

# GitGroup – A web-based software development management system

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## Introduction

### Git and GitHub

If you are a web developer, you must be familiar with the git - a version control system for tracking changes in computer files and coordinating work on those files among multiple people, and GitHub - a web-based hosting service for version control using git. You almost can use it to do anything when your team develop a software, such as bug tracking, feature requests, task management, and wikis.

### GitHub OAuth Apps and GitHub GraphQL API v4

OAuth2 is a protocol that lets external applications request authorization to private details in a user's GitHub account without accessing their password. This is preferred over Basic Authentication because tokens can be limited to specific types of data and can be revoked by users at any time. An OAuth App uses GitHub as an identity provider to authenticate as the user who grants access to the app. This means when a user grants an OAuth App access, they grant permissions to all repositories they have access to in their account, and also to any organizations they belong to that haven't blocked third-party access.

GraphQL is an open source data query and manipulation language, and a runtime for fulfilling queries with existing data. GraphQL was developed internally by Facebook in 2012 before being publicly released in 2015. It provides a more efficient, powerful and flexible alternative to REST and ad-hoc web service architectures. It allows clients to define the structure of the data required, and exactly the same structure of the data is returned from the server, therefore preventing excessively large amounts of data from being returned.

GitHub chose GraphQL because it offers significantly more flexibility for our integrators. The ability to define precisely the data you want—and *only* the data you want—is a powerful advantage over the REST API v3 endpoints. GraphQL lets you replace multiple REST requests with *a single call* to fetch the data you specify.

## What is the app idea?

Although GitHub is very famous among the programmers and developers. But there are also some disadvantages. One of them is that Git and GitHub have a high entrance standard. For example, when you want to create an issue to suggest a new idea or track a bug, you need to learn markdown

syntax, emoji code. And it is even more complex when you do pull request and merge the project. In Most time, developers need to communicate with the boss or product manager. However, most managers are not good at programming, and GitHub is not very suitable to them. My idea is to make GitGroup more easy to use by person who has little development experience, such as product manager. When you use the GitGroup, you can sign up an account and access to the GitHub api. The user can create online group chat, schedule and record the conference. After the discussion between the team member, they will have some their project idea, thus, our online app also provide the task management service. In each project, every team member's work is recorded in the system. And according to those information, every user will have their own grade. Furthermore, the online web can have a recommendation system which help the product manager and programmer match each other. In conclusion, it is a online service based on the GitHub API, and improve the user experience.

## What it does, for whom, and why

GitGroup is designed for all people in the product development team, even for those people haven't computer engineering knowledge like product manager. The functionality of GitGroup includes:

1. Online meeting;  
Online meeting group chat. Record the conference. Make conference scheduling form and alarming the coming meeting.
2. Task management;  
Like GitHub task management, but has better UI design. Make TODO list; Create an issue to suggest a new idea or track a bug. Then organize and assign tasks to your team.
3. Developer grading system;  
Record the working of any team member. According the performance of users in all team which he joined, get users a grade;
4. Developer finding system;  
If you are a team leader, you can find a perfect developer who has related skill to your project. If you are a software developer, you can post your information to find suitable project for you.

## What makes it special

Easy to use. Make the whole process of development more efficient and also improve the communication between product manager, designer and developer.

## What is the target market?

1. Software developer;
2. Product manager;
3. Startup company;

## What problems am I solving for my users?

Accept some good idea of GitHub and improve the user experience by the GitHub api and our own service. It is a easy way to let manager and other people without development experience participate in the process of the software development. Real-time system let users' communication efficiently.

Another problem is that sometimes, programmers cannot find good ideas or projects and product manager cannot find suitable programmer to implement their ideas. To figure it out, we offer the grading and recommendation system to match them together.

## What channels will I use to reach customers?

Because our target is software developer, product manager and some startup company. They are all in the new information industry and their age is between 20 and 40, We will use the new media, such as socia media, tech website, mobile app, online podcast. I will make: Social Media: Facebook, Twitter, LinkedIn, Pinterest, Tumblr Network ads: Google's AdSense ads

## What could possibly be the future of this app?

Focus on the user experience in the process of project development. Improve the developer recommendation system algorithm. Include all the features of GitHub and develop our own version control system and task management system based on our idea and logic to make development easy.