**OnlineShop Development Report Draft**

**Description and requirements**

This application is an online shopping website. This is a business to customer(B2C) platform which means it will sell things directly to customers. A B2C website has frontend page and backend page, frontend page is used for displaying products and backend page is used for database management.

Functional requirements:

Frontend:

1. Home page: Carousel display, Category display, Advertisements display, Special products.
2. Products information page: Product main picture display, Product description picture display, Product description, Product configuration information, Product comments.
3. Checkout page: Shipping address, Product information.
4. Shipping cart page: Single select and select all, Quantity edit, Delete.
5. Order generation page
6. Products category page
7. Search page
8. Login and registration page: registration (including mobile registration), login (including mobile login).
9. Recover password page: Register and retrieve password through email.
10. User information page: My profile, My order, My comment, My address, Edit password.

Backend:

1. Administrator management
2. User management
3. Slider management
4. Category management
5. Category advertisement management
6. Advertisement management
7. Products management
8. System management
9. Comment management
10. Address management
11. Order management

Nonfunctional requirements:

Scalability: The scalability of backend system

**Development methodology**

There are many development methodologies, but the most commonly used are agile development, waterfall development and iterative development. Waterfall development is a traditional development method. It is the most typical and predictive method which strictly follows the step pf pre-planned requirements, analysis, design, coding, and testing. Waterfall development requires that each development period be perfect before proceeding to the next step. Iterative development does not require the tasks of each stage to be perfect, but finish developing the whole project first as soon as possible instead of focusing on the shortcomings during development period. After that, the product will be gradually improved according to customers’ feedback. Compared with waterfall development, iterative development is suitable for project where the requirements are not clear, so that when the requirements change during the development process, the impact will be smaller than that in waterfall development. Requirements are usually changing in many projects nowadays, so iterative development has more advantages than waterfall development. Agile is a kind of iterative incremental development method. In agile development, the construction of a software project is divided into multiple sub-projects, and each sub-project is tested and have the characteristics of integration and operation. In other words, a large project is divided into multiple small projects that are interconnected, but can also be run independently, and completed separately. Compared with waterfall development and iterative development, agile development may have more flexibility and stability, less unproductive work, faster high-quality delivery, better development team performance, stricter project management control and faster bug detection. It is difficult to analyze and mine all the requirements in any software project’s early stage. Some requirements will gradually appear in the process of design and implementation. Agile development is more adaptable to this change than waterfall development.

In this project, I have chosen Agile as development methodology.

**Development plan and approach**

**Testing plan and approach**

This project will use black-box testing. The reason why white-box unit test is not used in this project is that although MVC design pattern has been used in development of this project, the model part has been written in controller. It is impossible to test the code coverage of each function except the API. Therefore, in this project, the mainly testing methods will be browser and API testing.

Black-box testing:

Black-box testing is to test software from outside, it is also called function testing. The following paragraph will demonstrate several black-box testing methods that will be used in this project.

Testing cases design analysis:

Backend:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **id** | **requirement** | **quality** | **module** | **page** | **priority** | **value** |
| F-01 | Add administrator | function | Administrator management | Administrator list | high | 1.bullet box  2.username and password tested with boundary value  3.submit and reset button |
| F-02 | Edit | function | Administrator management | Administrator list | high | 1.bullet box  2.password  3.status choice  4.submit and reset button |
| F-03 | delete | function | Administrator management | Administrator list | low | 1.click and redirect |
| F-04 | Status button | function | Administrator management | Administrator list | high | 1.click |
| F-05 | Records display | function | Administrator management | Administrator list | low | 1.records display |
| F-06 | search | function | User management | User list | high | 1.search user by telephone |
| F-07 | Add category | function | Category management | Category list | high | 1.jump to specific page  2.submit and reset button |
| F-08 | delete | function | Category management | Category list | low | 1.delete and prompt message before delete |
| F-09 | Add branch | function | Category management | Category list | high | 1.jump to correct page  2.when it is not root category then can’t be added |
| F-10 | Add product | function | Product management | Product list | high | 1.jump to correct page  2.category can be chosen according to category table  3.Images can be correctly added  4.submit and reset button |
| F-11 | Order number | function | Order management | Order list | high | 1.order number should be correctly linked to order information |
| F-12 | Receiver information | function | Order management | Order list | high | 1.receiver information should be correctly linked to receiver information |
| F-13 | operation | function | Order management | Order list | high | 1.operation should be correctly linked to status edit page  2.status edit page can be edited  3.submit button |
| F-14 | Order status display | function | Order management | Order status list | low | 1.status of each order can be displayed properly  2.status of each order can be edited |
| F-15 | System list | function | System management | System configuration | low | 1.title,kerwords,description,statistic box can be edited  2.image can be uploaded |
| F-16 | Add slider | function | System management | Slider management | low | 1.bullet box  2.boundary value for orders  3.image upload  4.submit and reset button |
| F-17 | Add ads | function | System management | Ads management | low | 1.jump to correct page  2.title,href,sort can be edited correctly  3.picture upload  4.submit and reset button |
| F-18 | Add category ads | function | System management | Category ads management | high | 1.jump to correct page  2.choose category  3.picture upload  4.submit and reset button |
| F-19 | Backend management | function | Home page | Home page | low | 1.logged administrator name display  2.change password  3.logout |
| F-20 | login | function | Login page | Login page | high | 1.display login page when don’t log in  2.username and password  3.captcha |