Class Scheduler

Summer 2018

Team name: SWE Squad

Jodie Chan
Saher Ahmad
Toritseju Mikie
Harry Nguyen
Woo Park

Friday, June 15, 2018

Team description

SWE Squad	
Member	*Role*
Jodie Chan	Team leader/Back-end developer
Saher Ahmad	Front-end developer/Documentation
Toritseju Mikie	Team coordinator/Back-end developer
Harry Nguyen	Back-end developer/Video Creation
Woo Park	Back-end developer/Video Creation

Team organization

The team will be organized as a democracy with one team leader and one team coordinator. All team members will be involved in a role with either front-end or back-end development for the project. In order to put together different components of the software, all team members are expected to research individually and come together to collaborate as a group with their research. The group will meet weekly to discuss strategies and any accomplishments/hardships that need to be addressed and devise an appropriate solution in regards to them.

Hoiyan Jodie Chan

Cyber Security/Networks Specialist

Chamblee, Georgia
(678) 516-4617
jodiechan13@gmail.com

EXPERIENCE

Twitch, Online — *Affiliate/ Content creator*

DECEMBER 2017 - PRESENT

Create quality content and network to grow channel's viewer base and increase revenues.

IBM, Sandy Springs, GA — *Security Knowledge Developer Co-Op*

FEBRUARY 2016 - PRESENT

Analyze company hardware and software products' technical documentation to create alternative media for end users, such as video content, to lower support tickets generated, resulting in cost savings. Create and distribute monthly newsletter for InfraStructure clients.

Siupo Chan & Associates, Duluth, GA — *Legal Secretary*

MAY 2015 - FEBRUARY 2016

Research and make inquiries for cases. Handle case documents preparations and filings.

Wisdom Tax Services, Lawton, OK — *Tax Preparer*

FEBRUARY 2015 - MAY 2015

Handle customer correspondence, scheduling, and administrative duties. Used Drake tax preparation software to file clients' taxes.

The Brow Parlour, Lawton, OK — *Spa Front Desk Manager*

DECEMBER 2013 - JANUARY 2015

Oversaw scheduling logistics, inventory management, customer correspondence, customer rewards system, cash handling. Trained new front desk staff and created a manual for the position. Created new systems to cultivate a more effective workflow. Increased customer base with new marketing strategies on social media.

Freelance and Customer Service, Various — *Web Design/Various*

SEPTEMBER 2013 - FEBRUARY 2016

Created a website with original food photography for one business.

EDUCATION

Georgia State University, Atlanta, GA — *Bachelor's in C.S.*

AUGUST 2015 - DECEMBER 2018

Concentration in Networks and Parallel Computing, minor in Music. HOPE Scholarship and Keep HOPE Alive Scholarship recipient.

Florida Gulf Coast University, Online — *Pharmacy Technician Certificate Program*

2013

Nationally Certified Pharmacy Technician (CPht.) (Now expired)

SKILLS

Documentation
Data Visualization
Information Security
Team Collaboration
Agile

KNOWLEDGE

VMware Virtualization
Linux(Red Hat)
Network+
APIs
IBM QRadar SIEM
Camtasia
Audacity
Web Hosting

LANGUAGES

Java
JavaScript
HTML/CSS
C

Harry Nguyen

hnqtkd@gmail.com (678) 978-1289

A highly responsible, cooperative and diligent potential candidate who is eager to bring his best effort, creativity and value to the company

EDUCATION

Georgia State University, Atlanta GA August, 2014-Present
Bachelor in Computer Science

Relevant Coursework

Data Structure, Computer Org & Programming, System-Level Programming

Computer/Programming Skills

- **Programming Languages:** Java, JavaScript
- **Operating System:** Mac OS X Leopard – El Capitan, Microsoft Window 98 – 10, Ubuntu
- **Software:** Eclipse, Unix, Adobe Lightroom, Photoshop CC, Microsoft Office

