

Software Tommies Present Z-Neighborhood

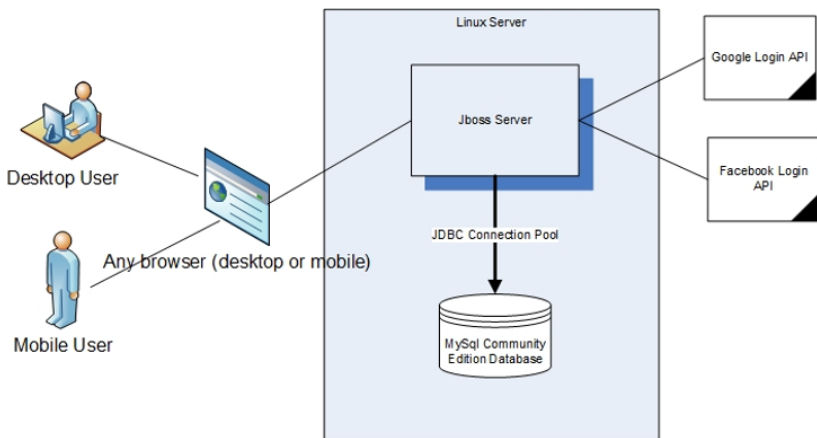
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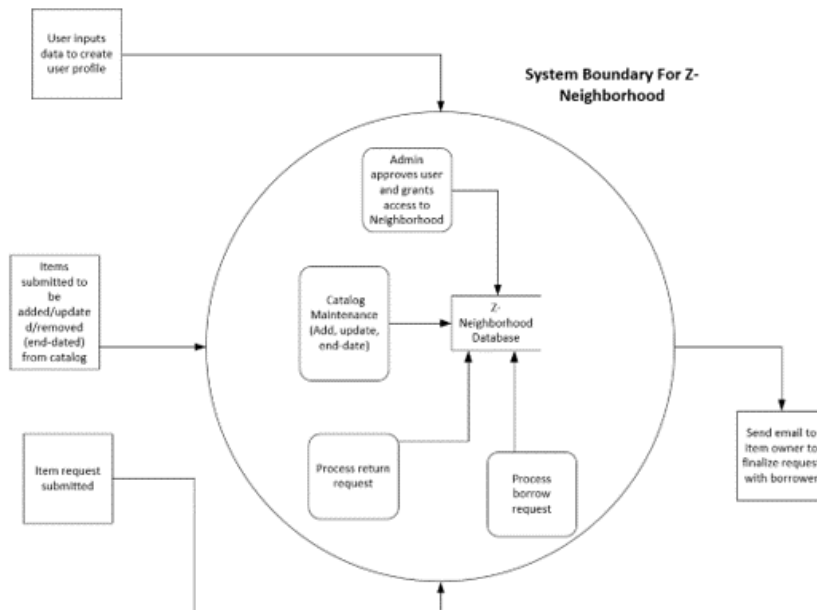
Software Design and Functionality (dorothy lesher)

Z-neighborhood is an application to facilitate the lending and borrowing of items in a neighborhood. Access to a neighborhood is determined by a user's zip code. They can enter items into their neighborhood catalog allowing their neighbors to borrow these items. Users can also browse the catalog if they are in need of an item and think that it might be something their neighbors would be willing to lend. Communication between borrower and owner are initially facilitated within the application when a user submits a borrow request, but are subsequently handled outside of the application through email, text, or phone. Users are responsible for updating the availability of an item if it has been returned or if it should no longer be available.

The Z-neighborhood application is designed to run on an open source technology stack. The server will run on Linux and will have a JBoss application server installed on it. MySQL Community Edition will be used for the database. The application will be browser independent and can run on either desktop or mobile browsers. This will require a hypothetical data center to host our application.



HTTPS will be used to ensure that data is transported securely and privacy of data maintained. Users will be able to choose if they would like to authenticate using their Google login, Facebook login, or a native login within the application.



Data will flow into the system through various user input. Users will create their own user profile. This data will be saved in the Z-Neighborhood database. Once their user has been approved by the neighborhood admin, the user will be able to browse the catalog of items, add their own items to the catalog and request items from the catalog. Data flows out of the system in the form of an email. All communications between item owner and borrower will be managed through email.



