

# PRESIDENT UNIVERSITY

**Internship Report For**



**PT. Wirecard Technologies Indonesia**

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**Information Technology – Faculty of Computer Science**

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**September 2019**

# Internship Completion Letter

wirecard

**SURAT KETERANGAN**  
No 0508-IX-19-INT

Yang bertanda tangan di bawah ini :

Nama : Rahendra Anugra Putra  
Jabatan : Head of HR and Legal

Dengan ini menerangkan bahwa nama dibawah ini :

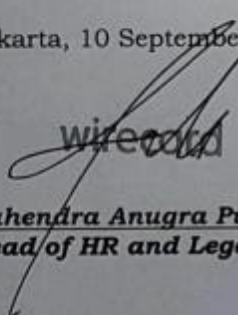
Nama : Lalu Aria Sultan Madani  
NIM : 001201600032

Adalah benar mahasiswa dari Preside University yang telah melakukan praktek kerja lapangan di PT. Wirecard Technologies Indonesia selama 4 (empat)bulan terhitung dari tanggal 6 Mei 2019 sampai dengan 6 September 2019.

Demikian surat keterangan ini dibuat untuk keperluan administrasi atas nama yang bersangkutan.

Atas perhatiannya kami ucapkan terima kasih.

Jakarta, 10 September 2019

  
**Rahendra Anugra Putra**  
**Head of HR and Legal**

PT. Wirecard Technologies Indonesia

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## **PREFACE**

First of all, Alhamdulillah, praise be to Allah for His blessings given to all of us until this day. As to fulfill the University's curriculum to take the internship program in the ninth semester, I would like to express my biggest gratitude for PT. Wirecard Technologies Indonesia for the opportunity entrusting me in contributing to the company despite the lack of skills that I have.

Transitioning from being a student to an intern working for a company, I admit it was not easy, though I am grateful for the people around me, especially:

1. Mrs. Cindy Kristiya Himawan, as my internship mentor who is always welcome for consultation and provides advices even from before the internship started until I have completed.
2. Mr. Sumadi Lie as Project Manager who directed me in delivering the tasks given, and always give motivation in my internship period.
3. Kak Kurniawan Utomo, as my Senior Developer who helped me gained knowledge and guidance during my internship period.
4. Andre Leonardo, as my fellow Internship Developer who assisted me with learning new knowledge during my internship period.
5. All family, friends, and all parties who have provided support to me so that this internship can be completed well.

Being involved in a project whilst it's still on development, thorough the four months of internship I have learned how to manage time to complete tasks within the deadline, encountering errors and problem solving, communicating with seniors in a manner when asking for guidance, and sharing what we know to others who are in need of help.

Further in this report is written information about the company and the activities and knowledge I have experienced as an intern. Evaluations and recommendations regarding the internship program will also be discussed in this report. Hopefully this report will be useful for readers in the future.

# **Chapter I – Introduction**

## **I.1 Background**

Internships are planned and closely supervised work-related learning experiences providing the students with a chance to gain important knowledge and skills in a career-related that may or may not be directly related to their academic coursework. An internship provides exposure to career fields of business and interest

By putting the internship as the compulsory subject of the university, President University recognizes the importance of learning by experience opportunities for both the educational advancement of students and the growth of host employer's businesses and organizations.

Internship program in President University serves as a medium for undergraduate students who want to feel a real understanding of taking a particular part of society's roles. As a result, students who have experienced internship program are expected to be competitive, responsible and are able to give their best contributions to society they are with.

## **I.2 Purposes**

The overall purpose of internship program is that competitive fresh graduates from well-known universities who have experienced working in projects of their study field are extremely needed in many big companies and start-ups. However, most of the fresh graduates from universities are not prepared for any functioning individual within societies. Thus, some universities including President University, provide their students with a real-world work experience.

## **I.3 Benefits**

Internship program benefits students to mature themselves to work professionally and develop their abilities to achieve performance goals based on the responsibilities and duties, also students can enhance decision-making and problem-solving skills through the formulation, implementation and evaluation of alternative solutions to problems and approaches to issues.