WORK EXPERIENCES

Eastern Data, Inc. Norcross, GA
IT/Accounting Assistant/ Warehouse May 2014 - January 2016

- Assembled computer components and diagnosed trouble shooting for any failure
- Gathered company information, received incoming shipment and uploaded into database

Fry's Electronic Duluth, GA
Cashier/Merchandizer/Component Sale/ Computer Sale August 2012 - April 2014

- Worked in team to achieve goal for the department every week
- Advised customers on computer's component to meet their need

LEADERSHIP and AWARD

TSA Robotic Team Leader – Tucker High School August 2010 - May 2011
Captain

- Planned and organized team activities
- Communicated all events information to current and prospective members effectively

Award

- Tournament Champion Award
- Robot Skill Award
- Support Award from Vex Robotic World Championship

LANGUAGES

Fluent in English, Vietnamese, and French

Saher Ahmad

Summary

Motivated and efficient undergraduate student with strong client and project management skills. Action-oriented with strong ability to communicate effectively with multiple audiences.

Skills

- Microsoft Office
- Java, HTML, CSS, Linux
- Web Development
- Knowledge in object oriented programming
- Report and data analysis
- Client Focused
- Results-oriented
- Problem Solving

Work Experience

Cashier Customer Service -

Follett College – Lawrenceville, GA

- Provided assistance to customers in need
- Used cash register system to help customers with their purchases
- Organized products of the store and aided customers in finding the materials they needed
- Helped customers by making and printing their identification cards
- Kept check of the sales made by the end of the day

Marketer on Ebay -

Home Business – Atlanta, GA

- Organized and distributed incoming bulk products
- Took professional photos of hundreds of items daily
- Listed dozens of items for sale for customers on site weekly
- Provided customer support assistance to customers in need

Education and Training

- Bachelor of Science in Computer Science at Georgia State University
- Completed coursework in Calculus, Physics, and Computer Science centered courses.
- Concentration in Computer Information Systems
- Developed computer programming centered projects
- Worked in developing Android Apps and web content
- Collaborated with group members to plan, write, and delegate tasks in order to present a comprehensive report and code on programming projects for web servers
- Done data analysis reports on Android apps and application programming interfaces associated with it

TORITSEJU MIKE MIKIE

2162 Chambers Road,
Stockbridge, GA 30281
470-418-0296
tojumikie@live.com
https://www.linkedin.com/in/toju-mikie-87ba96101/

OBJECTIVE

To experience and learn as I go.

EDUCATION

High School Diploma | Ola High School
AUGUST 2011 – MAY 2013
Computer Science | Valdosta State University
AUGUST 2013 – MAY 2014
Computer Science | Clayton State University
AUGUST 2014 – MAY 2017
Computer Science | Georgia State University
AUGUST 2017 – ONGOING

EXPERIENCE

Electronics Sales Associate | Wal-mart
MAY 2016 – JULY 2016
Worked in the electronics department full time

IT Intern | RAM-Tech PC Solutions
AUGUST 2014 – MAY 2016; AUGUST 2016 – ONGOING
Fix customer computers, customer service, configure routers, printers, and other devices, adding computers to a domain

SKILLS

- Can fix and build computers
- Can also fix cell phones and game systems
- soldering
- Configuring servers, setting up RAID, setting up networks, fixing printer issues
- C/C++ (Intermediate), Java/HTML (Beginner)

ACTIVITIES

Video gaming, eating, sleeping, schooling

Woo Park

- 66 Weatherstone Court
- Sharpsburg, Georgia, 30277
- (678) 677-3979
- parkeugene96@gmail.com

Summary

I am currently a student at Georgia State University as a Computer Science major. I am also currently working at Chick-fil-A as a Front-Counter Coordinator. I am knowledgeable in Adobe Premiere and know the basics in Adobe After Effects and Adobe Photoshop. Also, I am positive and enjoy working with people and making connections beyond the workplace with my team.