This UML diagram shows the entities in our application. We will need properties to store data for each of the entities Z_USER, Z_CATALOG, Z_BORROW, and Z_BORROW_ITEMS. To provide loosely coupled methods we will provide interfaces with data types and no structured data classes from our application.

[Login \(Aziz\)](#)

Z-Neighborhood

User name :
 Password:

☐ Keep me signed in

Log in

Sign up



Sign in with Google

1. Go to Z-Neighborhood log in , then sign in using your User name. Optionally use your google/facebook credentials.
2. To avoid signing in the next time you visit Z-Neighborhood, select “Keep me signed in.” If you return to Z-Neighborhood within two weeks.

3. If you do not have user name you can double click to sign up the you create new user.

Create User Profile (Archana)

- 1.User has to enter name
- 2.Home address with zip code
- 3.Home Phone number/ cell phone number.
- 4.Email address
- 5.Start date.

Admin Approve User (dorothy lesher)

While users can create their own login they will need to be approved by the neighborhood admin before being able to access the application. This will ensure that users are valid users and if any abuse of the system occurs, the admin will be able to revoke access to that user.

Access to the "neighborhood" is determined by the zip code a user enters in their profile.

After a user completes their profile setup an email with a link to the application will be sent to the admin. The page displayed from the link will contain the information entered by the user as well as an approve/reject option. The admin selects the appropriate response and submits the request.

The Admin User can return to the user's profile at any time to revoke access if needed.

Add Item to Catalog (Sai)

User initially need to add items to the catalog so that other users can look for the items which are actually available. For this to be done, he/she will add the name, some useful description of the item, quantity, availability dates and sample picture of the item so that the persons who are borrowing can have the look at that.



Zneighborhood

select category 

Enter name of the Item

Description of the item

Enter the quantity 

Item available from: 

Item available till: 



Upload Picture

Submit

[Update Item \(Sai\)](#)

After entering the details of the item into the catalog if the owner of the item wants to make any changes in the details, he/she can go to the update item module and can make the necessary changes to it. Here is the sample screen of the update module:



Zneighborhood

Enter the item Id:

Update the available date ☐ yes ☐ No

Available from



Available till



Update the name of the Item ☐ yes ☐ No

Enter the name of the item

Update the picture of the Item ☐ yes ☐ No



upload

Update the description of the Item ☐ yes ☐ No

Enter the description

Update

Exit

Z-neighborhood Catalog

	A	B	C
1	Item ID	item category	Quantity
2	Z item-1	Table	1
3	Z item-2	Garden chairs	4
4	Z item-3	lawn mover	1
5	Z item-4	Tent	2
6	Z item-5	Gas Barbique grill	2
7	Z item-6	Barbique tool kit	1
8	Z item-7	Chair covers	25
9	Z item-8	Chairs	6
10	Z item-9	Storage containers	3
11	Z item-10	Portable Refrigerator	1
12	Z item-11	Coolers	5
13	Z item-12	Welder's essential accesory kit	1
14	Z item-13	Microwave	1
15	Z item-14	Torch	2
16	Z item-15	Electric wire cable	1
17	Z item-16	Gas heater	1
18	Z item-17	Fire pit	1
19	Z item-18	Patio heaters	2
20	Z item-19	Snow Sleds	2
21	Z item-20	Snow blowers	3
22	Z item-21	Snow showels	5
23	Z item-22	flash lights	2
24	Z item-23	paint brushes	5
25	Z item-24	Paint rollers	2

1. Z-item catalog will help user to find their needed item that they want to borrow from list.

2. They can also see the pictures and item quantities.

Browse Catalog (Aziz)

Catalog:

Roasters

Q

 Search

Start date:

11/12/2016


End date:

11/12/2016

Available: ☐ Yes

Item Name: Roaster Oven, Stainless Steel


Item description: 22-quart portable roaster oven for roasting, baking, cooking, and serving
Simple control knob with adjustable heat up to 450 degrees F
Removable insert pan and lid; lift-out wire rack; cool-touch side handles
Stainless steel housing; easy-to-clean design; user manual with recipes included
Measures approximately 18 by 25-1/2 by 11 inches; 1-year limited warranty



Request Item

Item Name: Roaster Porcelain Cookwell - Silver Body


Item description: Prepare large holiday meals and side dishes at the same time. Enjoy the benefits of a second oven—wherever and whenever you need it—with this 12-qt. convection roaster from Nesco. Take it on the road with you to parties or the homes of friends and relatives.



