ALGORITHMS AND PROGRAMMING - PRACTICAL EXAM

Deadline: you have **30 minutes** to solve the exercises. After the deadline you can **NOT** upload your solution and you will be marked as absent from the exam.

Exercise: A coffee shop needs an application to manage the prices for their types of coffee. There are 2 types of coffee: vegan and non-vegan. Each coffee is characterized by *name* and *price*. The application should allow to:

- Add a new type of coffee **(1p).** If the price is not a positive number, then the coffee should not be added and a message should be displayed **(1p – only if exceptions are used).**
- Identify the most expensive coffee in the vegan category as well as the non-vegan category **(2p - only if one single algorithm is used)**.
- Count how many types of coffee cost less than 5 euros. For this requirement, please provide a test function using at least three assertions **(2p).**

Other Requirements:
- Calling the functions implemented in the **main** module. The list should be printed after each operation. **(1p)**
- The initial list should contain at least 5 elements (loaded at the beginning of the application). **(1p)** Example for the content of the repository:

Vegan: Americano, 30 // Long Americano, 200 // Espresso, 45 // C2, 34 // C3, 45
Non-vegan: Cappuccino, 201 // Latte, 305 // Flat White, 20 // C3, 34 // C4, 45

- **Style:** clarity of the code **(1p)**
- Use **layered** architecture! Otherwise you will receive maximum the **50% of the final grade**.

Notes:

- You do **NOT** have to have *ui* and *application* modules. You should have a structure like:
practical_exam

```
├── domain
│   └── coffee.py
├── infrastructure
│   └── coffee_repository.py    └── main.py
```

TOTAL: 9 points + 1 for appearance