

Python OOP - Second Exam Practice

Pizza Management Software System

Your mission is to create a software system that implements a pizza employees management system.

Your system should handle the employees of 2 Pizza stores -

Pizza Hut & Pizza Dominos

Each Pizza store has the following properties:

- Id
- name
- address
- number of employees
- List of store employees
- phone number
- rank



Each Pizza store will have a function called `calculate_employee_expenses()` which returns the amount of expenses this Pizza store is paying to their employees.

Each Pizza store should support employee resigning and employee hiring. Before each change, your system should check if the current employee is indeed an employee of the store.

The rank of the store is calculated differently by each store:

In Pizza Hut → The rank will be the average rank of all the store employees' ranks

In Pizza Dominos → The rank will be the sum rank of all the store employees' ranks.

Each time we create a new Pizza class with the constructor we should set the pizza rank by the relevant calculation method.

The rank is first created with the constructor but can be changed by calling the `calculate_rank()` function.

Another function that we should support is `calculate_ranged_rank(int rank_range)`

This function will get the amount of days we allow the employee rank to be valid. For example: if the range number is 1 we should take only employees ranks that took with a range of 1 day from the current date.

If we have an employee rank that is not valid we should ask him to rank again and update the employee rank date accordingly.

Each Pizza employee has:

- Id
- First name
- Last name
- Address
- Salary
- Start date
- Pizza rank
- Pizza rank date
- Pizza surprise

Each employee should have a Pizza rank when created but this rank can be changed by calling the `set_rank()`. The `set_rank` will randomly generate a rank number between 1-100 and set the employee rank and the rank date accordingly.

The Pizza surprise is a property that each employee has and it can be null. The surprise can be of any type but must have the `activate_surprise()` method.

When calling this method the console should print "You got a surprise! Congratulations!"

The Pizza store can give a new surprise to their best employees. In addition the Pizza store can take back surprises from resigning employees.