



School of Information Technologies
Faculty of Engineering & IT

ASSIGNMENT/PROJECT COVERSHEET - GROUP ASSESSMENT

Unit of Study: SOFT3888

Assignment name: Optimize Search Results In Confluence

Tutorial time: 4-6pm. Monday Tutor name: Ronald Noronha

DECLARATION

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We realise that we may be asked to identify those portions of the work contributed by each of us and required to demonstrate our individual knowledge of the relevant material by answering oral questions or by undertaking supplementary work, either written or in the laboratory, in order to arrive at the final assessment mark.

Project team members				
Student name	Student ID	Participated	Agree to share	Signature
1. Hang Zhao	470522208	Yes / No	Yes / No	Hang Zhao
2. Jiyuan Yang	470504433	Yes / No	Yes / No	Jiyuan Yang
3. Xianlong Jiang	470522183	Yes / No	Yes / No	Xianlong Jiang
4. Jinjing Xu	470509014	Yes / No	Yes / No	Jinjing Xu
5. Yu Shi	470508992	Yes / No	Yes / No	Nicole Shi
6.		Yes / No	Yes / No	
7.		Yes / No	Yes / No	
8.		Yes / No	Yes / No	
9.		Yes / No	Yes / No	
10.		Yes / No	Yes / No	



Optimize Search Results in Confluence

---A plugin that tremendously improves the user experience and helps to optimize the search results

Team Quokka

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Jinjing Xu: 470509014

Jiyuan Yang: 470504433

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Yu Shi: 470508992

Tutor: Ronald Noronha

Submitted Date: 11/09/2019

1. Introduction

As an outstanding collaboration software, Confluence has provided hundreds of enterprises helps to manage their intelligence resources. However, the search engine has a bottleneck of its efficiency. The company of Confluence, Atlassian has been working on improving the performance of it for years by enhancing its search algorithm. However, the search engine is still required to be improved and this is our project goal. This report will show the details of the project.

As for the user stories, we have already finished UI related ones. In detail, the following user stories.

- As a Confluence user, I want to view highlight results easily so that I do not need extra time to find them.
- As a team leader/employee, I want to be able to highlight the contents I want easily so that no extra time is spent on filling forms related to the function.

The user stories do not serve as major ones and minor risk is evaluated. It is suggested by the client at the 2nd client meeting¹.

2. User Stories

2.1 The normal user (team member/employee)

As our primary user type, the normal user is the main entity that views the highlighted and optimized results. 4 user stories are related to the normal user:

1. As a normal Confluence user, I want to have a better search engine so that I can get a more valuable result when I search.

This is the major user story we are aiming to fulfil. It is delivered by our client at the very first meeting². The main risk is whether the pattern we deliver the more valuable result is appropriate. After 3 meetings with the client, the risk is controlled to minor³.

2. As a team member, I want to get suggested materials when I search so that I can get useful information easily.
3. As a new employee, I want to get familiar with the newest policy so that I can get used to the company.

The two user stories tells another two major functions determined by our scope. They are decided after 2 scopes rejected by the client⁴. Major risk is whether the material is valuable for the user for this user story.

¹ https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week5%20Client%20Meeting

² https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week%202%20Client%20Meeting%20Minutes

³

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week4%20Client%20Meeting,https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week%203%20Client%20Meeting%20Minutes,https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week5%20Client%20Meeting

⁴ https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week4%20Client%20Meeting

2.2 The Authorized Users (team leader/employer)

Two use stories are related to the authorized uses:

4. As a team leader, I want to highlight useful documents related to specific key words so that I can let other teammates see them when they search with the same key words.
5. As a manager, I want to highlight new policies for the employees so that they will not violate them.

The two user stories are evaluated as medium priority. They serve for the 2nd and 3rd major user stories. Main risk for them is whether the leader can select good materials for the normal users. They are decided together with the previous 2 user stories⁵.

3. Evaluation

3.1 Overview

Requirements	Acceptance tests
The function is easy to use	User friendly
Assigning documents	Availability
Viewing assigned documents	Data Integrity

3.2 Details of tests

Acceptance testing would be tested by the tester to make sure if the assigned documents function works well. An acceptance criteria of whether the highlighted result would be shown in the specified place would be defined by the testers. In order to ensure every assigned result can be shown, several testers would run 100 times acceptance test. The normal and boundary indicate nature should be met if all the highlighted documents are shown. If the highlighted results do not show 100%, it would be an abnormal nature. In this case, if the normal indicate nature is met the system could be accepted.

User acceptance testing is mainly used to test if the requirements of Confluence are met. In order to increase the user satisfaction, the acceptance criteria of user satisfaction is above 80% is defined by the project team as a boundary indicate nature, 90% of the user satisfaction would be the normal indicate nature and if the user satisfaction is lower than 80%, it would be an abnormal indicate nature. Two of acceptance tests is planned by the team which includes the test of if the authorized user can assign the documents to assignees and the test of if the system can assign the documents on searching pages. The acceptance test would be running by doing a survey of user satisfaction for both the normal users to view the

⁵ https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week4%20Client%20Meeting

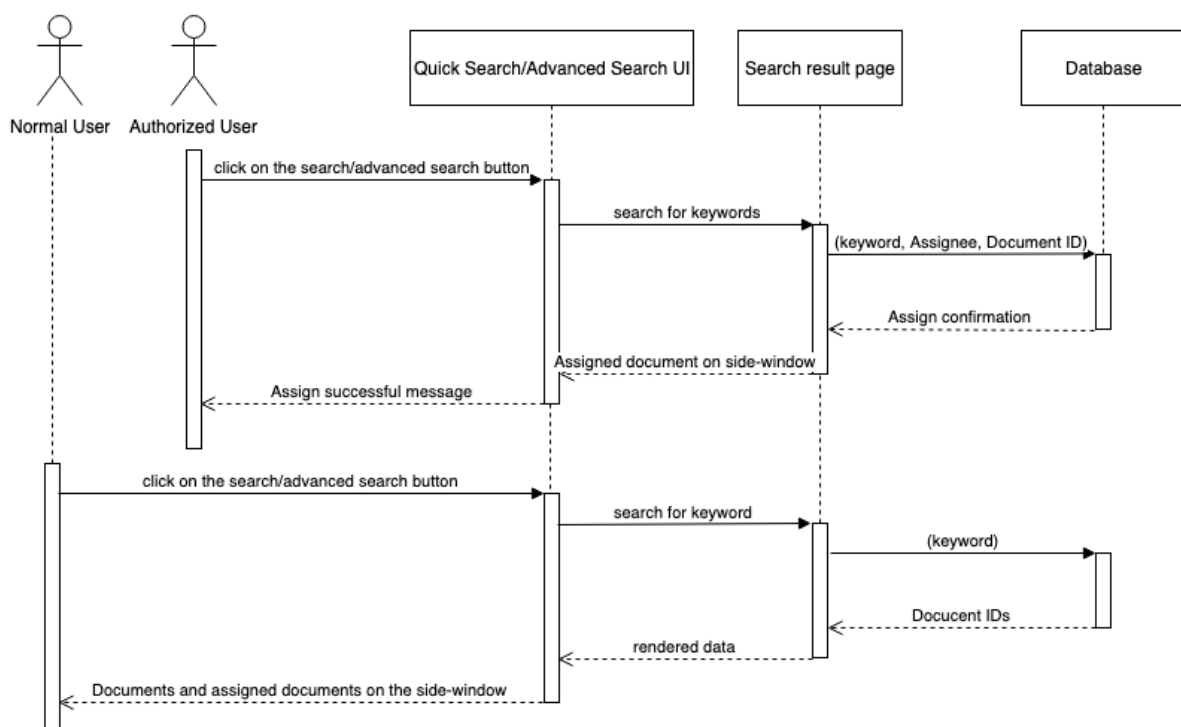
assigned documents and the senior users to assign documents. The result of the survey would be negotiated to make sure if the change of the confluence search engine is acceptable by most of the Confluence users. Moreover, the user friendly would be insured by evaluation the result of the survey.

