

Software requirement specification (SRS) document template

Project name: Weather Forecast

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Revision history

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Definitions and acronyms

1 Introduction

Describe the purpose of the document.

Countermeasures can be taken to reduce the impact of adverse weather

1.1 Product scope

List the benefits, objectives, and goals of the product.

Accurate and timely weather forecast has great social and economic benefits for economic construction, national defense construction, protection of people's lives and property

1.2 Product value

Describe how the audience will find value in the product.

People can prepare for various complex weather according to the weather forecast

1.3 Intended audience

Write who the product is intended to serve.

everyone who need to forecast the weather

1.4 Intended use

Describe how will the intended audience use this product.

After entering the APP, select the module of information people want to know, and click this module to know the real-time weather conditions they want to know

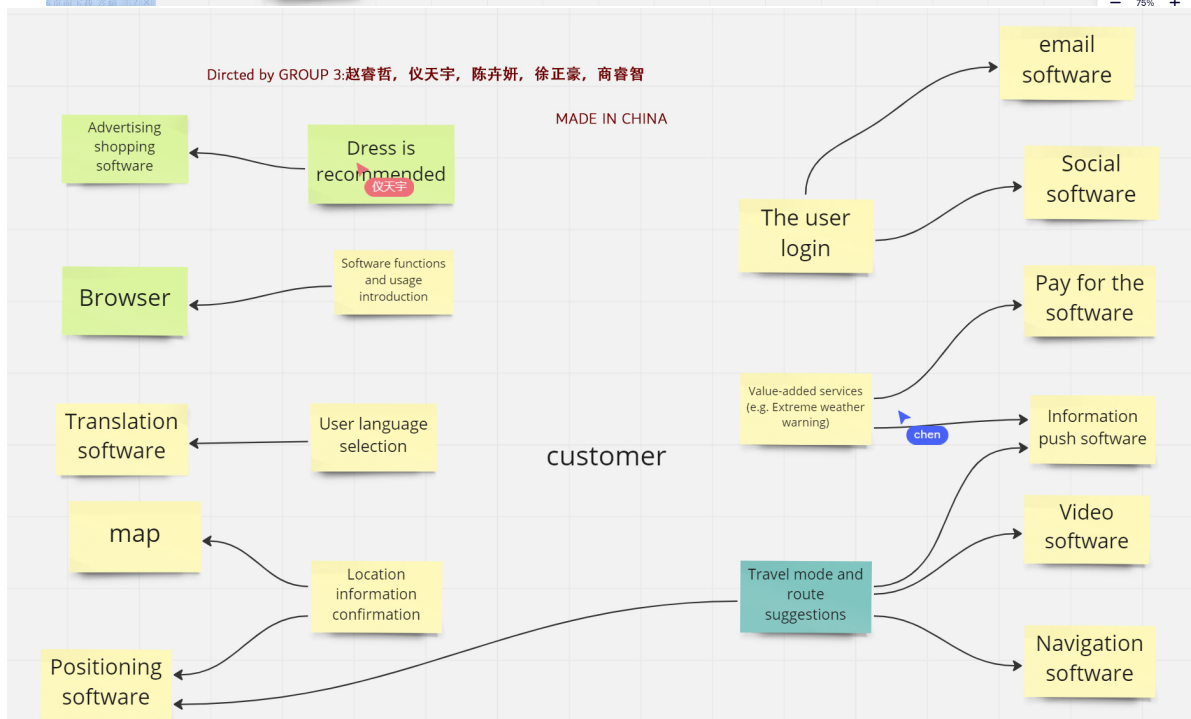
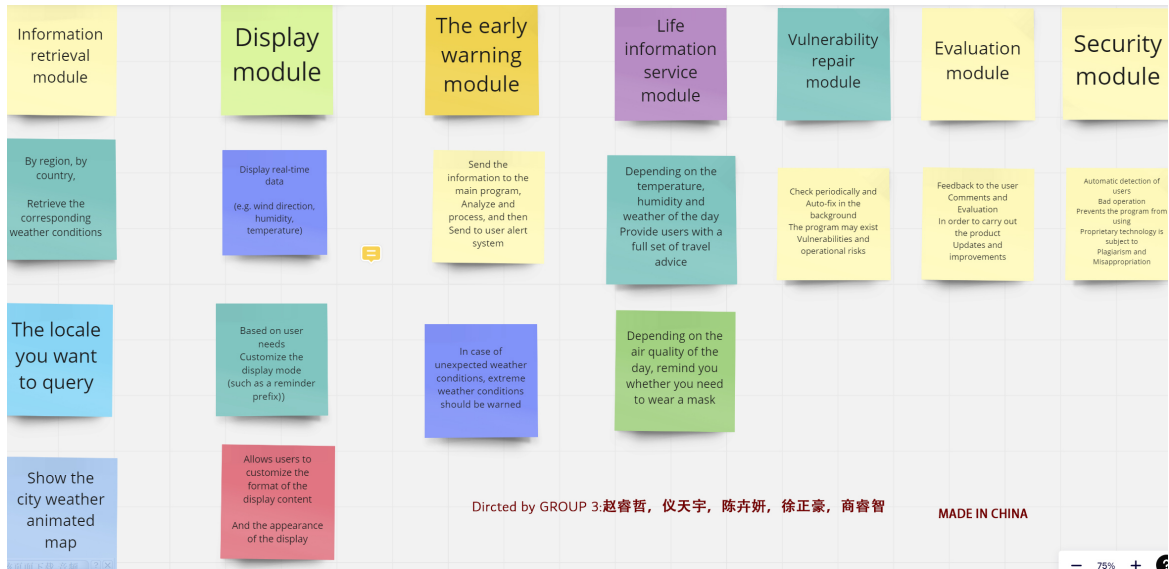
1.5 General description

