1. Sprint 2 Overview
2. Issues
3. Stack A
4. Stack A & B
5. Retrospective
6. Overview

·Do some analysis of the project and dicide what kind of technologies should be included

·Search technologies which is related to each part

·Come up with stack A and stack B

·Using ADOT method to compare them

·Begin with project design

1. Issues

·Be unfamiliar with system architecture

Because all of us are unfamiliar with complete project development process. In the beginning, we feel very confused about how many kinds of technologies should be included in our technology stack and what are them. All things had to be searched on the Internet, it is a huge work

·Lack of cooperation between group members

Because of all classes are taking online, our group members could only use MSTeam to communicate with each other. The communication between group members is very slow. As a consequence, our cooperation isn’t very successful.

·Can’t complete understand some talk

By using MSTeam, some view can’t be express clearly. Which cause some allocated tasks can’t be finished as requirment. So we have to redo the task. It will enlarge our workload.

1. Stack A

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1. Technologies

Front-end:

Front-end Language: HTML, CSS, JavaScript

HTML gives the skeleton to website, CSS gives the meat to website, JavaScript make website can interact with poeple.

Front-end Framework: Vue

The aim of Vue is that developer can use simple API to realize data binding and combined view.

UI Designer: Sketch

Sketch use the mothod of vector plotting to design user interface of website and other software.

Back-end:

Programming Language: Java

Define the data which is needed by computer and what action should do in different situations

Webserver: Apache

Response to requests from client and handle them.

Database: MySQL

The repository of arranging, storing and managing data based on data structure.

Cloud Host: Google Cloud Platform

Cloud Host can provide simple and efficient, safe and reliable, stretch computing service.

Back-end Framework: SpringMVC

Receive parameters in request and send back data result to pages

Security

Acunetix:

Acunetix is a network vulnerability scanning software that can detect network

vulnerabilities

1. Mock UI/UX design
2. Security issue

1. Patching - It is important that we consistantly make sure our users  
updating their software. This is to ensure all users are using  
an up to date and secure platform in which they can operate their  
business. Rules and protcols can be enforced to ensure each user  
is updating their application. We can include auto updating which  
will aid in securing our software.

2. Automated security checks - This will be an automation script designed  
to detect misconfigurations and breaches within the system. These automated  
check with greatly increase the chances of detecting any security vulnerability  
within our software.

3. Enforcement of least priveledge - We need to ensure that our users have  
the minimum amount of access to the application for which they need to complete  
their work. For example, managers will have the ability to update and change  
asset information, and have access to all asset information. Drivers for example  
do not need access to all of the assets locations, they only need their own. By  
implementing these user limitations we can further secure our software and avoid  
the spread of sentitive data being accessed by those who do not require it.

4. Integration of secure development throughout the development process -  
It is important that security is kept in mind throughtout the entire design  
process to help minimise any security risks. The basis of this best practice  
is that if security is always in mind when developing, security risks are  
less likely to be present

5. Create an incident response plan - It is impossible to develop a 100%  
secure software. Having this in mind, it is very important to have an incident  
response plan. This plan will be in place for if a security breach does occur,  
we will be able to minimise the impact of the breach and help isolate the  
security threat in order to reduce senstive data being leaked.

6. Segmentation of Data - Isolate our critical data from the rest of our software  
in order to limit our chances of sentive data being accessed. This can be done by  
isolating our sensitive data and relocating it onto a different servers whcih will  
limit access to the data.

7. Monitor user activity - A simple way to know if any malicous activity is occuring  
is to monitor all user activity throughout the software. By monitoring each users activity  
we can easily identify any security risks and eliminate any threat.

1. Education for users - A software can be developed extremely secure, but one of the  
   biggest vulnerabilities in IT are the users themselves. Education of security risks For  
   all users is vital to protecting the inforamtion within our software. Users need to know  
   the impact of what can happen if they share their password, or give someone information  
   that can help a person with malicious intent to break into our system and retrieve valuable  
   and sensitive data.

VI. Data Storage Plan

Obeject: Manager,Client,Asset

Three obeject belong to three datasheet

Feature: Manage, Search, Status changing, Access

Technology: Database, Cloud Hosting

Resources are stored in the database and hosted to the cloud platform. Use the cloud platform to manage and recall data from the database.

1. Stack A & B

|  |  |  |
| --- | --- | --- |
|  | **Stack A** | **Stack B** |
| Front-end | | |
| Front-end Language | HTML, CSS, JavaScript | |
| Front-end Framework | Vue | React |
| UI Designer | Sketch | Photoshop |
| Back-end | | |
| Programming Language | Java | C++ |
| Web Server | Apache | Nginx |
| Database | MySQL | Microsoft SQL Server |
| Cloud Host | Google Cloud Platform | Microsoft Azure |
| Back-end Framework | SpringMVC | gSoap |
| Security | | |
|  | Acunetix | |

Ideal project:

1. Middle/small size project
2. High Performance-to-price Ratio Development (use less resouces to achieve higher performance)
3. Scalability and flexibility

Stack A use Java as programming language which is more suitable for lightweight project development. SpringMVC+Vue+Apache is a mature and popular combination of technology. Microsoft SQL Server is better than MySQL in performance but MySQL is almost free. So if we have enough financial support, we will use MSS.