To evaluate the usability test of assigning function. Expert review would be considered as a key point to make sure the usability of the confluence search engine. As the client is from the Atlassian company. The employees in the Atlassian company would provide us the advice to make sure the usability of our new function. Moreover, the remote usability testing could be tested by the friends of teammates from China to make sure the new function can be worked effectively in different countries and time zones.

3.3 Conclusions

The test of the system in main using acceptance testing and usability testing. However, there are still some limitations for the user who is not familiar with some knowledge about software, as the Confluence is mainly focus on programmers.

4. System structure overview



The system is inspired by “providing user results” function from Google Ads. There are two types of users in the system, which is the “Normal User” and the “Authorized User”. Team members can be allocated to a specific ‘manager group’ in which members are authorized to assign documents.

Once there are documents that are prominent and necessary to be focused on, the authorized user is able to assign certain documents according to the keyword. Firstly, the authorized user searches for a certain keyword to obtain the target document and then assign this document with the specific keywords, and of course the document should only be assigned to certain

selected members. When the authorized user conformed the assign information, the assignee, corresponded keyword and the document ID will be delivered to the database. If the assign operation is successful, the successful message will be sent to the operation issuer. After, the assigned document will be achieved and shown on a side-window in the search result page.

When the normal user search for a keyword, the keyword will be delivered to the database and the document ID will be retrieved. The assigned document and other search results will be rendered in the search result page. Normal users are not able to assign documents, assigned documents will automatically displayed on a side-window in the search result page. Besides the quick search, there are also an advanced search module in confluence. Although the UI in these two modules are not the same, the design and operating logic are identical.

5. Tools used to build system

During the process of building our system, there are many technical tools that are demanded to help us complete our project. The tools mentioned below are what we use.

5.1 Prototype: Balsamiq Mockups 3

Our group uses Balsamiq Mockups 3 to design our prototype and preview our project results.

5.2 Language: Java, HTML/CSS, JavaScript

Java is the language for backend development.

HTML/CSS are the languages for designing front end development.

5.3 Source code management: IntelliJ, Bitbucket

Team members use IntelliJ to write Java code and run the program in it.

Bitbucket is an outstanding software for team collaboration, version control and source code management.

5.4 Database tools: Confluence Query Language (CQL), Search-V2, Postgre

Confluence Query Language (CQL) is a high level database query language of Confluence that is necessary for us to build our system. In addition, Search-V2 is low level database query language of Confluence which is not recommended to use.

We choose Postgre as our database.

5.5 Other tools: Confluence SDK, Junit

Confluence SDK is the core of our project to make a plugin for our project.

Junit is made use of testing our program.

6. Information search

6.1 Software:

Balsamiq Mockups 3

Confluence SDK

IntelliJ IDEA

Bitbucket

6.2 Reports and evaluations of software:

6.2.1 Balsamiq Mockups 3

It is a UI design tool for creating prototypes(also called wireframes or mockups). It can be used to generate a sketches for our project so that we can have efficient discussions and overview of before programming. It is an easily used UI design tool with lots of UI templates like buttons, icons and search bars.

Literature found on the web: Balsamiq Wireframes Quickstart Guide. ("Balsamiq Wireframes Quickstart Guide", 2019)

6.2.2 Atlassian SDK

It is the Atlassian plugin software developer kit. It can be used to create apps to extend Atlassian server applications like Jira Software, Confluence and Bitbucket Server. It is a highly integrated and sufficient fully functional tool.

Literature found on the web: Atlassian SDK modules guide ("Plugin modules", 2019)

6.2.3 IntelliJ IDEA

It is an integrated environment for java programming language development. It is one of the best Java development tools in the industry. IDEA has some very outstanding features like code automatic prompting, code analysis and various version tools.

Literature found on the web: IntelliJ IDEA Documentation ("Documentation - IntelliJ IDEA", 2019)

6.2.4 Bitbucket

It is a web-based version control repository hosting service is owned by Atlassian. It can be used for source code development projects, which is similar to Github.

Literature found on the web: Atlassian Bitbucket Tutorial ("Tutorials - Atlassian Documentation", 2019)

7. Group reflections and conclusions

7.1 Challenge/Risk analysis

Risk No.	Risk Name	Risk Description and Impact	Mitigation Plan	Impact Level and Likelihood
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R01	Time	Our project has been behind schedule so far. It is likely that we cannot finish our project within limited time.	Team members should increase the number of meetings and improve the efficiency.	Serious-High
R02	Technology	Our team members lack some knowledge about developing our system, it will result in that we cannot complete our project.	Team members should learn more knowledge which is relevant to the project and ask client for help.	Serious-High
R03	Instability	The support for MacOS of Confluence is not perfect and this will cause software crash.	Team members should reduce the use of MacOS and use Windows whenever possible.	Minor-Medium
R04	Management	Team members are not familiar with the project management.	Team members should obey the management of the team leader. The leader should make a proper management plan.	Serious-Low
R05	Emergency	Some emergencies may occur during the process of development and these emergencies may lead to project delay and some results we cannot predict.	Make a plan to deal with some emergencies according to possible factors.	Limited-Medium

7.2 Limitations of functionality

1. The highlight documents can only be shown by searching the exact same key words.
2. The highlight documents can only be shown to assigned group of users.
3. The function can perform well is rare words are used as key words but not suitable for common words.

7.3 Limitations in terms of structure, design and implementation

Structure: New functionalities requires more UI change which can be extremely sophisticated.

Design: The UI design is not as good and compatible as the original UI.

Implementation: The plugin may not support the latest version of Confluence.

7.4 Primary Strength

1. Good collaboration in the team and with the client.
2. Sufficient technical support from client.

7.5 Programming practices

In terms of XP(Extreme Programming), we have worked out detailed user stories and abstract functionalities accordingly. The user stories always serve as our guidance to ensure we only work on what is needed. In other words, the simplicity is considered in the process. On the other hand, team harmony is well managed during the whole project. Every team member devotes him/herself to the project.

However, due to the long planning phase, we are a little behind schedule. The actual XP programming phase has not started yet. We may need to integrate several smaller releases into bigger ones to decrease the release cycles.

As for the code, bitbucket is used for version control and the integration-manager model is used. In other words, each team member should work on his/her own branch and the merge should be done by the head programmer. In terms of issue tracking, each team member should publish an issue on the bitbucket and close it when finished. All team members will view the issue and the manager will try to help with the team member if any difficulty happens. Google java coding style is applied for the project. The head programmer is responsible for the coding style check.