## **Chapter II – Company Profile**

### **II.1 Company History**

PT. Wirecard Technologies Indonesia, which was previously PT. Aprisma Indonesia, is a wholly owned subsidiary of Wirecard A.G. The German Wirecard Group is one of the world's leading independent providers of solutions for electronic payment transactions. Wirecard has more than 14,000 corporate customers worldwide, a banking license in Germany and an FSA license in the UK. As Principal Member of Visa, MasterCard, JCB, and licensed Acquirer of Amex and UnionPay, Wirecard has operations in 69 countries on all 5 continents and boasts a truly global reach.

### **II.2 Company Vision and Mission**

- **Company Vision**

Building on the strong Wirecard group - and individual PT Wirecard Technologies Indonesia accomplishments and partnering with our customers, shareholders and employees, we will be the regional ASEAN most trusted Financial Technology vendor with focus on full vertical integrated Cash Management, Internet & Mobile Banking Solutions.

- **Company Mission**

- ✓ We will be a leading vendor of quality solutions and services consistently delivered to our clients, match their IT and business needs and exceed their rising expectations in an ever-changing market.
- ✓ Supported by leading-edge technology, we will be driven by a commitment to help our clients succeed in their business goals, through a highly motivated team of competent professionals, guided by in-depth knowledge of the industry.
- ✓ Our clients are never taken for granted or serviced 'out-of-the-box'. Whilst offering a broad specter of customizable functionality and tools, we strive to be at the forefront of the Financial Technology internet and mobile 5 banking landscape and give innovative access to new payment channels and technological developments.

- **Company Objective**

Wirecard is trusted as a result of our unrivalled understanding of online transaction banking solutions and its related processes. We have a definitive vision of how online banking payment systems will look in the future and we have the knowledge,

scale, and resources to deliver it. Our high-level products have flexible features to offer tailor-made and end-to end 'full vertical integrated' financial solutions in line with your corporate profile and identity.

### **II.3 Core Company Activities**

- **Client wealth creation**

Through our solutions we strive to enable our clients to become high-performant businesses. We aim to create long-term win-win relationships by being responsive and relevant and by consistently delivering value.

- **Leadership**

Leadership in our business is defined by courage, personal integrity and by having a vision which inspires others. Our people are motivated and empowered to bring just that in their daily operations and output.

- **Trust and Partnership**

They are the foundation of our success and stretch beyond the written words. They build themselves through common goals, respect, and fulfilment of our commitments. Our stakeholders and clients know that we will go the extra mile in meeting their needs.

### **II.4 Company Product and Services**

- **PrimeCash**

PT. Wirecard Technologies Indonesia offer multi-regulatory approved Cash Management Solutions that match global industry security standards and leading banks' risk management charters. Both your domestic and international customers need will be serviced in a premium way using their preferred languages and currencies. A large variety of dedicated, customizable modules is available that if needed can be tested and launched separately and that are guarantee - together with our industry dedication - for fast integration and deployment. Every module will be tailored and customized to banking specific business goals. PT. Wirecard Technologies Indonesia will help to assemble the package of every choice.

- **PrimeCash Mobile**

PrimeCash Mobile provides an integrated development platform for mobile applications with a comprehensive technology that allows a developer to write once the UI, business

process. It also allows to test and deploy applications into multiple smartphone platforms such as iOS, Android, Blackberry OS, and Windows phone.

- **Prisma Gateway**

The Prisma Gateway is a service integration engine, advanced Service Oriented Architecture SOA and Enterprise Service Bus ESB platform that adapts flexible to dynamics business needs. It provides an easy way to integrate to third party business partner back-end hosts and is designed to speed up time-to-value, to reduce the costs of IT initiatives and to futureproof businesses.