Education

Georgia State University *Computer Science*

Graduating December 2019

I am currently studying Computer Science at Georgia State University. I had endured a rough start, but I have since been motivated.

Employment History

Chick-fil-A *Front Counter Coordinator*

June 2014 - Present

My primary responsibility in my current position include sales, customer relations, conflict resolution, and increasing customer loyalty; as a coordinator, I am also responsible in leadership development. I have spent years as a leader at my workplace and continue to lead. Overall, I have learned to build fellow coworkers to become enthusiastic and excelling workers and leaders. I have further developed my sense of loyalty and commitment. Also, my workplace has truly grounded the sense of servitude, positivity, and respect in me regarding the company and most importantly the customers.

Hobbies & Interests

I volunteer and serve at my church constantly as a youth teacher and praise team leader. I greatly enjoy making connections with people and the youth and establishing deeper bonds.

I enjoy editing and producing videos. I use photoshop as well in certain instances. Lately, I have been producing covers of certain songs and familiarizing myself in the realm of music production.

I enjoy data organization and use Excel often to organize data for work and for my personal needs such as my finances.

I am knowledgeable with Java regarding programming and MASM assembly language.

I am greatly into music and play the guitar and drums.

I am relatively active and enjoy playing intense or casual sports.

Professional Skills

Adobe Premiere:	Advanced
Adobe Photoshop:	Intermediate
Adobe After Effects:	Intermediate
Excel:	Advanced

Languages

English:	Native
Korean:	Fluent
Spanish:	Beginner

Overview

Our team objective is to create a web based software application to generate possible student schedules for a given semester in 6 weeks. Additional features will include a final grade calculator, in which a student can input the grade breakdown for a course and it will calculate the grade they will need to achieve for a final exam/project in order to get their desired final grade, a GPA calculator, and routes to classes using the Google Maps API.

Principle Tasks and Milestones

Milestone	Milestone Description	Milestone Criteria	Dependencies(tasks)	Deadline
M1	Start Planning	Scope and concept described	T1	June 15, 2018
		Proposal reviewed		
M2	Start Execution	Project plan reviewed	T2	June 22, 2018
		Requirements agreed		
M3	Confirm Execution	Architecture reviewed to be stable	T3, T4, T5, T6	June 29, 2018
		Resources are committed		
M4	Start Testing	Alpha is finished	T7	July 13, 2018
		Draft documentation		
M5	Release Final Project	Beta Application tested & functional	T8, T9, T10	July 20, 2018
		Documentation reviewed		

Hardware and software resource requirements:

For our application, it will require access to the internet, if there is an API available to connect to the school's class server. If not, we will access our database located on our local SQL server running on MAMP/WAMP. We will be creating the GUI that will use a web browser to display. For development, we will be using Eclipse IDE.

Challenges and Risks:

The biggest challenge we will face while proceeding with this project will be obtaining a way to access the Georgia State University servers where courses and their information is stored. If we cannot gain access for our application, we will pull data to populate our own database, in which the scheduler will use to generate schedules. There is a risk that we are underestimating the project complexity and that requirements will change. We also added a new member to the team in the second week of this project and will need to readjust the team dynamic and project planning. Our team has members with a variety in the experience we each have and hope that the learning curve will not impact us negatively. Ways to mitigate or lessen the impact of these risks and challenges will be using pair programming, sharing knowledge, and dividing research for planning/implementation. We are also utilizing Code Academy, among other resources, to gain the knowledge of the languages we need to use.