8. Individual contributions (individual reports), work split and reflections

8.1 Work split

	Hang Zhao	Jinjing Xu	Jiyuan Yang	Xianlong Jiang	Yu Shi
Group contract			✓		
Week2 documents			✓		
Week3 documents					✓
Week4 documents				✓	

Week5 documents		✓			
Week6 documents	✓				
Quick search assign UI(prototype)		✓			
Advanced search UI(prototype)					✓
Quick search result page UI(prototype)				✓	
Advanced search result page(prototype)	✓				
Plugin initial coding preparation(prototype)			✓		
Introduction and background research		✓			
User Story			✓		
Evaluation and test				✓	
System structure and requirements design	✓				
Tools used to build system		✓			
Information search					✓
Challenge/Risk analysis		✓			

Limitations	✓				
Strengths and programming practices			✓		
Technical evidence					✓
Group activities evidence					✓

8.2 Individual report

Hang Zhao: 470522208

Jinjing Xu: 470509014

Jiyuan Yang: 470504433

Xianlong Jiang: 470522183

Yu Shi: 470508992

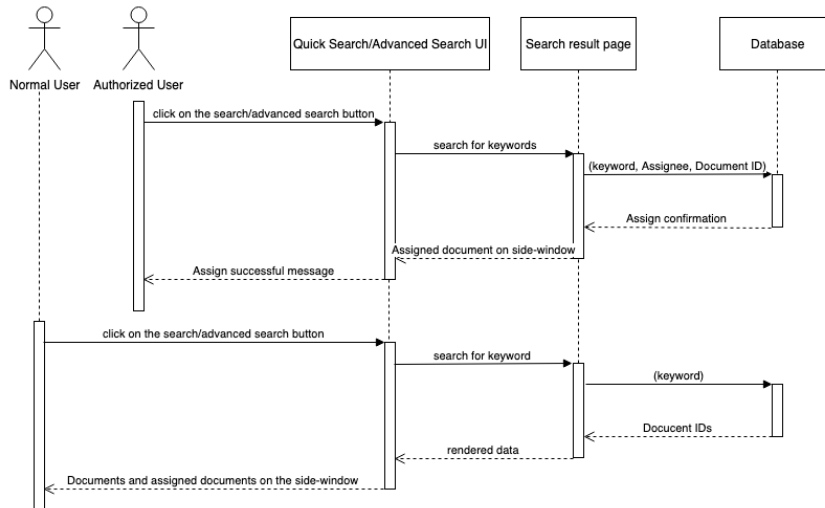
Individual Report

Hang Zhao: 470522208

Contributions

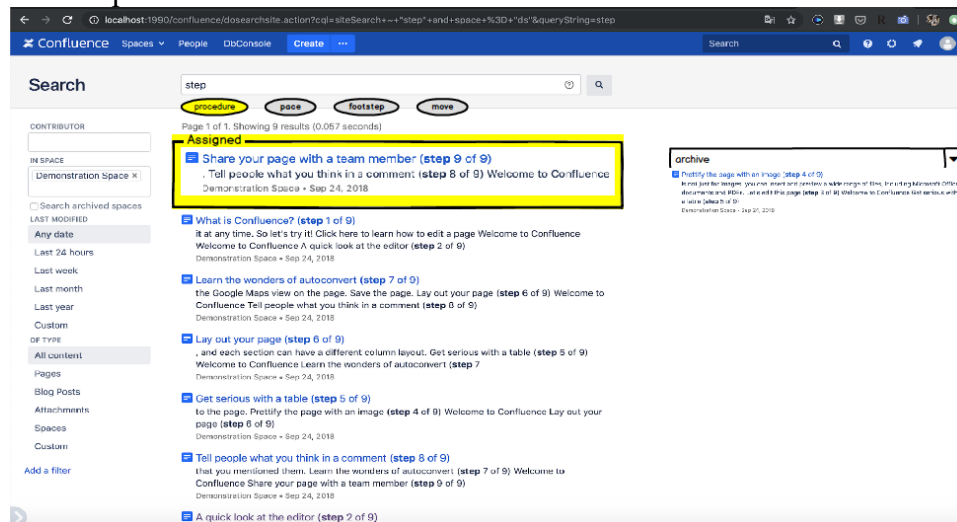
Technical Contributions:

I have done the system design with a sequence diagram.

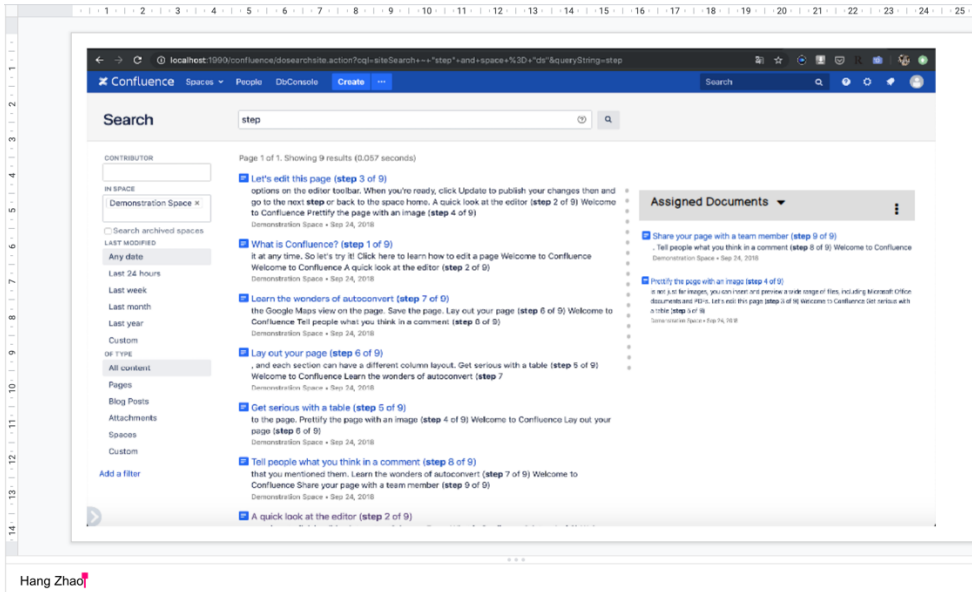


I have also searched for the technical literatures for the tools and initial design. Besides, I have made a simple mock-up for the first demonstration for the client and then made part of the entire prototype.

Mock-up:

