****

**Software Design Patterns**

**Code Refactoring for Carrot Defense**

Group T02

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Number** | **Phone Number** | **Email Address** |
| **Cheng Qin** | **2250397** | **19552120519** | **2250397@tongji.edu.cn** |
| **Jiale Peng** | **2252215** |  | **2252215@tongji.edu.cn** |
| **Wenchao Jia** | **2253968** |  | **2253968@tongji.edu.cn** |
| **Zhengyu Zhou** | **2252042** |  | **2252042@tongji.edu.cn** |

January 5, 2025

目录

[**1. Project Introduction** 1](#_Toc186898947)

[**1.1 Project Background** 1](#_Toc186898948)

[**1.2 Project Features** 1](#_Toc186898949)

[**2. Project Refactoring Overview** 1](#_Toc186898950)

[**2.1 Project Structure** 1](#_Toc186898951)

[**2.2 Design Patterns Summary Table** 1](#_Toc186898952)

[**3. Design Patterns Details** 1](#_Toc186898953)

[**3.1 Factory Method** 1](#_Toc186898954)

**1. Project Introduction**

**1.1 Project Background**

**1.2 Project Features**

**2. Project Refactoring Overview**

**2.1 Project Structure**

**2.2 Design Patterns Summary Table**

**3. Design Patterns Details**

**3.1 Factory Method**

**3.1.1 Pattern Introduction**

**3.1.2 Application Scenarios**

**3.1.3 Class Diagram**

**3.1.4 Key Code Demonstration**