# LAPORAN PRAKTIKUM INTERNET OF THINGS (IoT)

# Fakultas Vokasi, Universitas Brawijaya

\

**Praktik Pembuatan Akun Wokwi Github**

*Agatha Herma Putra*

*Fakultas Vokasi, Universitas Brawijaya*

*Email: agathaputra24@student.ub.ac.id*

**Abstract**

With the rapid advancement of technology, online platforms play a crucial role in various fields, including software development and embedded systems. This experiment aims to guide users through the process of creating accounts on **Wokwi** and **GitHub**, two widely used platforms with distinct functionalities. **Wokwi** is an online simulation tool for microcontrollers, enabling users to test and prototype embedded system projects. In contrast, **GitHub** is a version control platform that facilitates software development collaboration and code management.

The experiment followed a structured methodology, beginning with account registration, verification, and testing of basic functionalities on both platforms. The results indicated that **Wokwi** provides a straightforward and fast registration process, allowing users to immediately access microcontroller simulation tools. Meanwhile, **GitHub** requires additional steps, such as repository setup and Git commands, making it slightly more complex for beginners. Despite this, GitHub offers extensive documentation and guides to support new users.

The findings highlight that both platforms serve essential roles in their respective domains. **Wokwi** is highly beneficial for embedded systems prototyping, while **GitHub** is indispensable for version control and collaborative software development. Understanding how to navigate and utilize these platforms effectively can significantly enhance users' productivity in technology-related fields.

*Keywords—Wokwi,GitHub,Account,RegistrationMicrocontroller,Simulation,Version,Control,SystemEmbedded Systems,Software,Development,Online,Collaboration,Git,Commands,User,Experience*.

**1 Introduction**

**1.1 Background**

With the rapid advancement of technology, online platforms play a significant role in communication, collaboration, and professional development. Social media platforms help individuals stay connected and engaged with communities, while development platforms enable programmers to work efficiently on projects.

Wikwok has emerged as a growing social networking site where users can share their thoughts, ideas, and media content. It provides an interactive space for people to connect and discover trending topics.

On the other hand, GitHub has become an essential platform for developers worldwide. It allows individuals and teams to collaborate on software development, track code changes, and contribute to open-source projects. With GitHub, users can manage repositories, participate in coding communities, and build their professional portfolios.

Understanding how to create accounts on both Wikwok and GitHub is essential for individuals who want to maximize their online presence, whether for social networking or professional growth in the tech industry.

**1.2 Purpose of the experiment**

With the rapid advancement of technology, online platforms play a significant role in communication, collaboration, and professional development. Social media platforms help individuals stay connected and engaged with communities, while development platforms enable programmers to work efficiently on projects.

Wikwok has emerged as a growing social networking site where users can share their thoughts, ideas, and media content. It provides an interactive space for people to connect and discover trending topics.

On the other hand, GitHub has become an essential platform for developers worldwide. It allows individuals and teams to collaborate on software development, track code changes, and contribute to open-source projects. With GitHub, users can manage repositories, participate in coding communities, and build their professional portfolios.

Understanding how to create accounts on both Wikwok and GitHub is essential for individuals who want to maximize their online presence, whether for social networking or professional growth in the tech industry.

**2.1 Methodology**

This experiment follows a structured approach to ensure a clear and effective account creation process on Wokwi and GitHub. The methodology consists of the following steps:

1. Preparation Stage  
   Before creating an account, users must prepare the necessary requirements. This includes having a valid email address, a stable internet connection, and access to a web browser to navigate the registration pages of Wokwi and GitHub.
2. Account Creation on Wokwi  
   The first part of the experiment involves creating an account on Wokwi. Users need to visit the official Wokwi website and click on the "Sign Up" or "Create Account" button. They must enter the required information, such as email, username, and password. After completing the form, users must verify their email address through the confirmation link sent to their registered email. Once verified, they can log in to their newly created Wokwi account and explore the available features.
3. Account Creation on GitHub  
   The next step is to create a GitHub account. Users should navigate to the official GitHub website and click on the "Sign Up" button. They will be prompted to enter a username, email address, and password. After completing the form, users need to verify their email through a confirmation link. Once the verification process is complete, they can log in to their GitHub account and start exploring repositories, version control, and collaboration features.
4. Testing and Exploration  
   After successfully creating accounts on both platforms, users will test the basic functionalities. On Wokwi, they can run a simple microcontroller simulation, while on GitHub, they can create a repository and push a test project.
5. Documentation and Analysis  
   Throughout the process, observations and challenges encountered will be documented. The results will be analyzed to evaluate the ease of account creation and the user experience on both platforms.

**2.2 Tools & Materials**

To successfully complete the account creation process on Wokwi and GitHub, several tools and materials are required. These include:

1. Hardware Requirements
   * A computer or laptop with an internet connection
   * A web browser (Google Chrome, Mozilla Firefox, Microsoft Edge, or any other compatible browser)
2. Software & Online Platforms
   * Wokwi (accessible at <https://wokwi.com>)
   * GitHub (accessible at <https://github.com>)
3. User Credentials
   * A valid email address for account registration
   * A strong password for security purposes
4. Additional Tools (Optional)
   * A text editor (such as Visual Studio Code or Notepad++) for working with GitHub repositories
   * A Git client (such as Git Bash or GitHub Desktop) for version control testing

These tools and materials ensure a smooth and efficient process for creating accounts and exploring the basic functionalities of both platforms.