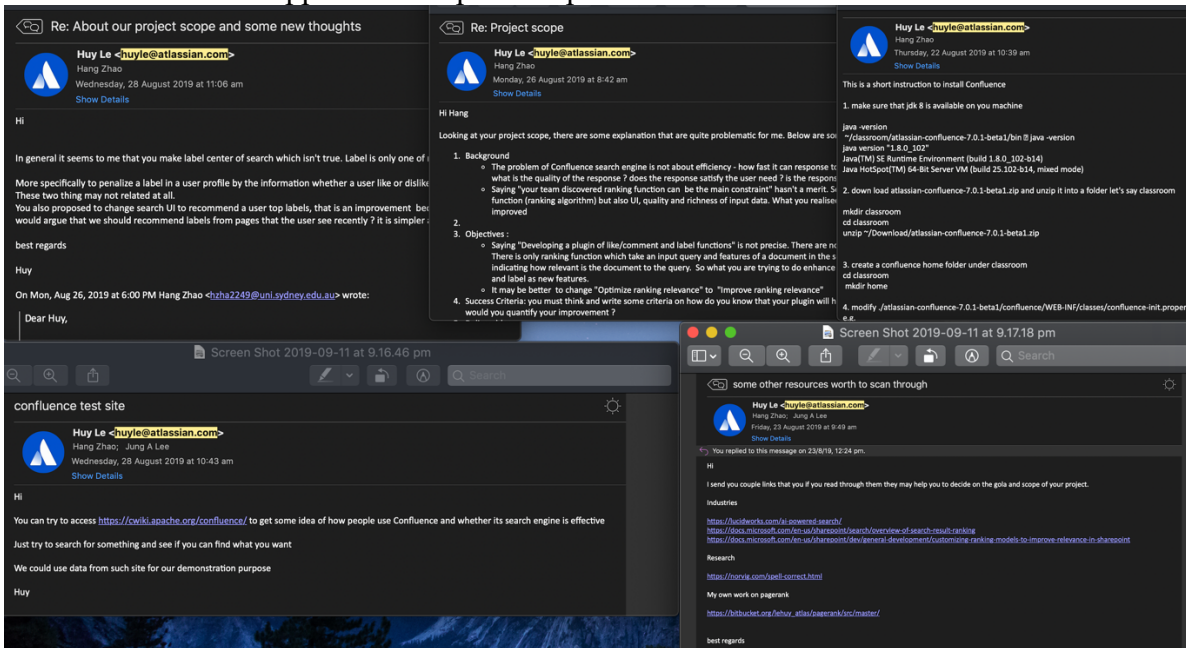


Prototype:



Non-technical Contributions

I am the facilitator of the group and the client, I am responsible to contact with the client if there are some issue appears and report our process to him.



I have put the useful links on the issue in bitbucket. (https://bitbucket.org/Arthur_Zhao/quokka/issues?status=new&status=open)
 I have also delivered some documents including wiki and weekly reports. (https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week6%20Team%20Meeting)

Individual Reflections

Version control, coding styles, XP, etc:

The role allocation for the team may not perfectly appropriate, but we have done the allocated part well.

Challenges met in the project:

We met a great challenge at the first stage, which is the project direction. We actually do not have any precisely pre-defined requirements about the project, so we need to decide what we could do to improve Confluence, however, Confluence as an outstanding software is already complete and optimized enough, which leads to the great difficulty to decide the project direction.

Secondly, we found that the UI of the search interface of Confluence is hard to change, as the search function is actually a plugin from Atlassian that is not possible to allow us to modify. Luckily, after seeking help to the client, his co-worker gave us a possible way to change the UI, we are now trying to implement this solution.

How these were tackled and the outcome

I have emailed our client a lot and after 4 weeks of discussion and demonstration with the client, we have finally decided the project content at week 4. The long duration of the process delayed the schedule badly, so we need to speed up our progress. Actually, this experience is really valuable said by the client, he also said that during a real project in the company, a huge amount of time is spent on deciding a right and efficient direction, so this experience may help us a lot in the future career.

Luckily, after seeking help to the client, his co-worker gave us a possible way to change the UI, we are now trying to implement this solution.

Achievements

We have decided the project scope and made the prototype of the product. We have also made some modification of the UI and started to code.

What you would do differently in future

I will learn more about the target product and company before meeting and discussing about the project scope and content, this may help to decide the scope easier and more precisely.

I will also try to communicate with the client more frequently to let him know our current progress.

Your role in the group and as a software engineer

I am the facilitator in the team, I am responsible for contacting with the client and report our process and problem to him, I also need to facilitate the group members while meeting.

I am the programmer(code) and system architecture designer. I am responsible to write the code and design the functions and architecture of the system.