Request Item

Item Name: Electric Roaster Liners for Soup 10 Ct. Package

Item description: Fits 16 Quart, 18 Quart, and 22 Quart Roasters
Easy Clean up!
Great For Soup Kitchens and Chili Feeds
Disposable
Great For Making Homemade Sauces



Request Item

Export to PDF Export to PNG Use column grids

Make multiple pages

in this screen show us how can the user have ability to search for the items that he is looking for in this screen he only needs to choose which kind of items that he is looking for and then select the start date and the end date after that he needs to check the availability of the items.


Here show you the items that available and give it to you some description of the items and once you hit request items then will lead you to this screen


Submit a Borrow Request (Archana)

Welcome to Zneighborhood

Q

 Search





select item category

Select Quantity

Item needed from:

Item needed till:

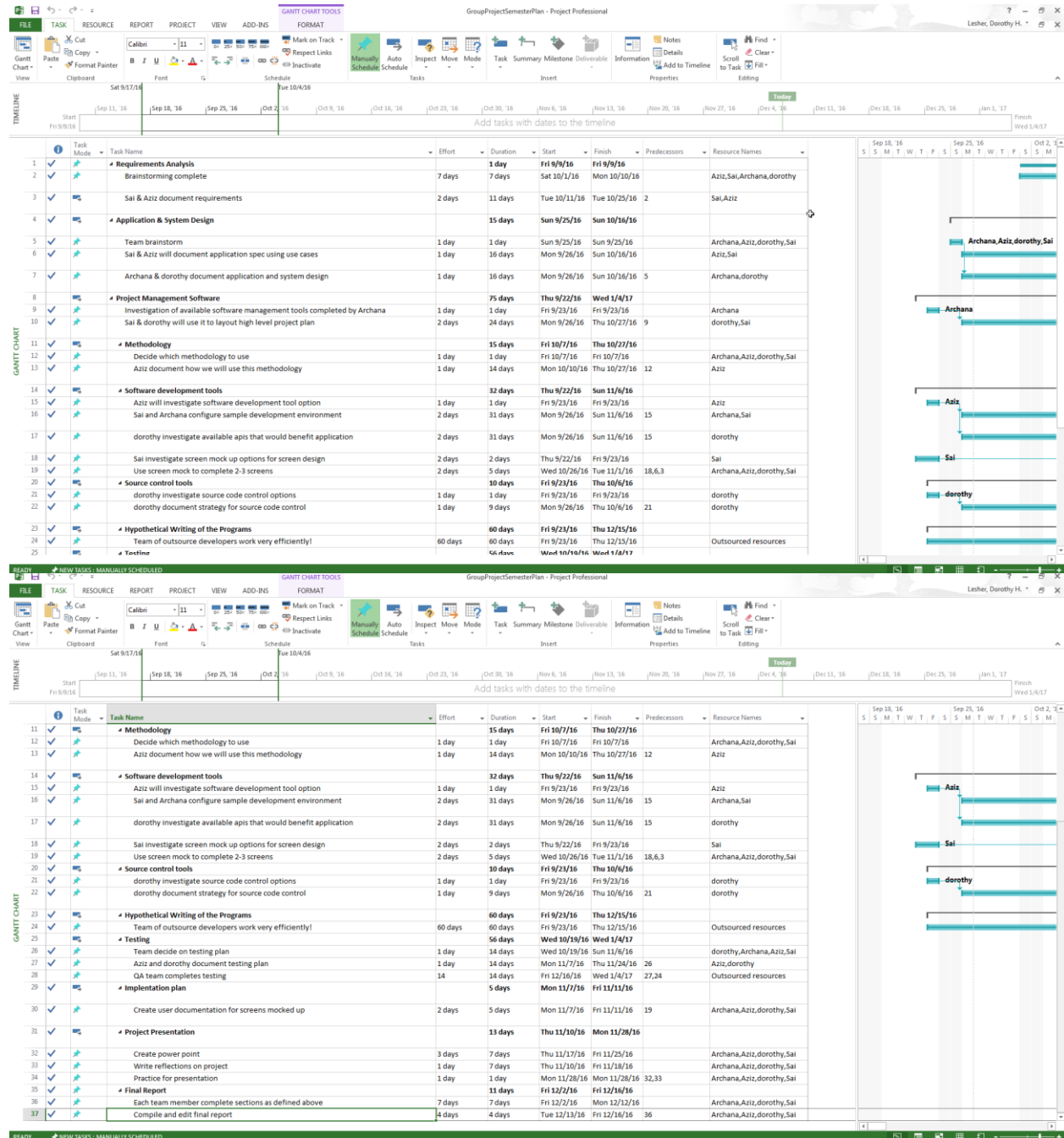
Add to cart

check out

Once User selects item from the Z catalog then it leads to this screen .then they select quantity of item and also select dates from which day to which day user wants to borrow the item and then user clicks on add to cart icon and then check out icon.

Project Plan and Final Execution Progress (dorothy lesher)

Our project plan documents not only our teams task, but also high level tasks that would be included in any software engineering project. We executed to this plan completing steps required for this project and omitting the steps that were not completed, for example, coding and testing. This was completed using Microsoft Project.



Team Members Tasks and Work Log

1	Task	Sai Peri	Archana	Aziz	dorothy	When	How long
2	Project brainstorming	X	X	X	X	10.Sept.2016	1.5 hours
3	made sample user interface	X				12.sept.2016	