Scheduling:

Task	Task Description	Person(s) Assigned	Effort (person-days)	Duration (hours)	Dependencies
T1	Research how to execute application & decided on requirements	*All*	5	Week	N/a
T2	Design the UI/architecture	*Toju, Saher*	2	6	M1
T3	Build application framework for schedule generator	*Woo, Harry, Jodie*	3	15	M2
T4	Create/Populate/Test Databases	*Toju, Saher*	2	10	M2
T5	Build other components: Route generator, GPA calculator, Final Grade calculator	*Jodie, Woo, Harry*	3	15	M3
T6	Test other components	*Toju, Saher*	2	5	M3
T7	Complete beta	*Toju, Saher*	2	5	M3
T8	Beta test application	*Jodie, Harry, Woo*	3	10	M3
T9	Complete final application for presentation	*Jodie, Toju, Woo*	3	10	M4

T10	Create final application documentation	*Saher, Harry*	2	5	M4

Problem Statement

Thousands of students attend at GSU every year. The biggest struggle and headache for students at the beginning of school year is to find the right class and the right time that students need. We came up with the Class Schedule Builder to make life easier, quicker, and to save time for the students.

With our new Schedule Builder application, students can customize their course selections and it will generate multiple schedules, if possible. Often students will have to log into PAWs, browse their course options and manually work out how to build a schedule with their desired classes, which takes up a lot of time. Another issue students often face is what grade do they need on their final exam or project to pass a class with their desired grade. What will their GPA be? How do I get to my classes?

Our Schedule Builder application is a class scheduling tool that will provide students with an enhanced registration experience by helping to automate and simplify the schedule generation process. With this tool, students can input courses that they need to take into their Schedule Planner and generate all possible schedule combinations based on their course selections. Students can also save their generated schedules to revisit at a later time.

Schedule Builder generates every possible schedule combination in a clean, color-coded, Monday through Friday calendar format. Students can then easily put in the CRN into the registration worksheet in GoSolar and be registered with their desired schedule. In addition, our application will also have a GPA calculator, routes between classes by utilizing Google Maps API, and allow the user to input their class syllabus' grade breakdown to calculate what grade they need to receive on their final exam or project to pass.

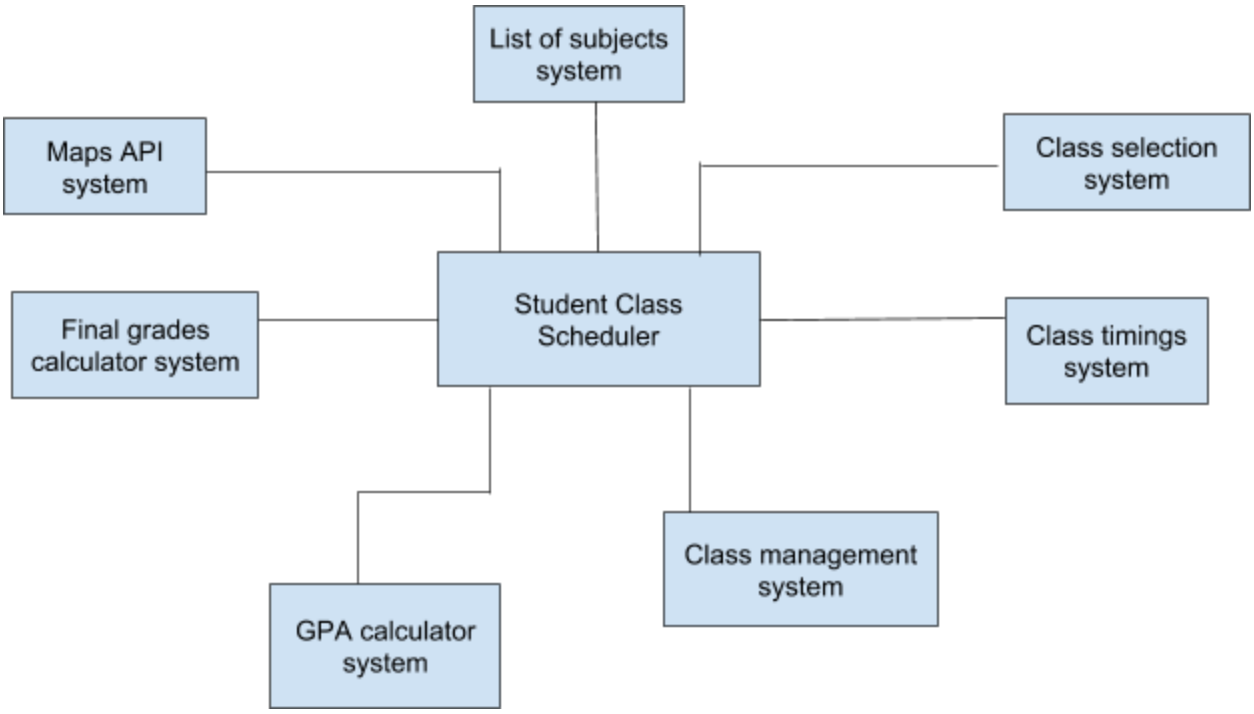
There are not many competitors out there for our application, but universities usually have their own website, like GSU has PAWs, which has a GPA calculator. However, GSU's resources often take too much time to search for and often difficult to locate. So, using our own personal experiences as GSU students, we decided to create our application to make things a bit easier. With our new application, it'll be convenient and useful in navigating some inconveniences students face every semester and hopefully, help enhance student success.

