

Deliverables

A Github repository. Please have the solution running on your computer so the domain expert can tell you which tests to run. Please have a **Postman collection** or **Swagger** ready on your computer so the domain expert can tell you what tests to run on the API.

Miscellaneous

1. How long do I have to do this?
   You should deliver it in 2 days at the latest.