

**Software Engineering II Project**

**Cleaning Help**

Part task: Write title of additional task here

**Group 1**

Zhang Haoze

Gong Zhaowen

Ma Xiaoqi

Wu Zelin

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1. Specification
   1. Description
      1. Product Purpose

Our product is a cleaning agent searching software, featured with quickly off-line searching,

updating and commenting about cleaning agent based on customers’ needs and favourites.

It is available on desktop computers and android mobile devices, supporting multi-platform.

* + 1. Product Scope

Our product provides three different languages, including Chinese, English and German,

containing most commonly used cleaning agent in China and Germany.

* + 1. Potential Customers

This product is specially designed for those who will travel, work or study abroad,

attempting to assist them to easily find the necessary cleaning agent in an unfamiliar society.

* 1. Product functions

The software serves unlimited number of users on a same device.

Each user can:

* Log in with username and password.
  + Username and password will be forced to fit certain format.
* Change password.
  + Old password is required to change password.
* Access to all the records of cleaning agent.
  + The categories will be displayed first, and those cleaning agents will be displayed in the form of tables in each category.
  + Multiple attributes of cleaning agents will be displayed as table columns with headers.
  + Each cleaning agent can be selected and the detail information of which can be displayed.
* Create unlimited numbers of cleaning agent lists.
  + Also allow user to modify, delete and sort those lists.
* Add, modify and delete his or her own record of cleaning agent.
  + Specially designed UI will be displayed to enable user to add, modify and delete.
  + Will also check if user's input is valid and show the execution status.
* Post, modify and delete his or her own rating and memo.
  + The average rating will be calculated and displayed.
  + The latest comment will be displayed in the first place.

# **User characteristics**

Users are assumed to:

1. have basic computer operation knowledge, such as log in, GUI interaction and typing.
2. be uninfected with hearing, vision, touching and any other kinds of disability.
3. speak at least one of the following language: Chinese, English and German.
4. be oversea students, business or casual travellers in the following country: China and Germany.
5. have basic knowledge in choosing cleaning agent.
6. have either computer or mobile phone.
7. have access to cleaning agents in nearby supermarket.

Users need the software to:

1. find the name of a cleaning agent by its purpose.
2. get a translation of a certain agent.
3. search for the purpose of an existing cleaning agent by name or other attributes.
4. do the cleaning with the help of instruction.
5. have their preference on some specific cleaning agent.
6. find detailed information about cleaning agents.
7. decide which cleaning agents to buy with additional information given by our application.

# **Functional requirements**

* + 1. Present
* Display the cleaning agents
  + The categories shall be displayed first, and those cleaning agents will be displayed in the form of tables in each category.
  + Multiple attributes of cleaning agents shall be displayed as table columns with headers.
  + Each cleaning agent can be selected and the detail information of which can be displayed.
    1. Customization
* Add, update and delete cleaning agents
  + User input shall be asserted.
  + Show status or result to the user after commit.
* Rating and user lists
  + Rating and list information is user specific.
  + Can be fully accessed by different user.
  + Can only be modified by the creator.
    1. Search
* Search keyword shall be:
  + Language insensitive, Chinese pinyin supported.
  + Case insensitive.
  + Partial compared.
  + Of unrestricted length.
* Search result shall be:
  + Presented in real-time during inserting keyword.
  + Folder up if the list is excessively long.
    1. Language
* The software GUI supports: Chinese, English and German.
* The content is prepared in: Chinese, English and German.

# **Non-functional requirements**

* + 1. Portability
* The software has two distinctive sub versions which support desktop computers and Android devices.
* The desktop version shall be supported by Java SE Runtime Environment 7 or higher.
* The Android version...
  + 1. Performance and Availability
* The software shall start up in less than 1 second.
* Search result shall be presented in less than 1 second.
* The software shall be always available during runtime.
  + 1. Security and Extensibility
* User data and system data are stored with database specific security.
* The software is not designed to extend.

1. UML Specification

# **Use Cases**

# **Class Diagrams**

1. GUI Design

# **Structure**

# **Screenshots**

1. Test

# **Description**

# **Results**

1. Evaluation

# **Group Work**

# **Task Responsibilities**