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**TITLE: Worker and Employer Agency System**

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# Agency System Design Documentation

## 1.Introduction

This document provides an overview of the design of the Agency System, explaining the applied principles and design patterns.

## 2. System Overview

The Agency System facilitates interactions between workers (Freelancers), employers (Companies), and an admin. It allows job postings, applications, and feedback management.

## 3. Key Components

### 3.1 Interfaces

- User: Defines methods for managing workers and employers.

- Worker: Extends User to apply for jobs.

- Employer: Extends User to post jobs.

- Feedback: Provides methods for giving and viewing feedback.

### 3.2 Classes

- Admin: Implements User; manages workers and employers.

- Full Timeworker: Implements Worker; applies for jobs.

- Freelancer: Implements Worker and Feedback; manages job applications and feedback.

- Company: Implements Employer and Feedback; manages job postings and feedback.

## 4. Design Principles

### 4.1 Encapsulation

Each class encapsulates its properties and behaviors, promoting modularity.

### 4.2 Interface Segregation

Interfaces are designed to be specific to their roles, ensuring that classes only implement methods relevant to their functionality.

### 4.3 Single Responsibility Principle

Each class has a single responsibility, making the system easier to maintain and extend.

## 5. Design Patterns

### 5.1 Adapter Pattern

The UserAdapter class adapts the User interface for different user roles, allowing for flexibility in user management.

### 5.2 Strategy Pattern

Different worker types (e.g., Freelancer, FullTimeWorker) implement the Worker interface, providing varied behaviors for job applications.

## 6. Conclusion

The Agency System is designed with modularity, flexibility, and maintainability in mind. By applying key design principles and patterns, the system can efficiently manage interactions between users.

## 7. Future Improvements

Potential areas for enhancement include:

- Adding more user roles.

- Implementing a database for persistent storage.

- Enhancing feedback management features.