4	Source code control tools research				X	17.Sept.2016	1 hour
5	Project Management Tool research		X			24.Sept.2016	
6	Mock user screen research	X				20.Sept.2016	
7	Software development tool research			X		21.Spet.2016	
8	Team meeting	X	X	X	X	25.Sept.2016	
9	Create project plan outlining each of our tasks for the semester				X	27.Sept.2016	1 hour
10	Questions with Professor Chiang and finalize project proposal	X		X	X	30.Sept.2016	1 hour
11	Diagram of system requirements				X	7.Oct.2016	30 min
12	Create power point outline for group presentation and final paper outline				X	24.Oct.2016	30 min
13	Presentation documentation of various assigned tasks		X	X	X	6.Nov.2016	3 hours
14	Screen mockups and more presentation work	X	X	X	X	12.Nov.2016	3 hours
15	Final paper work				X	20.Nov.2016	1 hour
16	Team practice for group presentation	X	X	X	X	20.Nov.2016	1 hour
17	Final paper work				X	26.Nov.2016	1 hour
18	Presentation practice	X	X	X	X	30.Nov.2016	1 hour
19	Final paper work			X		1.Dec.206	
20	Final paper work	X				9.Dec.2016	1hour
21	Final paper work		X			7.DEC.2016	1hour
22	Final edits				X	10.Dec.2016	

Evaluation and Analysis of All Tools Studied

Source Code Control -(dorothy lesher)

I evaluated two different source code control options, Subversion and GIT Hub. Both are popular source code control options. Subversion also known as SVN is open source and freely available. It is widely used and easy to learn. It does require a repository to be installed on a server. Each user then installs a client to perform actions with the repository like committing changes to the repository or updating their local source code from changes that others have checked in. Additionally there are a number of clients or plugins that can be used with SVN. There is a plugin that can be used for Eclipse so that code can be committed and updated directly from Eclipse IDE.