Individual report

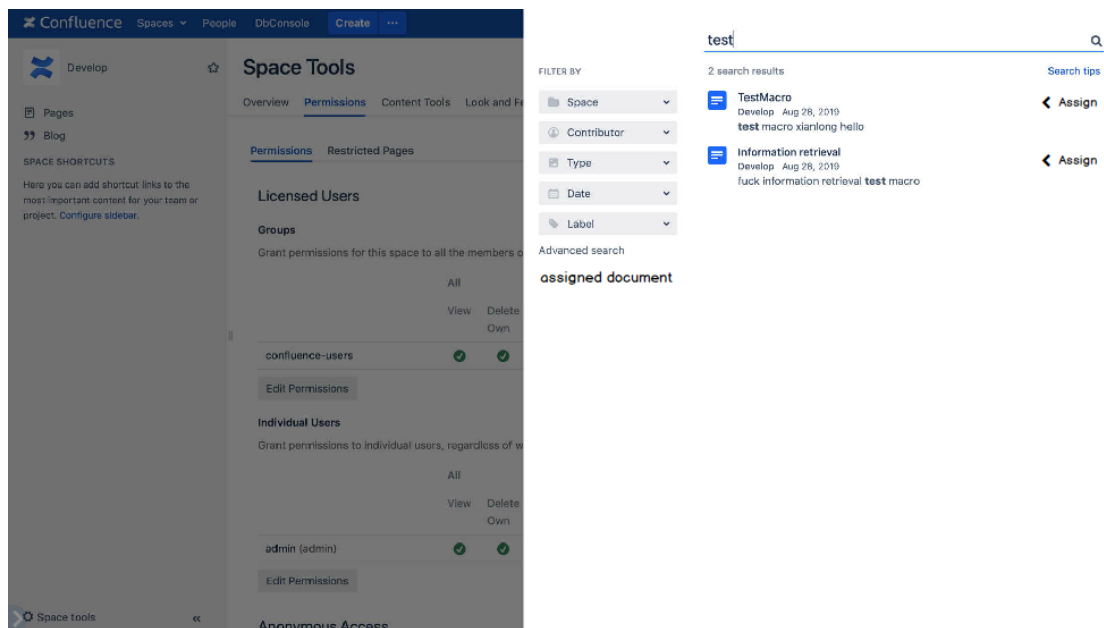
Name: Jinjing Xu
SID: 470509014

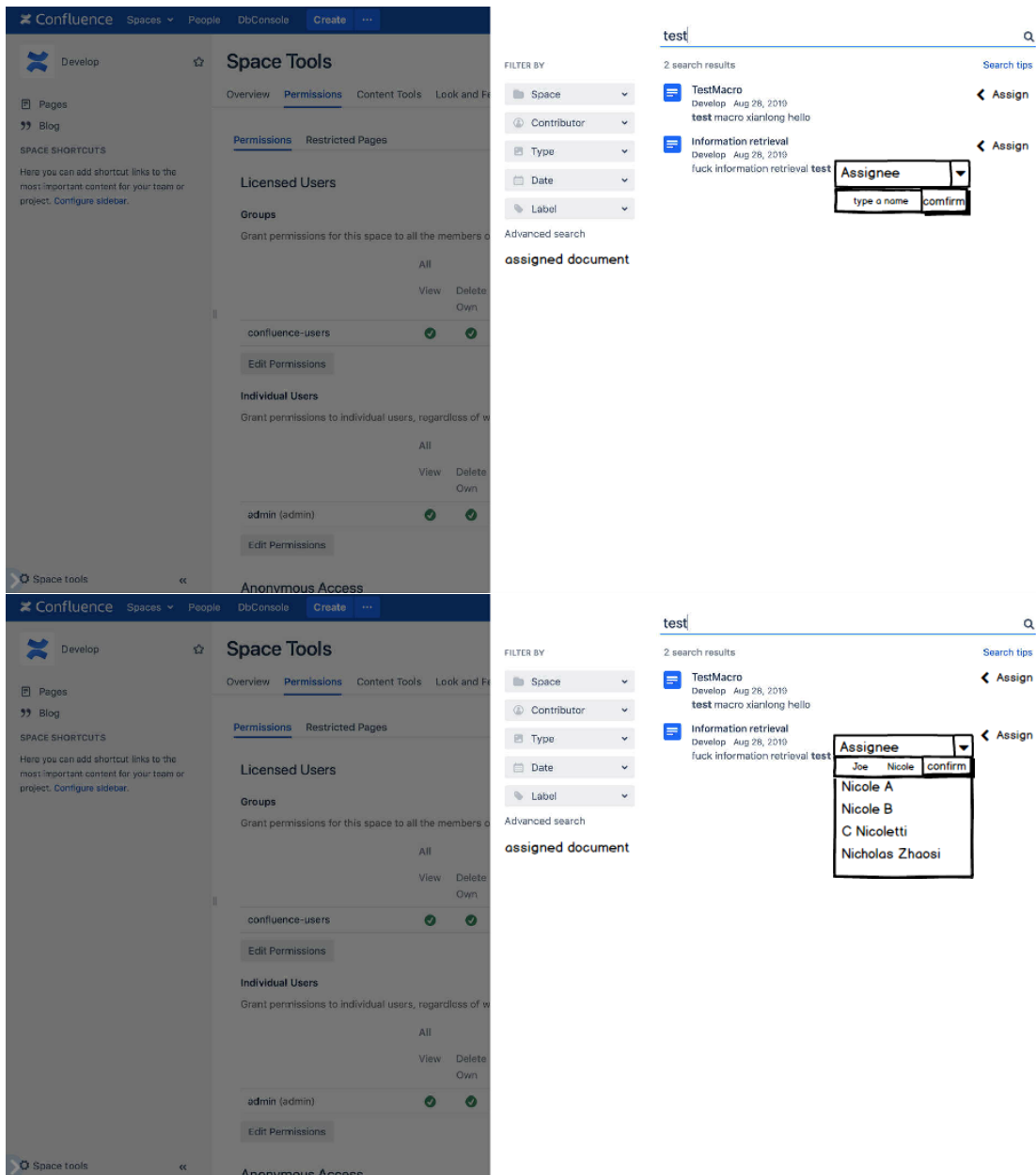
Technical contributes:

In terms of technical aspects, I devoted myself to the demo of our project.

Demo:

After determining the direction and scope of our project, we can decide what functions our prototype should have. This task is extremely important and necessary that requires me to design an attractive UI for our project as while as implement the functions from users' perspective. I was assigned to finish the function of quick search assign. To complete this task, I searched many resources from internet to make the interface are easier to operate and discussed with my teammates to make the UI unify. These graphs can be evidences to prove the contributes.





Non-technical contributes:

In terms of non-technical aspects, I wrote the week5 status report and minus of our group. In addition, in this group report, I also finished many parts.

Week5 Documents:

Our team has weekly group meeting on Monday and client meeting on Thursday. Every team member will attend the meetings every week and we need a person to record the content of meeting. We use a rotation system to complete them. On week5, I finished the reports and minuses. These links are the evidences to prove these contributes.

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week5%20Team%20Meeting

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week5%20Client%20Meeting

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week5%20Project%20Status%20Report

Group report:

Group report is not only one of our assignments but also presents our subject idea, so it is very significant. We are a team, therefore team members need to discuss and communicate to each other about our project to complete this report together. After the communication, we wrote this report separately and what I did are introduction and background research, tools used to build system and challenge/risk analysis. The parts in this report you can see are the evidences of these contributes or you can see the screenshots.

1. Introduction

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Confluence SDK is the core of our project to make a plugin for our project.

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R05	Emergency	Some emergencies may occur during the process of development and these emergencies may lead to project delay and some results we cannot predict.	Make a plan to deal with some emergencies according to possible factors.	Limited-Medium

Issues:

According to the requirement of this unit and the tasks we need to solve, I created many issues in Bitbucket for our group to remind us what we should do next and solve it in time. This link illustrates the evidences which prove I did it.

https://bitbucket.org/Arthur_Zhao/quokka/issues?responsible=5d51055bdbb98c0d9c22c474

Individual reflections:

Version control, coding styles, XP:

In terms of XP (Extreme Programming) aspect, some detailed user stories have been made and they are always the guidance to make a direction for us and help to remind us of following them.

Challenges met in the project:

Initially, we cannot determine a precise direction and cannot think out a good solution for both client and our group. It spent us several weeks to decide our final scope, therefore, it

led to our project behind schedule. However, every team member tries their best to the project.

Another challenge we met is that the UI is extremely hard to change. It means that we cannot achieve the effects that we are expected and we can only change some simple things from backend instead to implement the function if we cannot change the user interface.

How these were tackled and the outcome:

On the one hand, the first challenge we met is about time and schedule. We decided to make a plan for our project and follow it. In addition, we should increase the number of meetings and work together to contribute to the project.

On the other hand, changing UI can be solved by client' s help. He sent email to tell us he had asked for his college who did the search function of Confluence to change some default settings, and then we can change the UI now.

Achievements:

We have completed our first UI, and I have done the quick search assign. Furthermore, we have many documents for our team meetings, client meetings, issues we met and reports. I participated every part of these documents.

What you would do differently in future:

First of all, I should search more resources to learn more knowledges about this project and spend more time on it since our project is behind schedule. In addition, learning how to manage a project and keep it going in normal pace. Besides these, I want to continue to live in harmony with the team members and client.

Your role in the group and as a software engineer:

I am a team member of our group. I obey the instructions of my team leader and do tasks what I was assigned.

As a software engineer, I am programmer, UI designer and tester. Although we did not do much programming, I will participate to write codes and test the program. As a UI designer, I have designed 3 UI pages.

The most important thing I released is that I need extra research before the project. By which I mean I need to conduct more surveys related to the project. This will highly relief the pain during the preparation phase and shorten the time spent on defining the scope.

Role in team

I mainly in charge of dealing with technical issues. As for non-technical aspects, I am the bitbucket expert and the main customer. In terms of technical aspects, I am supposed to help with solving coding problems within the team.

Individual Report

JiyuanYang SID:470504433

Contributions and evidence

Technical contributions

The initial preparation of coding is done by me. This involves research for related and useful literatures, studying about the tutorials and find previous threads about the topic. More specifically, find materials related to improve Confluence search engine especially about the UI change topic. Here are some results link I found:

<https://community.developer.atlassian.com/t/create-plugin-settings-ui/4832/4>

<https://developer.atlassian.com/server/confluence/web-ui-modules/>

<https://community.developer.atlassian.com/t/create-plugin-settings-ui/4832>

And related codes:

A screenshot of a Java code editor showing the implementation of the PageCreatedListener class. The code includes imports for ContentEntityObject, Component, Autowired, PostConstruct, EventListener, and PreDestroy. The class has private final fields for ContentPropertyManager and EventPublisher. It uses @Autowired for dependency injection, @PostConstruct for the register() method, and @EventListener for the pageCreated() method. The register() method calls eventPublisher.register(this). The pageCreated() method calls ContentEntityObject.getPage() and ContentPropertyManager.setStringProperty(). The PreDestroy method calls eventPublisher.unregister(this).

```
PageCreatedListener.java | StatusFieldHandler.java | StatusPropertyExtractor.java | StatusValueResource.java
import com.atlassian.confluence.core.ContentEntityObject;
18
19 @Component
20 public class PageCreatedListener {
21     private final ContentPropertyManager contentPropertyManager;
22     private final EventPublisher eventPublisher;
23
24     @Autowired
25     public PageCreatedListener(@ComponentImport ContentPropertyManager contentPropertyManager,
26                             @ConfluenceImport EventPublisher eventPublisher) {
27         this.contentPropertyManager = requireNonNull(contentPropertyManager, "contentPropertyManager");
28         this.eventPublisher = requireNonNull(eventPublisher, "eventPublisher");
29     }
30
31     @PostConstruct
32     public void register() {
33         eventPublisher.register(this);
34     }
35
36     @EventListener
37     public void pageCreated(PageCreateEvent pageCreateEvent) {
38         ContentEntityObject page = pageCreateEvent.getContent();
39         contentPropertyManager.setStringProperty(page, StatusPropertyExtractor.SEARCH_FIELD_NAME, PageStatus.PENDING.name());
40     }
41
42     @PreDestroy
43     public void unregister() {
44         eventPublisher.unregister(this);
45     }
46 }
47
```

As for the result, I am facing a problem that the UI of Confluence search engine is extremely hard to modify and we are waiting for response from our client.