The biggest hurdle to creating Schedule Builder is gaining access to real-time data from the university server. In the case that we cannot acquire access to that data, we will have our own database populated with the current semester's course offerings to generate schedules.
We remain optimistic in engineering this application to help our fellow students.

Schedule Builder is a really useful tool that shows students all their options that they need within seconds. We're very excited to see students eventually try our Schedule Builder. Through this project, we will grow our technical skills by learning to use database servers, creating algorithms for a scheduler, learning how to utilize APIs and create a functional user interface.

System Requirements

Context Model



The system architecture is drawn from the main idea of the project, the student class scheduler. There are different components and modules listed that arise from it. It include a list of classes/subjects the student can choose from in order to choose their classes. The students are able to select classes based on what they desire and need for their subject of study. Class timings are also available in order for the students to be able to successfully plan their classes accordingly. There is also a maps API system, in which each student can use a navigator to help them go to each location of their classes. There is also a calculator system, in which students can calculate what their final grades would be at the end of the semester. Another calculator is used. where students can calculate their GPA using the final grades they obtain through the classes they sign up for. Students are able to use a management system for their classes, in which they can add or drop classes.

Required components of the system:

- There should be a system where there is a portal for the student to go through to access the database with available classes.

- A timing system should be created in which helps students to not let classes override or overlap each other.
- A list of classes should be produced that are needed for the student for their major.
- A navigation tool should be provided to help students find the locations of their classes.
- There should be a system architecture where everything can be found in the same place easily and efficiently for the student's convenience.
- Student should be able to enter their information in order to log into the system to be able to sign up for classes.
- The system should be easily accessible for students at convenient timings.

Use Cases

The main section, the class scheduler, allows students to select in the GUI, which option they would want to view. From this menu, the students will have options, such as a GPA calculator at first, and then when the students provide the system with more information, the more options will unlock and allow the students to do more things with the program.

The GPA calculator system allows the student to insert his or her classes, and the weights of the classes, and the letter grade (A, B, C, D, F) and allows the students to see a simulation of the GPA based on the calculations. As an example, the student selects two classes and then puts in the weight of the classes, which are 3 credit hours each. Student then puts in grades of B and F in the calculator. The GPA calculator will then calculate a GPA of 1.5 as an average of the B and F grades.

The final grades calculator system allows the student to input their class' grades into the program and then, calculate the student grade at the end of the semester. As an example, the student inserts grades with the same weights of 60, 70, and 80. The final grade calculator would then process the information and show an average of 70 for the final grade. The student can then add or insert more grade after the calculation to affect this final grade

The maps system will incorporate the Google Maps API and help students find the route to the correct building of the class they are taking. This is a great part of the application, especially for new students who are unsure of where they are supposed to go. As an example, the student wants to walk to his or her next class, so the student selects the class they want to go to and let the program do the rest of the work. The program will then triangulate the location of the student and give them a route to the building of the next class.