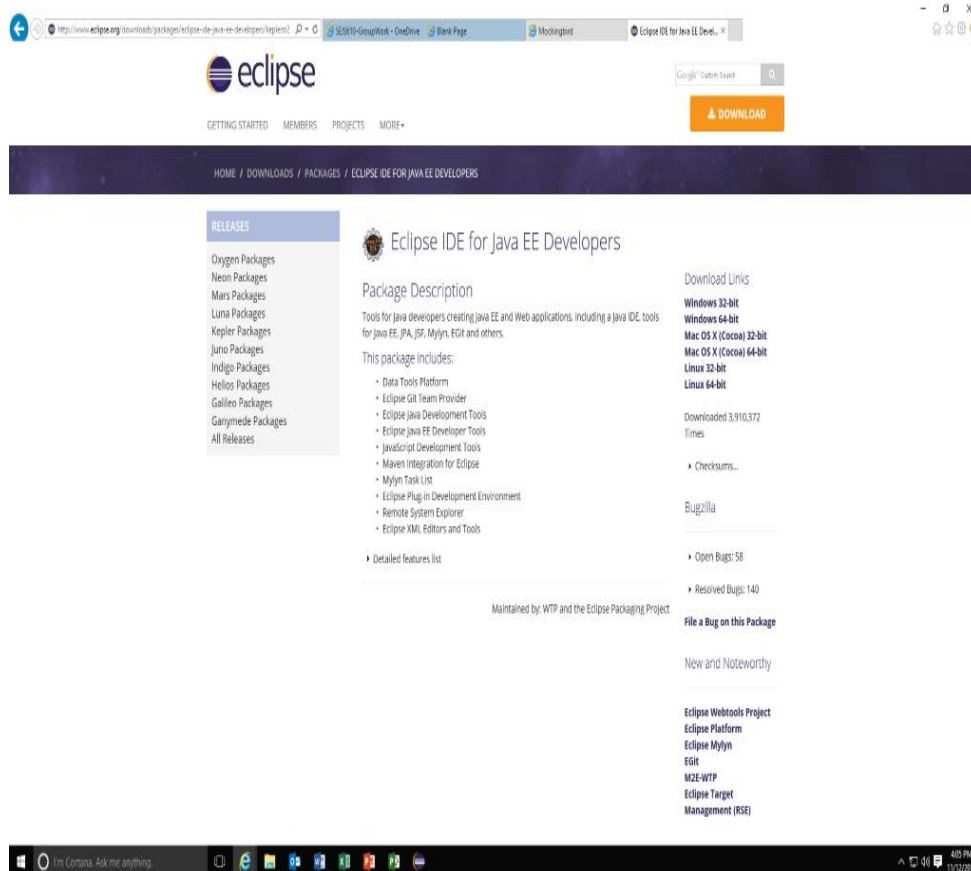
Git Hub is a newer and very popular repository. It is not as easy to learn as Subversion, but does provide excellent documentation to assist in learning how to use the tool. It also had an Eclipse plugin. It differs from SVN in that it is a distributed version control system while Subversion is a centralized version control system. In a distributed system the clients each check out the full repository. This effectively backs up the code in multiple locations. We focused on Subversion for our project since our team had some experience using it.

Google/ Facebook Login -(dorothy lesher)

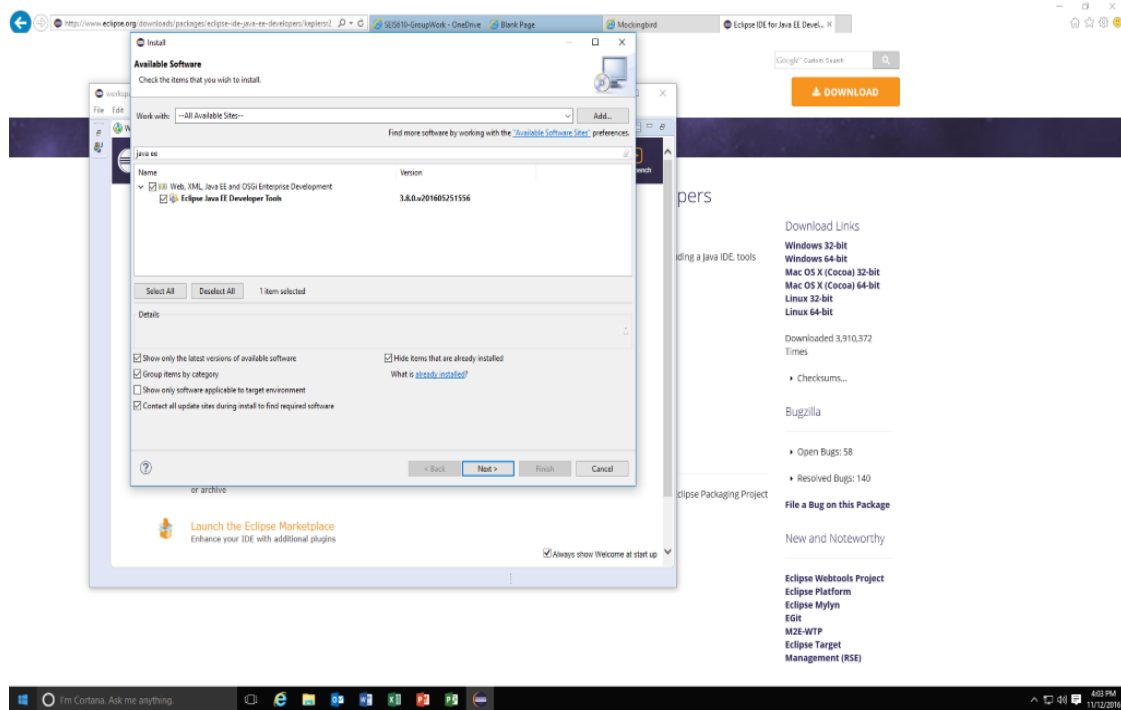
We included options of using Google and Facebook credentials for logging into our application as it can facilitate ease of use for new users and encourage usage of our application. The Z-Neighborhood application will still require additional profile information to be stored within the application regardless of what login method the user selects. Both Google and Facebook provide easy to learn and implement APIs to link their logins to third party applications. Google provides their Google Platform Library. This is a javascript library that is included on any pages that make use of the Google login. Functions are supplied in this library to login, sign out, get profile information etc.

