

Individual Report

Name: *Ruipeng Jiao*

Task1:

Based on the problem statement above, as well as using the Requirements table template (found below), provide 5 functional and 5 non-functional requirements. For each requirement, you should indicate supplier compliance as well as any assumptions as needed. Please note that you may be able to think of more than 5 requirements of each type, but you only need to list 5 of each here.

**Functional Requirements**

|  |  |  |
| --- | --- | --- |
| Requirement | Priority  (H, M, L) | Supplier comment |
| Staff can check their tasks for the day by logging into their account and providing a check button to click on | H | Click on the enquiry button to display this staff member's assignments for the week, not just the work tasks of the day. |
| Provide a form filling board where staff can fill in the form once a week and click the save button to save and submit the contents of the form | H | Staff members have permission to change the content of their own forms |
| The manager has access to view all staff positions. A button is provided, which is clicked after logging into the manager's account to display task information and the corresponding staff member, or NULL if there is no staff member on the task. | H | If the task has staff member, then staff member number and name are displayed |
| The manager has the right to modify all staff positions. Edit and Save buttons are provided in the task information section. Clicking the Edit button allows the manager to adjust the personnel in the task position. Click on the save button to complete the staff adjustment and save | H |  |
| Each week the system takes the list of tasks, staff availability and qualifications from the database for the week and assigns the staff member to a job. Finally, the staff member corresponding to each task is displayed and if a task has not been assigned then NULL is displayed for the staff member of that task | H | Special jobs should be assigned to qualified staff before other staff are assigned to essential jobs in the distribution of tasks. |

**Non-Functional Requirements**

|  |  |  |
| --- | --- | --- |
| Requirement | Priority  (H, M, L) | Supplier comment |
| Strict authority access control, employees can only access the data within their authority and only perform operations within their authority after they have been authenticated | H |  |
| Response times of no more than 1.5 seconds during normal hours and no more than 4 seconds during peak hours at 95% | M | More than 20 seconds is considered unresponsive |
| There are prompts for staff input and data checks to prevent data anomalies | H |  |
| Can withstand general malicious attacks from the Internet. Such as virus (including Trojan horse) attacks, password guessing attacks, hacking, etc. | H |  |
| No more than 10,000 database rows and a maximum database size of 100GB | M | Minimum 300G of disk space required |

Task2:

Choose and justify a software development process model that you would use to implement

the system described in the problem statement. As part of your answer, you should state

which process model you have chosen and give at least two reasons as to how the process

model’s key features are appropriate for the problem statement

A requirements analysis of the problem reveals

1. This is a museum staff management system, where the problems faced are all about matching between staff and work tasks, editing and access to permissions.

2. The museum contains only a few different houses and shops. So there are not that many employees.

In general, this people management system is a small system because the database and the number of staff required for this system are not very large. At the same time, the requirements are very clear and the situation is clear in terms of purpose. So the requirements may not change later in the project or may change very little.

Therefore, I believe that the waterfall model is a more appropriate model for the development process of this project.

The waterfall model divides the software lifecycle into six basic activities: Requirements Analysis, Specification, Design, Implementation, Testing, Acceptance Testing. and defines them in a fixed top-down, interlocking sequence Development. The core idea of the waterfall model is to simplify the problem by process, separating the implementation of functionality from the design and facilitating the division of labor. In other words, the waterfall model is a structured approach to analysis and design that separates logical implementation from physical implementation.

I chose the waterfall model as the development model for this project because of 3 reasons.

Firstly, the requirements were clear. The waterfall model requires detailed documentation as the completion criteria, especially requirements and specifications. The requirements for this museum's back-office people management system were all clear, so the waterfall model could be used.

Secondly, the waterfall model has a traditional engineering cycle. Clear phasing. Clearly identifying when to transition from one phase to another - this will help with planning and monitoring progress. It is not difficult to plan, monitor and implement this not very complex system. So the waterfall model is appropriate for this museum’s back-office staff management system.

Finally, this back-office staff management system is not a new system or uses new technology, so it is easy to plan with experience. The waterfall model is suitable for development in a mature system, so in general, this system is suitable for development using the waterfall model.