The list of subjects system and class selection system will import the database of subjects that are available to take during the semester and allow the student to view this information in a clear

format. The systems will also allow students to select the class that he or she wants to pick. The data may be collected and imported, possibly as a CSV file or other simple database file. As an example, the student will select SOFTWARE ENGINEERING as a class. The student will then be able to view this information. The student then decides to select this class as an option. The student decides to select more classes. The student selects OPERATING SYSTEMS, ROBOTICS, and COMPUTER ARCHITECTURE. This combined list of classes will be shown in an easy-to-view format for the student to view. The student looks at the credit hours and see that he/she is taking 12 credit-hours and is satisfied. The student then saves the configuration and moves on with his/her day.

The class timings system or scheduling conflict system allows the students to settle class conflicts on the fly. The student will be able to view the class conflicts in the calendar GUI and make adjustments to the schedule without the hassle of remembering the CRN of the class. As an example, the student selects a class that has the schedule Monday, Tuesday, Wednesday, Thursday 9:00am-9:50am. The student then selects a class that has the schedule Monday, Tuesday, Wednesday, Thursday 9:30am-10:20am. The student will be notified that there is a class conflict and will give more details, including the name of the course, that the class is having a conflict with.

The management system allows the student to add, drop, or even withdraw classes. There is even a prediction part of the system where the student can view “what if” scenarios. As an example, there is a student who is overwhelmed by the amount of work that the student is getting in classes. This student is only getting 5-6 or less hours of sleep and needs to drop two classes. The student accesses the class scheduler and drops the two classes with ease. The student can now catch up on his/her sleep and focus on the classes that are still being taken.

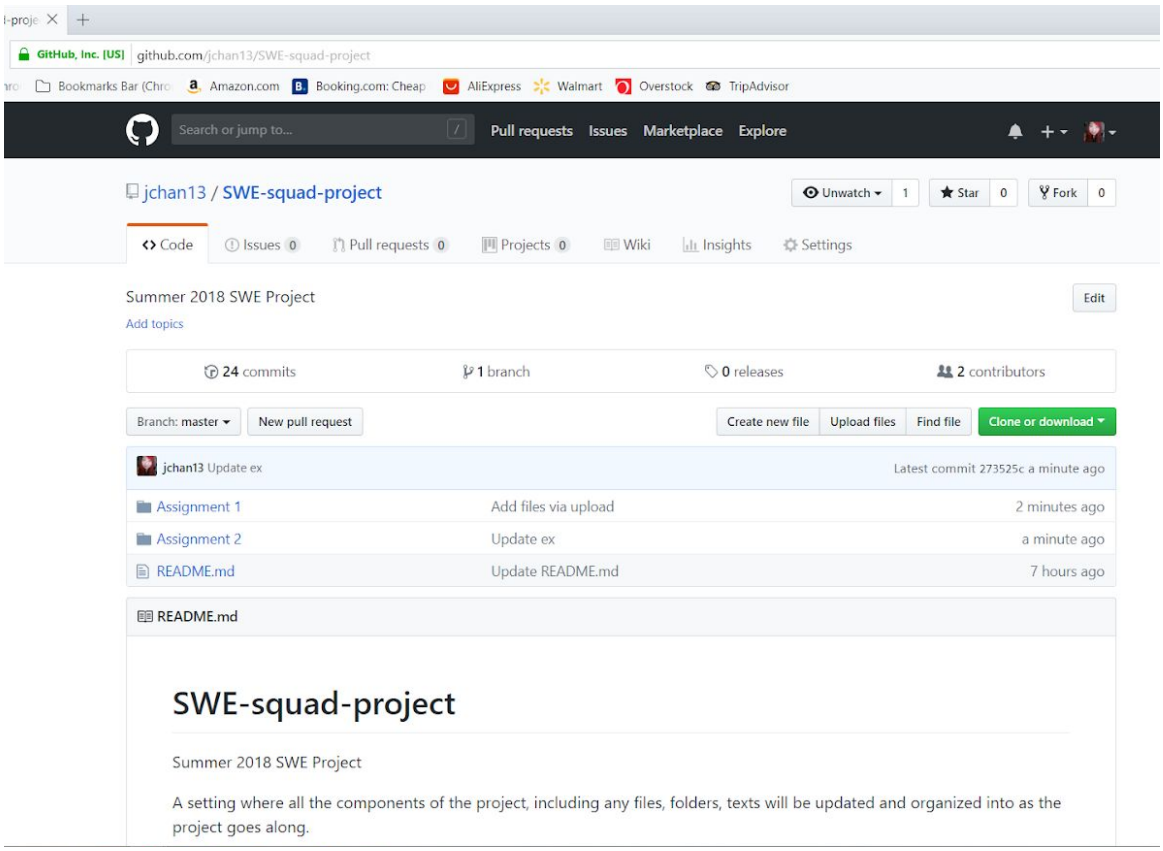
The notification system will notify a student when there is, by default, ten minutes remaining until the class begins. This setting can be changed, of course, within the notification system. As an example, we have a student who is always running late for class. The student sees the setting in the notification system that the notification is set for ten minutes before class. The student then sets this setting to 30 minutes before class and has rarely been late to class since then.