Facebook provides the Facebook JavaScript SDK. Again, this needs to be referenced in any page that will make use of the Facebook login.

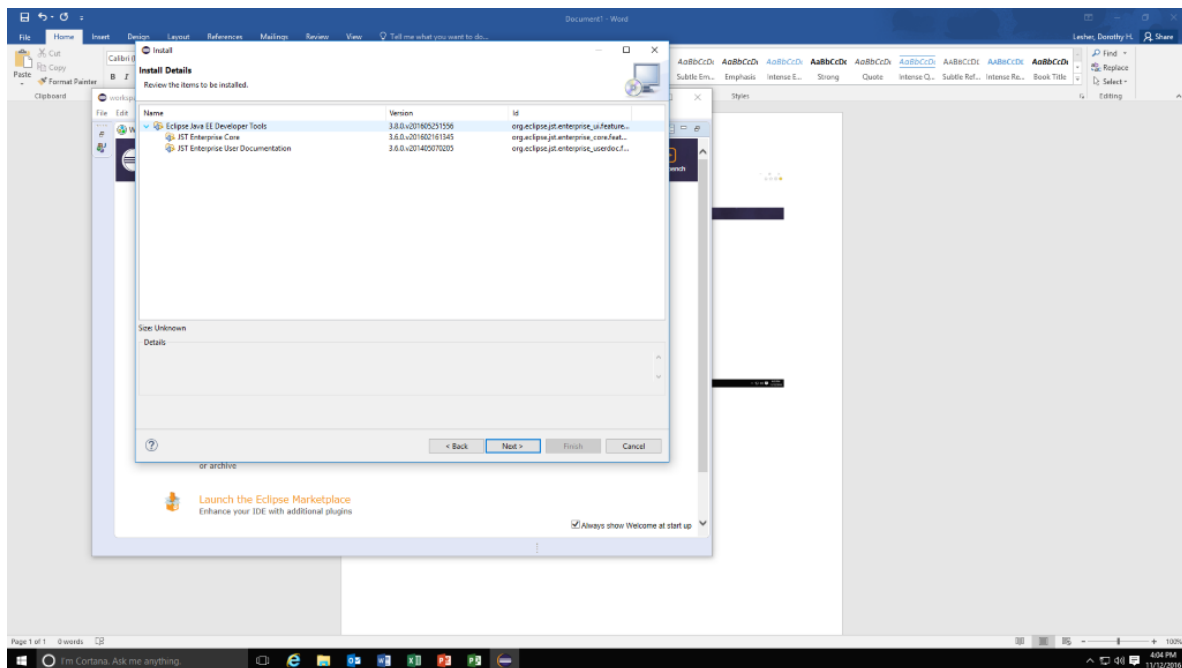
Development Environment (Aziz)