- **PrismaHub**

Slowly 'silo' building payment channels (ATM, Internet, etc.) as they have emerged overtime, banks have built an important legacy on difficult to maintain and conflict creating middleware. The unifying Prisma Payment Service Hub couple efficiency and cost reduction to the need to handle ever-growing volumes of payments with an increasing share of near-real time transactions. Orchestrating in one platform a multitude of existing and yet to come payment channels, the growing and irritating patchwork of middleware finally belongs to history.

## **II.5 Company Growth and Trend**

Thanks to its focus on Cash Management Systems, Internet and Mobile Banking, Wirecard Indonesia rapidly became market leader in Indonesia. Successful deployments in most Indonesian Tier 1 banks, the company did expand on the wings of its regional clients throughout ASEAN, with vocation to become the regional innovator and market reference. The clients of PT. Wirecard Technologies Indonesia are the company that has an impressive list of blue-chip clients that include most Indonesian top 10 Tier 1 banks.

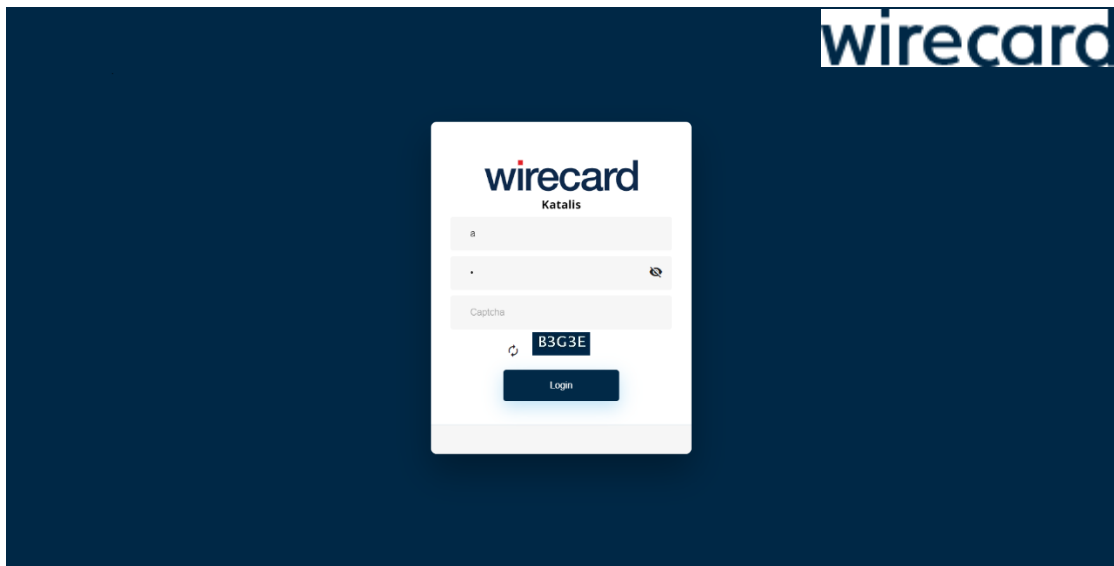


## **Chapter III – Internship Activities**

I started my internship at PT. Wirecard Technologies Indonesia on Monday, May 6th, 2019. The regular office hours are Monday to Friday 08.30 – 17.30. At the first two weeks, we have to join the training program before being released to the project. During the training program, we learned in-depth Java and tools around it in preparation before contributing in a project. We were taught how to use repository, pushing, and pulling files to GitLab with Git. We also taught to use test automation software such as Katalon. We were also taught how to use Spring Java frameworks, do testing using Postman, make web application along with the database that can-do CRUD (Create, Update, Insert and Delete) using Apache Tomcat web server.

After the training program is completed, I was interviewed by a project manager and his developers. After the Idul Fitri Holiday period, I was assigned in an internal team Katalis as a back-end developer to enhance the product especially in backend side. But before getting fully involved in the project, I was given a briefing about the project outline by the Business Analyst.