The system that incorporates Rate My Professors will show a score of the professor, alongside the class that is either selected, or in the student’s schedule. The student can use this score to figure out whether or not the student wishes to take the class. As an example, the student registers for classes and then sees a low professor score in Rate My Professors website. The student then decides to switch that class with another class where the professor has a higher score in Rate My Professors. The student is satisfied and then walks to class.

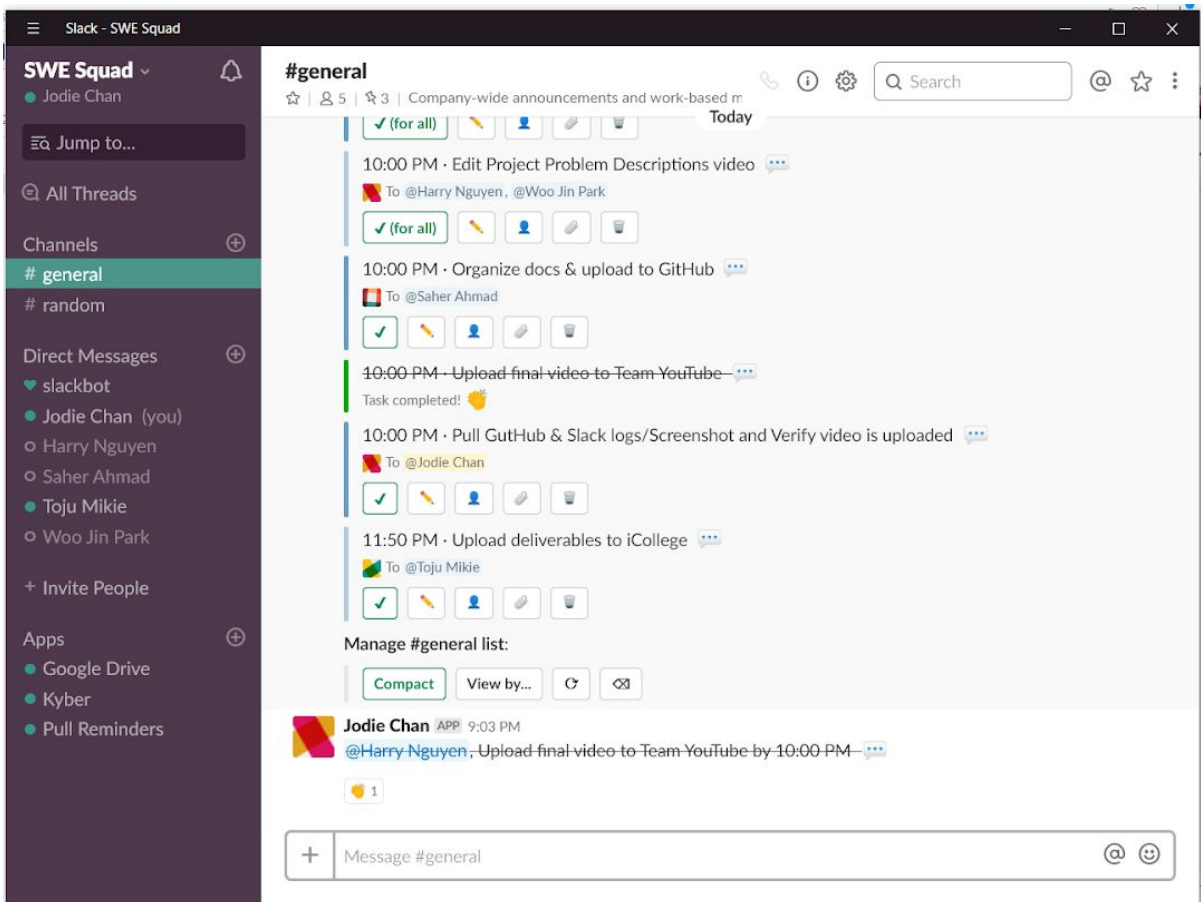
Appendix

Project Problem Description: YouTube Link

GitHub Logs:



Slack Logs:




```
[
  {
    "user_id": "UB5CEV9S6",
    "user_name": "jodiechan13",
    "date": "1529008815",
    "change_type": "added",
    "app_type": "Google Drive",
    "app_id": "A6NL8MJ6Q",
    "scope":
"identify,bot,channels:read,files:read,team:read,users:read,users:read.email,chat:write:bot,links:read"
  },
  {
    "user_id": "UB6EG9EH5",
    "user_name": "tojumikie",
    "date": "1529008517",
    "change_type": "added",
```

```
      "app_type": "Google Drive",
      "app_id": "A6NL8MJ6Q",
      "scope":
"identify,bot,channels:read,files:read,team:read,users:read,users:read.email,chat:write:bot,links:r