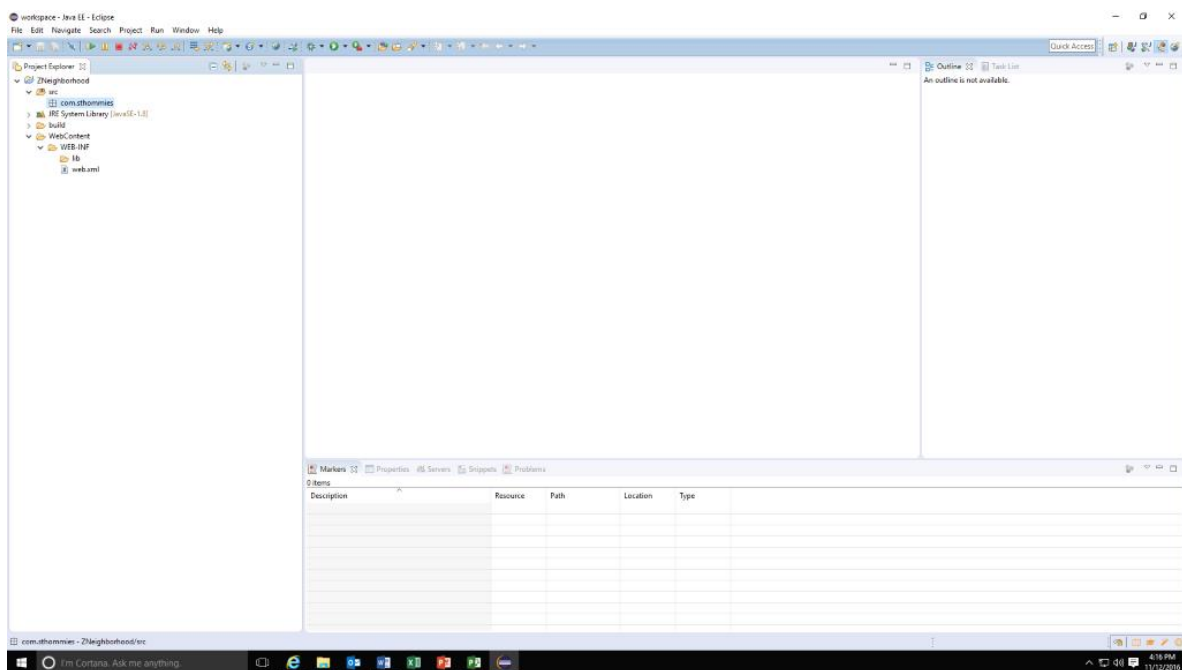
Many software developers spend their workday in an integrated development environment. For many java developers, Eclipse IDE is the best choice. Eclipse is a Java-based open source platform that allows a software developer to create a customized development environment. Eclipse is an integrated development environment (IDE) used in computer programming, and is the most widely used Java IDE. It contains a base workspace and plug-in system for customizing the environment.



This works as expected. If you stick to the update site you simply go to Preferences->Install/Update->Available Software Sites and make sure that the above mentioned site is defined and checked. Install the Eclipse java EE developer stools documentation and sources according to your needs. Double click on the show only the latest version Click next two times, read through the license and check accept. Click Finish to install. The download gets everything in place and you have to finish the installation with a re-start.



Here the detail of installation select eclipse EE developers then you will find JST enterprise and JST enterprise documentations.



Project Management Tools (Archana)

Software management tools help us do all of this in one place. Some keep it simple, with just tasks and workflows, while others add chat, forums, invoices, expense tracking, and more functions for a full picture of projects. I surveyed 4 Management Tool and choose **Microsoft Project 2013** as our project management tool because it is free for us from University and every team member are well aware how to use.

Every project management app at least lets you break the project into steps, with a workflow to help person get everything done. Some, like Trello, are simple, focused on just your tasks and the workflow to finish them. Then, others like Zoho Projects include everything, as a one-stop-shop for your project needs.

Features of the Management Tool:

- **Milestones** to list broad deadlines for core parts of your project
- **Gantt Charts** to show the time each part of a project will take
- **Kanban Boards** to set a process for tasks
- **Calendars** to show events, deadlines and task due dates
- **Status Updates** to let everyone know how a project is going
- **Messages** to send email-like messages to your team
- **Live Chat** to discuss the project with your team in real-time
- **Time Tracking** to log time spent on tasks
- **Invoicing** to bill clients for the time you spend on their projects
- **Notes or Documents** to share important info about a project
- **Dashboards** to get a quick overview of due tasks, new messages, and project progress
- **Reports** to look back over a project and see how things went

1. Smartsheet

Smartsheet is a spreadsheet-easy online project management tool with an unlimited number of FREE collaborators. Power your team with automated reminders, attachments, Gantt charts, and a mobile app.