The product I was working on is Katalis (formerly known as DevOps Dashboard) is a platform that offers a single solution for software development lifecycle from development up until delivery, Katalis is currently being used only by Wirecard. One of its core product features is release management. Katalis also manages the standardization for the project to be released. Katalis back-end is written in Java using Spring framework and its dependencies was managed by Maven. It has also a feature to check developer's code quality with SonarQube. Those will help to make sure the development team to produce good quality product after it has been released. During working in Katalis, my senior developer kak Kurniawan recommend me to use a more sophisticated Java Integrated Development Environment (IDE) which is IntelliJ IDEA, IntelliJ IDEA have been helping a lot when it comes to debugging the software as it has more advanced debugging features.



The first task I was assigned to is implement Captcha to the Katalis log in page to prevent brute force login that can slowing the server down, because of the complexity of this task, the task was assigned to both me and my fellow intern developer Andre Leonardo that also helping me complete the task. In the first two weeks I struggle to understand image generation in Java library as it was quite complex but Andre was keen to help me teaching the image generation. With this task I also learned database framework called Liquibase, a framework that can manage database structure without using a complex SQL statement. After done with the first task, I was assigned to fixing bugs that left by the previous developers within the release-management part of the product.

The next task I was assign is implementing SonarQube scan to be recorded in the Activity Log menu. SonarQube is a service that will scan code written by the developers and it will check for the codes quality, if the code contains bugs or have been coded badly, the scan will have failed result. If the scan result is failed then the code cannot be released, SonarQube scan is implemented as a safeguard for a bad code not be released into the production. A SonarQube scan will be run automatically depending on the schedule, the SonarQube Scan run by Jenkins, Jenkins provide automatic pipeline that will run script used to automate tasks. The tasks are automated by Jenkins because it will save human resource as the tasks are run by Jenkins. Jenkins is written using Groovy script, and my task is to modify the script so that each SonarQube scan will be recorded to the Activity Log menu. In the beginning of working with Groovy script I struggled to understand many of the Groovy syntax because I never have previous

encounter with it, but with the help of kak Kurniawan and well documented Groovy documentation, I am able to complete the task.

After done implementing SonarQube scan with Activity Log menu, I was given a task to make unit test for release-management of Katalis, Unit test was made to make sure that the codes are behaving as intended, I use Junit testing as the main unit testing tools.

## Chapter IV – Personal Result

Through my internship period in PT. Wirecard Technologies Indonesia, I have learned not only on technical skills but also on soft skills. These things will be described in the details below:

- **Technical Knowledge**

While at training I am getting to learn about how to be developer, whilst getting involved in the Katalis project, I had to work on something completely new, there was many technical knowledges that I obtained,

1. Learned more advance Object-Oriented Programming (OOP), especially more about Java programming languages.
2. Learned Java framework such as Spring.
3. Learned Maven dependencies tools.
4. Learned to use Source Code Management such as Git and Mercurial
5. Learned Groovy Script

- **Working Experience**

Working at PT. Wirecard Technologies Indonesia and being involved in a more of a technical project required me to give all I have learnt in university to deliver the task efficiently. I got to experience and understand that developing an application, even though only on the back-end was not easy, because we are creating a product that use many automation tools and many new tools that not many companies implemented yet. Not only focusing on the development, I also had to learn that the developers must follow on the requirement specified by the business analyst even though that my solution seems more appropriate in my opinion.

- **Organizational Structure**

From this internship experience, working in an office with many departments and positions, I get to observe many people with different kinds of role in the company. I learned that asking the right people is important depending on the position because not every person has the right answer.

- **Personal Skills and Growth**

Working in a project definitely improve my technical skill especially working as a back-end developer, but most importantly I developed my soft skills because it was previously my greatest weakness. Communicating with seniors and PM helped my ability to speak more clearly. I am also learned to be more responsible on the work that I was assign to and that is very valuable experiences for what I will face in my future career.

## **Chapter V – Recommendation**

Being an intern was definitely worth it, even though it seemed hard and with many struggles since the transition for me from being a student to an employee. Gaining experience in a developing project was fun and exhausting at the same time, but of course there are many positive things besides that and earning new knowledges that's valuable for my future career.

