DocuPet
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Backend PHP Coding Test

✅ Requirements

You are to create a classification or "binning" utility. The engine contains a discretization filter into which a set of continuous variables (long or float) is input. The output is a lumping of items into 3 discrete categories or "bins": `High, Medium, Low.`

For example, if I pass in a set of longs through the filter the output might look something like:

```
High: 99, 87, 65
Medium: 35, 60, 24, 43, 50, 55
Low: 5, 9, 3, 13
```

A filter algorithm determines how the individual amounts are lumped into the bins. Implement the following two algorithms as filters:

1) "Equal width," i.e., the bins are of equal width. For example, these intervals are of equal width:
`(0,10], (10, 20], (20, 30]`

2) "Equal frequency," i.e., each bin contains the same number of items.

🧬 Instructions

Write a solution in PHP. Spend no more than 2 hours addressing the problem. We must be able to execute on OSX or Linux.

Send a response email, attaching a GitHub link to the source code, execution instructions (e.g. README.md is within the repository including an overview and instructions on execution), and the result for each filter algorithm for the following data set:

```
[0.1, 3.4, 3.5, 3.6, 7.0, 9.0, 6.0, 4.4, 2.5, 3.9, 4.5, 2.8]
```

🌟 Bonus points

- Your solution is encapsulated into a Docker container (CLI executable or web frontend)
- Your solution utilizes a PHP framework of your choosing, e.g. Laravel Zero
- You've written ample unit test coverage
- Git commits show your progress over the completion of the assignment

👓 What we're looking at

- Experience in writing up-to-date PHP (>= 7.4) code
- Requirements decomposition - how you interpreted the test and solved it!
- Code structure, code flow, and software design patterns
- Code styling and cleanliness (PSR-12)
- Object-oriented programming and SOLID principles
- Experience and understanding of writing meaningful tests