- Automate workflow with notifications & reminders
- Google Apps integration - Drive, Calendar & Gmail
- Simple as a spreadsheet but enterprise ready

Features of Smartsheet :

- a) Autofill formulas
- b) To create web form with spread sheet
- c) Roll up several sheet into master sheet
- d) Using spreadsheet interactive Gantt chart capabilities
- e) Sharing your sheet makes it easy to collaborate
- f) View and work with dates from your sheet

2.Trello: Trello uses a method called Kanban, a project management system developed by a former Toyota vice president, Taiichi Ohno, which allows users to move cards—representative of tasks—to create a visual representation of where a project is in development.

Prons: A quick peek at the alignment of the cards lets users know how far along a project is—and what to work on next. While the front of the card has little more than a task label, the back can be filled with all kinds of information—like who's working on the task, when it's due, and what parts of the task have already been completed with a simple checklist. Trello also now offers a calendar function so everyone can collaborate on their projects transparently.

Cons: Because of Trello's emphasis on simplicity, it's missing a few key features. There isn't a good way to look at a project with high detail—for example, it does not offer an option to see task lists broken down by user or due date.

Trello Price: offers unlimited users and projects, but only offers 10MB of storage on their free version. Luckily, it's easy to get Trello Gold—just share and get a new user on board, and you'll jump up to 250MB for a year. Looking to pay for it? It's only \$5 a month, or \$45 for a year

3.Wrike:

Features:

- * Budget Management
- * Portfolio Management
- * Project Planning
- * Resource Management
- * Bug Tracking
- * Collaboration
- * Email Integration
- * File Sharing
- * Gantt Charts
- * Issue Management
- * Milestone Tracking
- * Time & Expense Tracking
- * Percent-Complete Tracking
- * Status Tracking
- * Resource Management
- * Task Management

Pros: The easily customizable dashboards are my favorite feature. We can create several dashboards that allow us to look at workloads from different perspectives: by due date; by team member; tasks completed by day, week and month.

Cons: It could have better privacy controls on discussions. You can't maintain a single thread on a project that includes both private team messages and messages with collaborators, such as clients.

Starting Price Pricing Details

Professional: \$9.8/user/mo Business: \$24.6/user/mo

\$50.00/month/user Professional: \$9.8/user/mo

Deployment

Cloud, SaaS, Web

Mobile - Android Native

Mobile - iOS Native

4.Microsoft Project 2013:

Microsoft Project Online is built around Office, so you can easily bring in data from other Office tools you use. You can turn Sharepoint task lists into projects, create project workflow designs in Visio, search through Office 365 and Sharepoint data from projects, and visualize visualize

project data using Excel Services. Project Online also integrates with Active Directory, for a simple way to integrate it with your existing device and user management. Or, if you want to manage projects on your own, without a web app, the native version of Microsoft Project is still an effective tool for that.

It's a new online version of the traditional desktop project management software, with tools to organize projects with tasks and milestones, and view them in detailed Gantt charts. And, since it's online, the new Microsoft Project lets you chat or make calls with Skype for Business and share social network-like updates about projects in a project newsfeed.

Features:

Task Management

Resource Management

Gantt Charts

Scheduling

Workflow Automation

Team Collaboration

Support for Agile Methodology

Support for Waterfall Methodology

Document Management

Email integration

Mobile Access

Timesheet Tracking

Change request and Case Management

Budget and Expense Management

Screen Mock Up Tools :

Mocking Bird:

Mockingbird helps us to create and share clickable wireframes. This tool is an open source tool for the first few days and we chose it as it was very effective to create mock up screens using this tool and it has all the features and designs that are required for our project.

Cacoo:

This tool is used to create and securely share flowcharts, wireframes, Mockup screens and UML Diagrams. This tool does not provide all the features that are required to design the project and also it is not an open source tool. Thus we did not choose it.

Conclusions/Final Thoughts

(Sai)

It has been shown, Z- neighborhood is useful for the neighborhood because z-neighborhood help them to share their items with each other . In addition, our project went smoothly from business blue print phase to final phase.(Aziz)

(dorothy)

In conclusion, our project went smoothly. We struggled a bit to find common times to meet, but were able to find times and complete the work we needed. Exploring various tools gave us exposure to what is currently available and how those choices would effect the budget of a project. In the end we chose tools with which team members had some familiarity. Some of the flow of the project did not follow the as would be expected in a software engineering project as we were able to evaluate some tools before requirements were fully completed and in a traditional waterfall project this would not have been the case. In the end I think we all learned about the software engineering process and benefited from the project.

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