Non-technical contributions

The non-technical contributions mainly include weekly minutes, reports and the group report. I am allocated to do the first week's weekly documents and group contract. The wiki links are here:

Week 2 team meeting:

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week2%20Team%20Meeting%20Minutes

Week 2 client meeting:

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week%20Client%20Meeting%20Minutes

Group contract:

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Group%20Contract

The evidence is obvious by viewing the editor of the wiki pages.

As for the group report, the user story and the strengths and programming practices part. It can be seen in the work split part.

Reflections

XP Progress

The good thing is that we are driven by the determined user story thus we are not focusing on irrelevant functions and scope creep is avoided. The role rotation is well processed and all team members devotes themselves into the project.

However, the schedule is our biggest risk and issue. We had already spent 2 weeks to decide the scope with our client and over 1 week to learn knowledge related to the project. We need to mitigate the risk by ask for help from our client. We may also need to release less and more functions each time in the future phases.

Challenges

As mentioned above, the main challenge is lack of knowledge. Adding new things to an existing sophisticated and mature system.

Solutions

We ask for help from our client which is a good decision as he has deeper understanding and more abundant experience. Another good thing is that our team members are keen on helping each other thus mitigation solutions are produced after discuss.

Achievements

The main achievement is the finished prototype which has already been qualified by the client.

Improvements in the Future

The most important thing I released is that I need extra research before the project. By which I mean I need to conduct more surveys related to the project. This will highly relief the pain during the preparation phase and shorten the time spent on defining the scope.

Role in team

I mainly in charge of dealing with technical issues. As for non-technical aspects, I am the bitbucket expert and the main customer. In terms of technical aspects, I am supposed to help with solving coding problems within the team.

Individual report

Name: Xianlong jiang
SID:470522183

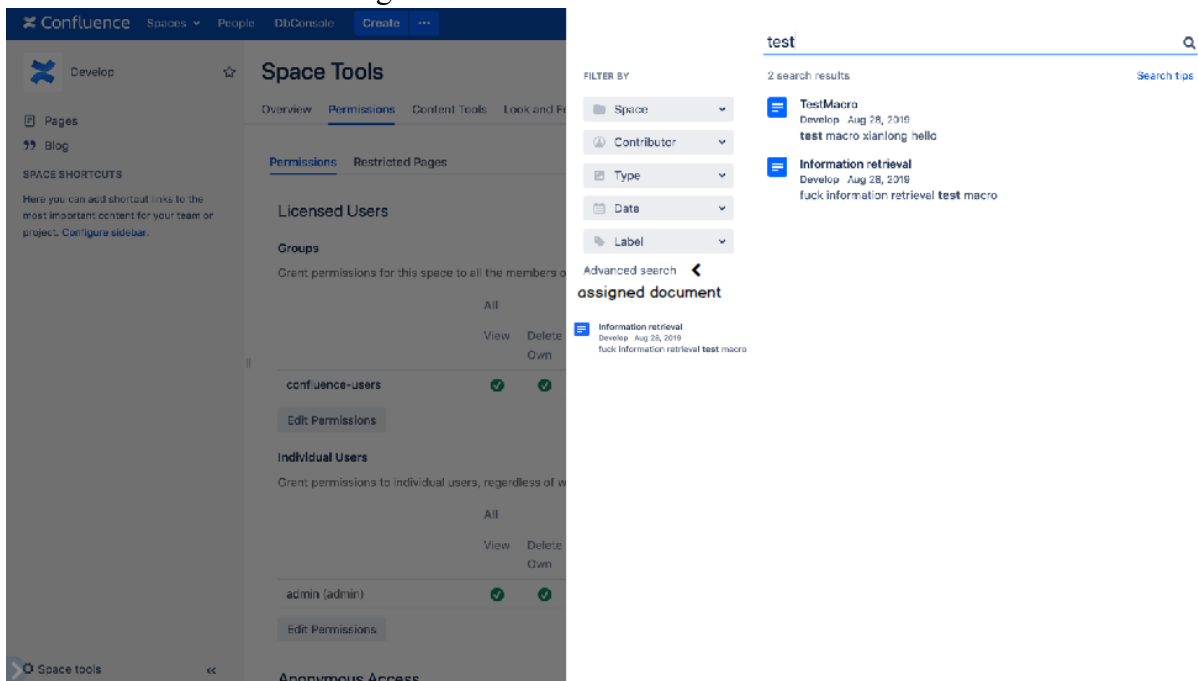
Contribution

My contribution for the whole project is including the wiki and issue parts on bitbucket, the test and evaluation parts in the presentation and the group report.

Technical contribution:

The technical contribution part of the project is including the demo of the quick search result and the design of the software testing for the coding part, we will mainly use unit test for the testing part of our whole project and some acceptance testing and usability test will be used as well.

The demo of it is as following:



Non-technical contribution:

The main job of me is some non-technical contribution for the team including writing the Contract part of Wiki, the Week 4 client report and team report in Wiki, some issues in Wiki, and test part for the project report.

These are the link of the contribution:

Group contract Wiki:

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Group%20Contract

Week4 team meeting1:

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week%204:%20Team%20Meeting%20Minutes%201

Week4 team meeting2:

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week%204:%20Team%20meeting%202

Week4 team meeting3:

https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week%204:%20Team%20meeting%20Week4 client meeting:
https://bitbucket.org/Arthur_Zhao/quokka/wiki/Week4%20Client%20Meeting

Individual reflections:

The version control part of the project would be done through bitbucket. The code style of the project would use Google Java Style. Here is the line of it:
<https://google.github.io/styleguide/javaguide.html#s7-javadoc>

For XP (Extreme Programming), the user stories are designed by team members as the guidance of the whole work to make sure the quality of it. However, as the confluence UI is written in a JavaScript framework, the client of us is still request the permission of changing the UI from the coworker of his. As a result, only small release like small part of code, few Unit testing or demo have already been done by us. However, continuous work would be released by team members to decrease the release cycles.

The main challenge we have met in the work is learning the Confluence search API and difficult to change the search UI of Confluence. So, team members are trying to learn the Confluence search API and get familiar with the coding part associated with information retrieval. Moreover, the client has asked for the method of the co-workers of him and provided us a new way of creating our own section in the search UI.

The achievement from the work of us so far is including getting familiar with different plugins in Confluence, getting some knowledge about information retrieval, Atlassian SDK is learned by us.