ead"
   },
   {
      "user_id": "UB6E8ALG6",
      "user_name": "sahmad6",
      "date": "1529003846",
      "change_type": "added",
      "app_type": "Google Drive",
      "app_id": "A6NL8MJ6Q",
      "scope":
"identify,bot,channels:read,files:read,team:read,users:read,users:read.email,chat:write:bot,links:r
ead"
   },
   {
      "user_id": "UB6E8ALG6",
      "user_name": "sahmad6",
      "date": "1529003833",
      "change_type": "added",
      "service_id": "382935749543",
      "service_type": "Google Drive",
      "scope": "files:write:user"
   },
   {
      "user_id": "UB5CEV9S6",
      "user_name": "jodiechan13",
      "date": "1528829110",
      "change_type": "added",
      "app_type": "Kyber",
      "app_id": "A0EP69E58",
      "scope":
"identify,bot,commands,channels:read,groups:read,im:read,mpim:read,reactions:read,team:read,
users.profile:read,chat:write:bot"
   },
   {
      "user_id": "UB5CEV9S6",
```

```
        "user_name": "jodiechan13",
        "date": "1528731873",
        "change_type": "added",
        "app_type": "Pull Reminders for GitHub",
        "app_id": "A8MBPB34N",
        "scope": "identify,bot,channels:read,groups:read,users.profile:read,chat:write:bot"
    }
]
```