Give a summary of the functions the software would perform and the features to be included.

It can predict the weather. If there are extreme weather conditions, it will alert and send SMS messages to give people travel suggestions, provide real-time air pollution index and UV intensity, etc

2 Functional requirements

List the design requirements, graphics requirements, operating system requirements, and constraints of the product.



In addition, based on the mobile and computer operating systems, the software must be compatible with the Hongmon, Android, and ios operating systems. For graphics, the software must support OpenGL® 2.1 or above hardware accelerated graphics hardware and at least 1 GB GPU memory

3 External interface requirements

3.1 User interface requirements

Use the flow of information to find users' interest points and build application scenarios for everyone

3.2 Hardware interface requirements

the supported devices the software is intended to run on :
CUP, motherboard, memory, hard disk, video card the
network requirements: Network security and high network
operation speed the communication protocols to be used:
TCP/IP protocol, IPX/SPX protocol, NetBEUI protocol, etc.

3.3 Software interface requirements

Specify and describe the purpose of exchanging data or messages between software components, describe the required services and the nature of internal component communication, and determine the data to be shared between components. If a special method must be used to implement the data sharing mechanism, such as a global data area in a multitask operating system, it must be defined as a restriction on implementation.

3.4 Communication interface requirements

The program needs to be stable, clear, fast and highly secure

Non-functional requirements

4.1 Security	<p>Users' location information, consumption information and personal identity information are strictly kept confidential, and no third-party applications are allowed to use them without authorization.</p> <p>Strict encryption measures are adopted to prevent users from accessing the software background and obtaining detailed information of the software</p>
4.2 Capacity	<p>The software currently faces a small number of users, so the storage of user identity information, location information, consumption information is small demand; However, after the user proficiency increases in the future, cloud servers need to be added to store a large amount of user data on the servers and do a good job of information encryption</p>
4.3 Compatibility	<p>CDN server, reverse proxy server, message queue server, load balancing scheduling server, distributed file server, distributed cache server, search engine server, distributed database server.</p>
4.4 Reliability	<p>On the basis of the existing hardware, even if a large number of users access the software and the database at the same time, because uploading and displaying the weather data occupies little memory, it is difficult to cause serious errors in the system. The critical time can be expected to be 23 hours, with one hour for software maintenance</p>
4.5 Scalability	<p>When receiving I/O information flow, weather data requires very small storage data, so the I/O information is small, which may only occupy 2%-4% of the user's CPU. When multiple users access, the traffic surges, and the actual running memory of the main server will not be too much occupied, the maximum is 30%-40%</p>
4.6 Maintainability	<p>The first step in the process is for the developer to submit the code to the repository. All subsequent steps begin with a single submission of native code for three kinds of testing: unit testing, integration testing, and peer testing. After the first round of testing, the code is merged into the trunk and ready for delivery. After delivery, you build and then move on to a second round of testing. By build, I mean turning the source code into actual code that can be run, such as installing dependencies, configuring various resources (stylesheets, JS scripts, images), and so on. All tests should be automated. The few test cases that cannot be automated should be run manually. After the second round of testing, the current code is a deployable version, and all files for this version are packaged and archived to the production server.</p>
4.7 Usability	<p>First of all, we will provide users with guidance before using the software, and the software functions will be clearly marked in the menu to provide text guidance. In addition, we will also provide customers with manual and machine customer service services to answer their questions</p>
4.8 Other	<p>The software automatically finds bugs and is submitted to the developer</p>

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