**2.3 Implemention Steps**

The implementation of this experiment follows a step-by-step process to ensure the successful creation of accounts on **Wokwi** and **GitHub**. The steps are outlined as follows:

**1. Accessing the Platforms**

* Open a web browser on a computer or laptop.
* Navigate to the official websites:
  + **Wokwi**: <https://wokwi.com>
  + **GitHub**: <https://github.com>

**2. Creating a Wokwi Account**

* Click on the **"Sign Up"** or **"Create Account"** button.
* Enter the required details, including:
  + A valid email address
  + A username
  + A strong password
* Click **"Register"** or **"Sign Up"** to proceed.
* Check the registered email for a verification link and click on it to activate the account.
* Log in to the Wokwi account and explore the available features, such as microcontroller simulations.

**3. Creating a GitHub Account**

* Click on the **"Sign Up"** button on the GitHub homepage.
* Enter the required details, including:
  + A valid email address
  + A username
  + A strong password
* Complete any CAPTCHA verification if prompted.
* Click **"Create Account"** and check the registered email for a verification link.
* Click the verification link to activate the account.
* Log in to GitHub and explore repositories, version control, and collaboration tools.

**4. Testing Basic Functionalities**

* On **Wokwi**, run a simple microcontroller simulation to confirm account functionality.
* On **GitHub**, create a new repository and test basic operations such as committing files and pushing changes.

**5. Documentation and Evaluation**

* Record observations during the account creation process.
* Identify any challenges faced and evaluate the ease of use for both platforms.
* Summarize findings and provide recommendations for users who want to register on Wokwi and GitHub.

By following these steps, users can successfully create and utilize their Wokwi and GitHub accounts for simulation and development purposes.

**3. Results and Discussion**

**3.1 Experimental Results**

The experiment involved the creation of accounts on **Wokwi** and **GitHub** and testing their basic functionalities. The following results were obtained:

**1. Wokwi Account Creation**

* The registration process was **successfully completed** within approximately **2-3 minutes**.
* The email verification link was received **instantly**, and the account was activated without any issues.
* After logging in, the user was able to access the **microcontroller simulation environment** without requiring additional setup.
* A test simulation of an **Arduino LED blinking project** was executed successfully, confirming that the account was fully functional.

**2. GitHub Account Creation**

* The registration process took **3-5 minutes**, including **email verification** and **account setup preferences**.
* The email verification was completed **without delays**, and the account was ready for use immediately.
* A new repository was successfully created, and a test file was uploaded using the GitHub web interface.
* Using **Git Bash**, the user was able to clone the repository, make local changes, and push updates to the remote repository without errors.

**3. Performance and User Experience**

| **Feature** | **Wokwi** | **GitHub** |
| --- | --- | --- |
| **Registration Time** | 2-3 minutes | 3-5 minutes |
| **Email Verification** | Instant | Instant |
| **Ease of Use** | Very user-friendly | Requires basic Git knowledge |
| **Primary Function** | Microcontroller simulation | Version control & collaboration |
| **Test Execution** | Arduino LED blink simulation | Repository creation & file push |

**4. Challenges Encountered**

* **Wokwi**: No major issues were found during registration and initial testing. The interface was intuitive, and the platform was accessible immediately after signing up.
* **GitHub**: Users unfamiliar with Git may require additional time to understand how repositories work. However, GitHub provides **guides and tutorials** to assist beginners.

**5. Overall Findings**

* The experiment confirmed that **both platforms have smooth and efficient registration processes**.
* Wokwi is ideal for users interested in **embedded systems simulations**, while GitHub is crucial for **software development and version control**.
* The functionalities of both platforms were tested successfully, demonstrating their usability for beginners and advanced users alike.

**4. Appendix**

**A. Links to Official Websites**

The following links were used during the experiment for account registration and platform access:

* **Wokwi**: <https://wokwi.com>
* **GitHub**: <https://github.com>

**B. Required System Specifications**

To ensure smooth execution of the experiment, the following system requirements were met:

* **Device**: Laptop with at least 4GB RAM
* **Operating System**: Windows 10 / macOS / Linux
* **Browser**: Google Chrome (Version 100+)
* **Internet Connection**: Stable with a minimum speed of 5 Mbps

**C. Sample Code for Testing**

**Wokwi - Arduino LED Blink Code:**

cpp

CopyEdit

void setup() {

pinMode(LED\_BUILTIN, OUTPUT);

}

void loop() {

digitalWrite(LED\_BUILTIN, HIGH);

delay(1000);

digitalWrite(LED\_BUILTIN, LOW);

delay(1000);

}

**GitHub - Commands for Repository Setup:**

sh

CopyEdit

git init

git add .

git commit -m "Initial commit"

git branch -M main

git remote add origin <repository\_url>

git push -u origin main

**D. Troubleshooting Guide**

Common issues encountered and their solutions:

| **Issue** | **Possible Cause** | **Solution** |
| --- | --- | --- |
| Wokwi email verification not received | Email provider filtering | Check spam folder or retry registration |
| GitHub repository not pushing | Incorrect remote URL | Verify and reset the repository URL using git remote set-url origin <new\_url> |
| Slow platform loading | Weak internet connection | Ensure a stable connection or try a different ne |