As the role of mine in the team is tester. I would written unit testing for the project and help other programmers in my team to adding the assigned function into Confluence in the future. The UI part would also be the main part that we are focussing on.

The resources of interfaces could help us change the UI provided by the client is in the issue part in Wiki, the link is as following:

https://bitbucket.org/Arthur_Zhao/quokka/issues/23/interface-that-may-help-to-change-the-ui

The resources of learning information retrieval and learning confluence search API is in the issue part as well. The link:

https://bitbucket.org/Arthur_Zhao/quokka/issues/6/some-resources-worth-to-scan-through-sent

Individual Report

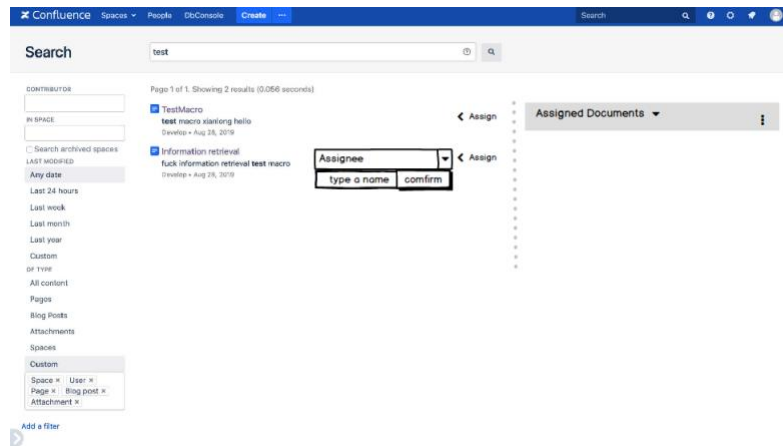
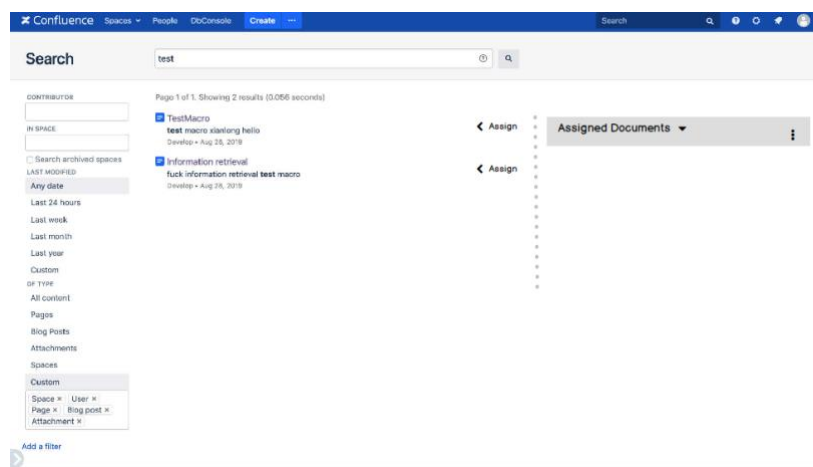
YU SHI: 470508992

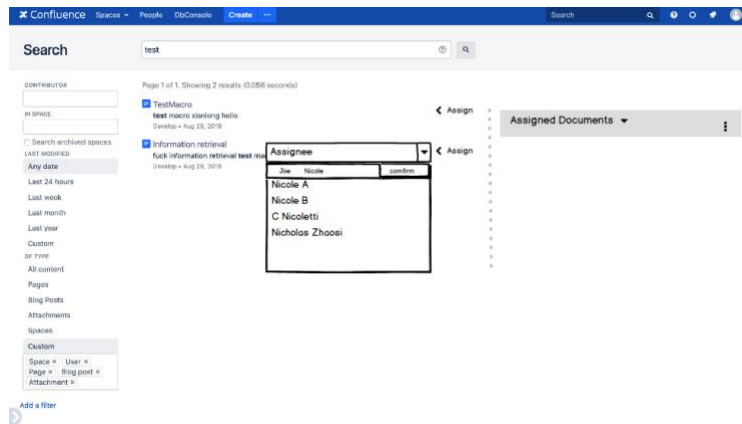
Contributions

- Technical contributions

In the previous project process, main technical contribution I carried out is designing the user interface for our project. I designed the Quick Search Assign UI pages(can check page 16-18 in this link for evidence:

https://docs.google.com/presentation/d/13dbfZekvsOmj9ZrjPzYGTb-sDy517venJk_Kot48uRQ/edit#slide=id.g627d03460b_8_18).





- Non-technical contribution

1) I wrote week3 team meeting minutes, client meeting minutes and week3 project status.



For evidence details link please visit: https://bitbucket.org/Arthur_Zhao/quokka/wiki/Home

2) On the issues board, we totally have gotten 22 issues here. I created 5 issues out of them. Issues (1-22 of 22)

Title	T	P	Status	Votes	Assignee	Created	Updated
#4: Try to understand IR and NLP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED	15	YU SHI	2019-08-19	3 days ago
#8: Brainstorm of our project topic and scope	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED	15	YU SHI	2019-08-23	3 days ago
#16: Make a prototype	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED	15	YU SHI	5 days ago	3 days ago
#20: Start the programming of frontend and backend.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NEW	15	YU SHI	3 days ago	3 days ago
#22: Write group report	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED	15	YU SHI	13 minutes ago	12 minutes ago

For evidence details link please visit: https://bitbucket.org/Arthur_Zhao/quokka/issues

Individual Reflections

- Version control, coding styles, XP, etc

Through doing this project, I learned how to use the Bitbucket and Sourcetree for version control. What's more, I understood how multiple team members can work on a same codebase and how to minimize the risk of conflicting code between each other. Also, I have

obtained the knowledge of google java code style, which is really helpful for standardizing my programming. And I learned how to use XP methodology to adapt the changes of requirements during project development processes.

- Challenges met in the project

- 1) Determine final project objective and scope:

Because our client did not give us specific requirements, we need to come up with several feasible solutions and discuss with him again and again until he approve it. And before week4, some of our ideas not satisfied our client and others were too hard to complete within the schedule. So, our progress is a little behind schedule, which requires us to speed up our processes.

- 2) Think about how to change UI of Confluence:

After we decided our final project scope, we have done a lot of research on how to change Confluence user interface. We tried several possible methods, but they did not work. During the week6 client meeting, we asked the client if he know how to change it. At that time, the client said he did not know how to carry out UI changes and maybe we even cannot change it. It is really bad news for us because we may need to change our scope again if we cannot change UI.

- How these were tackled and the outcome

- 1) Determine final project objective and scope:

After constant brainstorming and under the assistance of our client, we finally decided our project goal and scope on the week5.

- 2) Think about how to change UI of Confluence:

Fortunately, after the week6 meeting, our client sent us an email said he has found some feasible methods to change the UI. He also provided us with some specific instructions and examples. Therefore, we can still follow our original plan.

- Achievements

I think my achievements are participating in prototype design, understanding what is confluenceSDK and knowing how to use the Confluence, Bitbucket and Sourcetree.

- What you would do differently in future

In the process of continuously finalizing project goals with the client, I realized that the requirements of clients may not always very clear and specific. I think, in future, I should do more researches and group discussions before each client meeting. I also realized that the feasible proposals we prepared in future should be as clear and detailed as possible, so that the client can easily understand what we are going to do, which can stimulate our group processes. One simple and intuitive way to do this is to show our mock-ups to the client.

