

# 10 days of animals live simulation

## Abstract Workflow

Processor → Stages ( Before lunch, lunching, After lunch) → Condition check (Whether to do sth or not, probability is required) → Sync with data repository → Print message out

## Approach

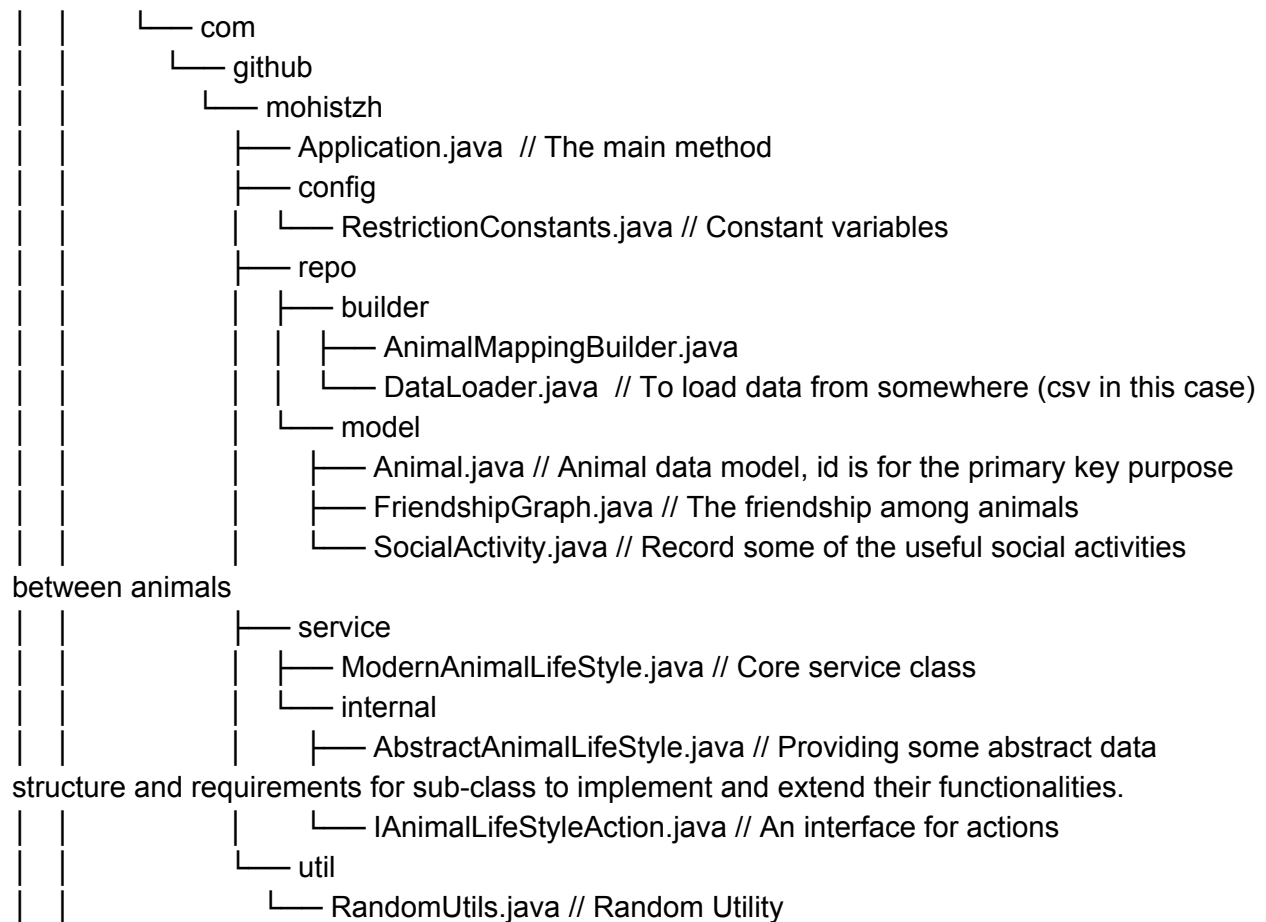
In this case, the core parts are applying probability for stage event points with the specific data models, and the models should be easy to CRUD. We are going to use multiple data structures to get high performance.

### Steps of the program process:

1. Loading the raw data from any data streams like files, inputs, or databases ( in this case, we are going to read csv for this part), then to build data structures simulating database necessarily.
2. Entering into a stage, for each step that we should check the condition first, whether or not be able to do something, like make a friend request or how to answer it. The probability algorithms are quick common, e.g. generating a random number excluded or included uncertain numbers.
3. Friends requesting and answering logic of whether or not to do are different. To make a whether or not decision, the make friends action should be excluded those animals who were friends now, themselves and the best forever friend should ignore as well, to break up with friends on the opposite.
4. Dynamic data repository was designed for tackling data easily, I used a graph structure to store friendship mapping among animals, and some of HashMaps and POJOs to specific needs.
5. Refer packages for more details info.

### Project packages

```
|— src
|  |— main
|  |   |— java
```



## About Model - Animal

*Species, Breed, Favorite food, Lays eggs, Wingspan, Best friend forever*

Animal model and their attributes actually are constant variables. In this case, only name, favourite food, and best friend forever are useful.