I would like to recommend for the next batch especially in Faculty of Computing that will be doing their internship, to be aware of what you are passionate of and which IT field that you are interested in.

Also, for the Faculty of Computing to teach their students more advance and updated material that are currently not thought in class. This is because at first, I was struggling in understanding the framework and tools that I was working with and understanding more advance materials before Internship will help.

# Appendices



Figure 1 Wirecard Company Logo

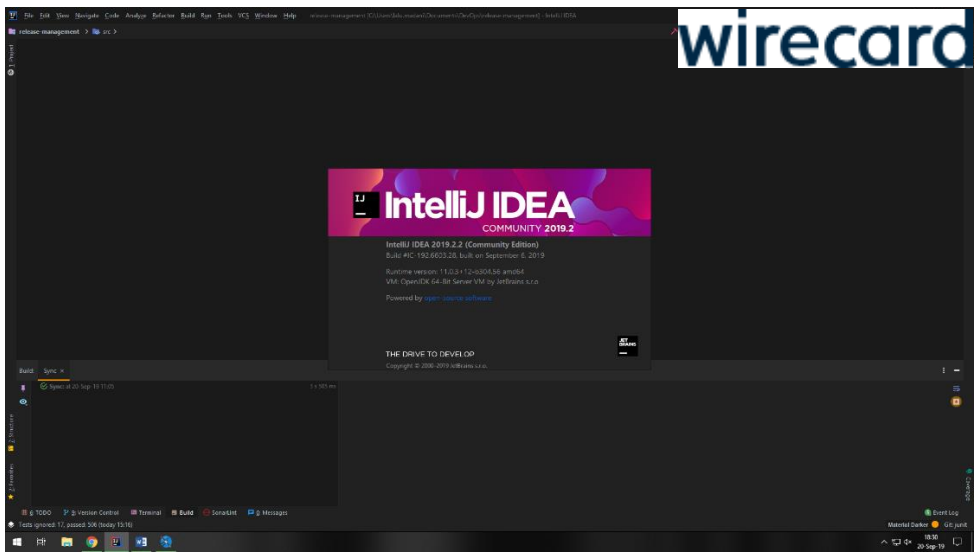


Figure 2 IntelliJ IDEA IDE

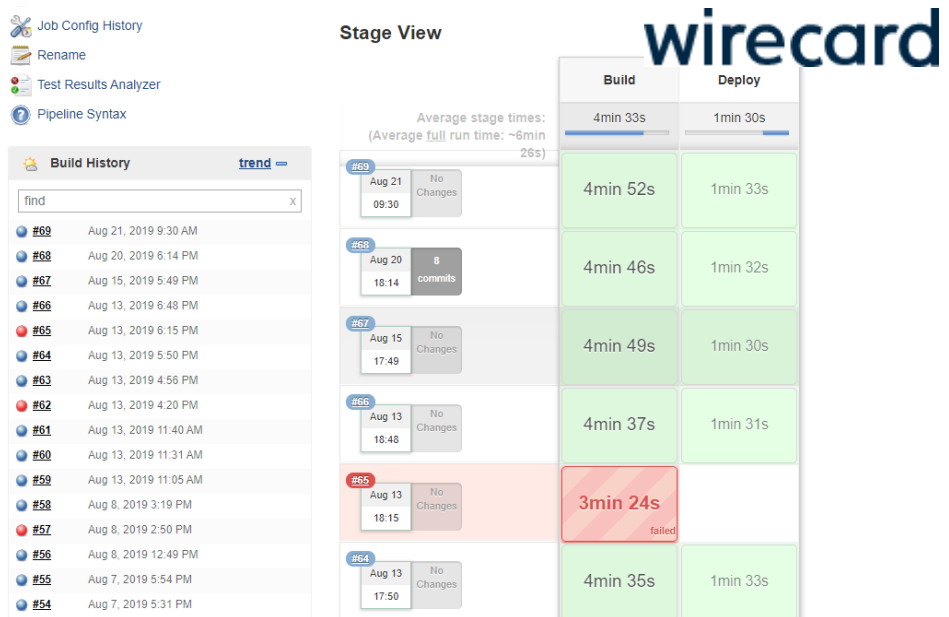


Figure 3 Jenkins

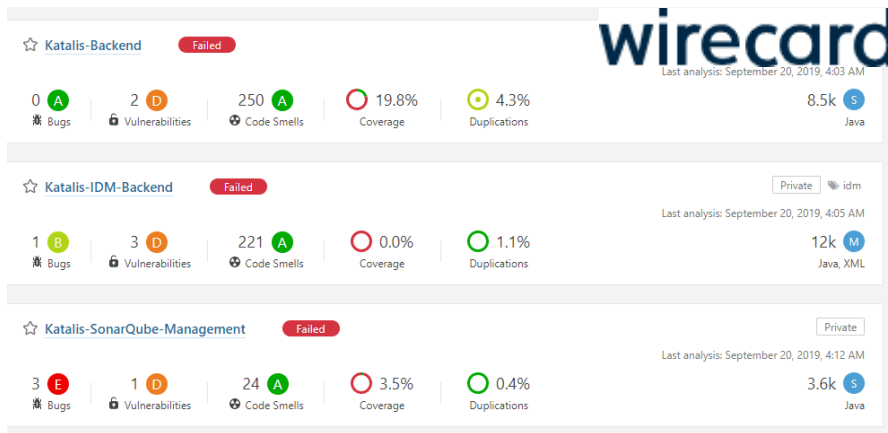


Figure 4 SonarQube

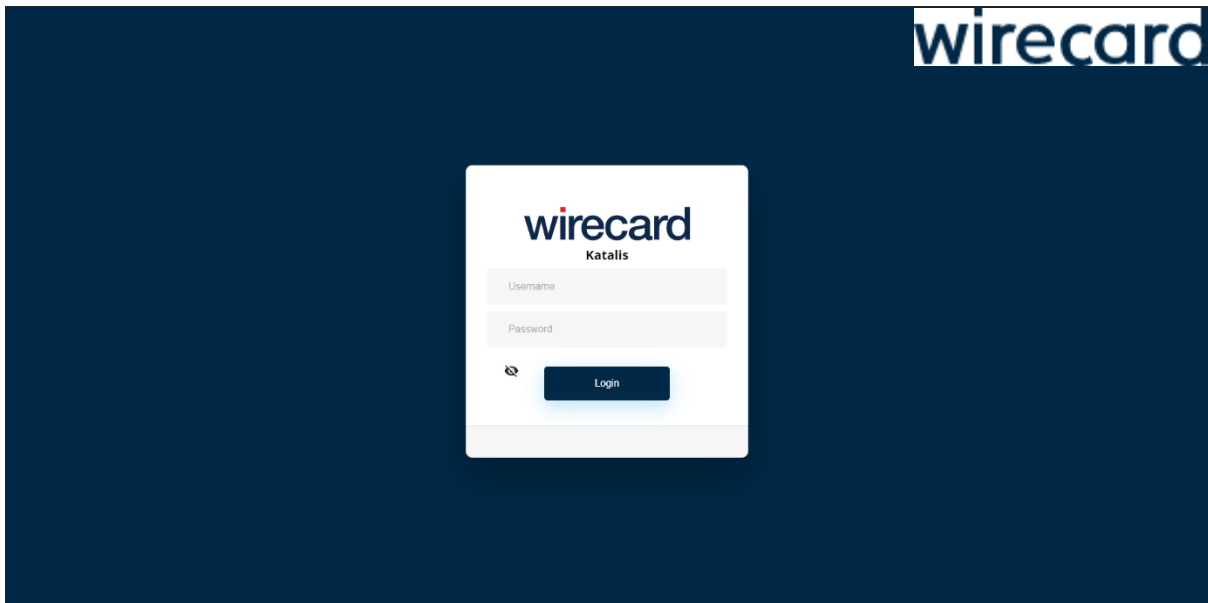


Figure 5 Katalis Login Screen