- Your role in the group and as a software engineer

I mainly play the role of tracker and customer. Can check group contract on wiki for evidence:

Team Member	IT and Engineering-related strengths, knowledge, skills and attitudes that contribute to the project	Roles, and Areas of Activity in the project	Key Responsibilities of Role(s)
Yu Shi	1. Competing in Programming 2. Project management 3. Communication skills 4. interest in IT innovation	1.Tracker 2. Customer	1. Cording for the project 2. Tracking bugs and testing programs 3. Controlling format and checking contents of every document

Link: https://bitbucket.org/Arthur_Zhao/quokka/wiki/Group%20Contract

Appendices:

A1. Technical evidence:

```
import com.atlassian.confluence.core.ContentEntityObject;

@Component
public class PageCreatedListener {
    private final ContentPropertyManager contentPropertyManager;
    private final EventPublisher eventPublisher;

    @Autowired
    public PageCreatedListener(@ComponentImport ContentPropertyManager contentPropertyManager,
        @ConfluenceImport EventPublisher eventPublisher) {
        this.contentPropertyManager = requireNonNull(contentPropertyManager, "contentPropertyManager");
        this.eventPublisher = requireNonNull(eventPublisher, "eventPublisher");
    }

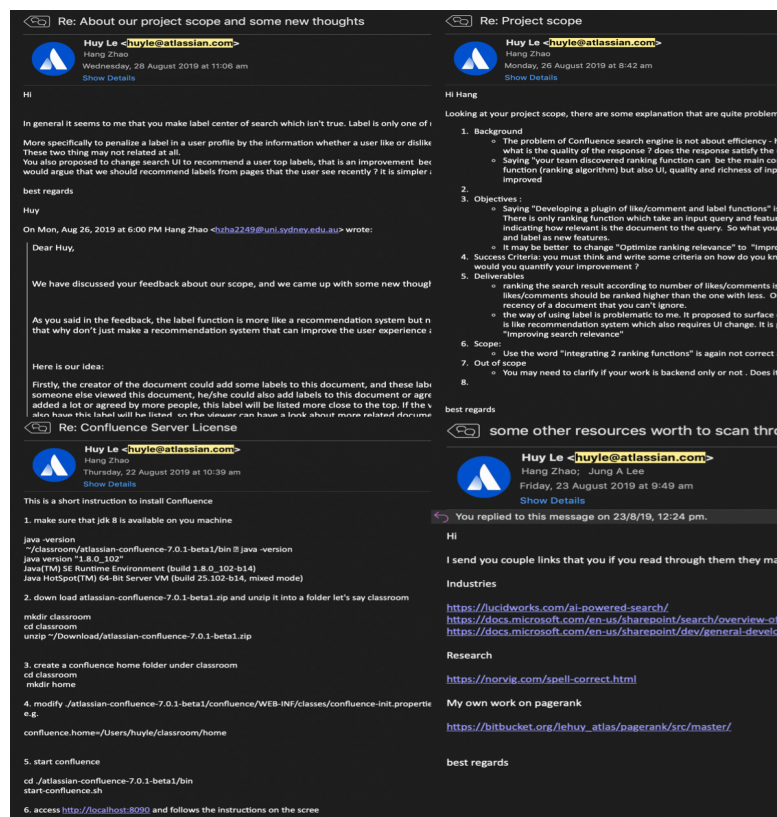
    @PostConstruct
    public void register() {
        eventPublisher.register(this);
    }

    @EventListener
    public void pageCreated(PageCreateEvent pageCreateEvent) {
        ContentEntityObject page = pageCreateEvent.getContent();
        contentPropertyManager.setStringProperty(page, StatusPropertyExtractor.SEARCH_FIELD_NAME, PageStatus.PENDING.name())
    }

    @PreDestroy
    public void unregister() {
        eventPublisher.unregister(this);
    }
}
```

A2. Group activities evidence

- These are some emails from the client. He has sent us some useful reading materials and guidances for the project.



- Evidence from issues board and wiki board on the Bitbucket. We have recorded the details of each group meeting and weekly project status.

Issues Create issue

Filter by: **All** Open My issues Watching Advanced search

Issues (1-21 of 21)

Title	T	P	Status	Votes	Assignee	Created	Updated	
#13: Install the Confluence SDK and learning the SDK tutorial	<input type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED		Xianlong Jiang	2019-08-27	2 days ago	↔
#12: Learn about Confluence plugin related API	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED		Robert Yang	2019-08-26	2 days ago	↔
#2: Learning information retrieval	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED		Xianlong Jiang	2019-08-19	2 days ago	↔
#15: Download and learn	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED		Jinjing Xu	2019-09-02	2 days ago	↔
#21: Learn how to make a confluence plugin and change UI	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NEW		Arthur Zhao	2 days ago	2 days ago	↔
#11: Analyze the feedback of scope provided by client	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED		Jinjing Xu	2019-08-26	2 days ago	↔
#1: Week 2 Issue by Jinjing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED		Jinjing Xu	2019-08-19	2 days ago	↔
#14: confluence test site	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED		Arthur Zhao	2019-08-28	2 days ago	↔
#10: client's respond to our scope	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED		Arthur Zhao	2019-08-26	2 days ago	↔
#7: Spell Checker	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RESOLVED		Arthur Zhao	2019-08-23	2 days ago	↔

Welcome

Welcome to Project **Improving search relevance in Atlassian Confluence** . We are aiming to develop a plugin to improve :
 You can use the index below to look around.
 Have fun!

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- Presentation
- Presentation for Week6
- Meeting Minutes
 - Week2 Team Meeting
 - Week2 Client Meeting
 - Week3 Team Meeting
 - Week3 Client Meeting
 - Week4 Team Meeting 1
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 - Week4 Team Meeting 3
 - Week4 Client Meeting
 - Week5 Team Meeting
 - Week5 Client Meeting
 - Week6 Team Meeting
- Group Contract
 - Group Contract
- Weekly Progress Report

wiki:https://bitbucket.org/Arthur_Zhao/quokka/wiki/Home

issues:https://bitbucket.org/Arthur_Zhao/quokka/issues?status=new&status=open

References:

1. Atlassian Bitbucket Tutorial: Tutorials - Atlassian Documentation. (2019). Retrieved 11 September 2019, from <https://confluence.atlassian.com/bitbucket/tutorials-755338051.html>
2. Atlassian SDK module: Plugin modules. (2019). Retrieved 11 September 2019, from <https://developer.atlassian.com/server/framework/atlassian-sdk/plugin-modules/>
3. Balsamiq Quickstart Guide: Balsamiq Wireframes Quickstart Guide. (2019). Retrieved 11 September 2019, from https://books.google.com.au/books?hl=zh-CN&lr=&id=gk6b4gGQjjsC&oi=fnd&pg=PT8&dq=balsamiq+&ots=Fysz_SaoS4&sig=-Jmc8AFbfqQ2nK4JTzWcgd3H4Xo&redir_esc=y#v=onepage&q=balsamiq&f=false
4. Confluence logo: Confluence Vector Logo. (2019). Retrieved 11 September 2019, from: <http://seekvectorlogo.com/confluence-vector-logo-svg/>
5. IntelliJ IDEA Documentation: Documentation - IntelliJ IDEA. (2019). Retrieved 11 September 2019, from <https://www.jetbrains.com/idea/documentation/>