



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

Internship Training

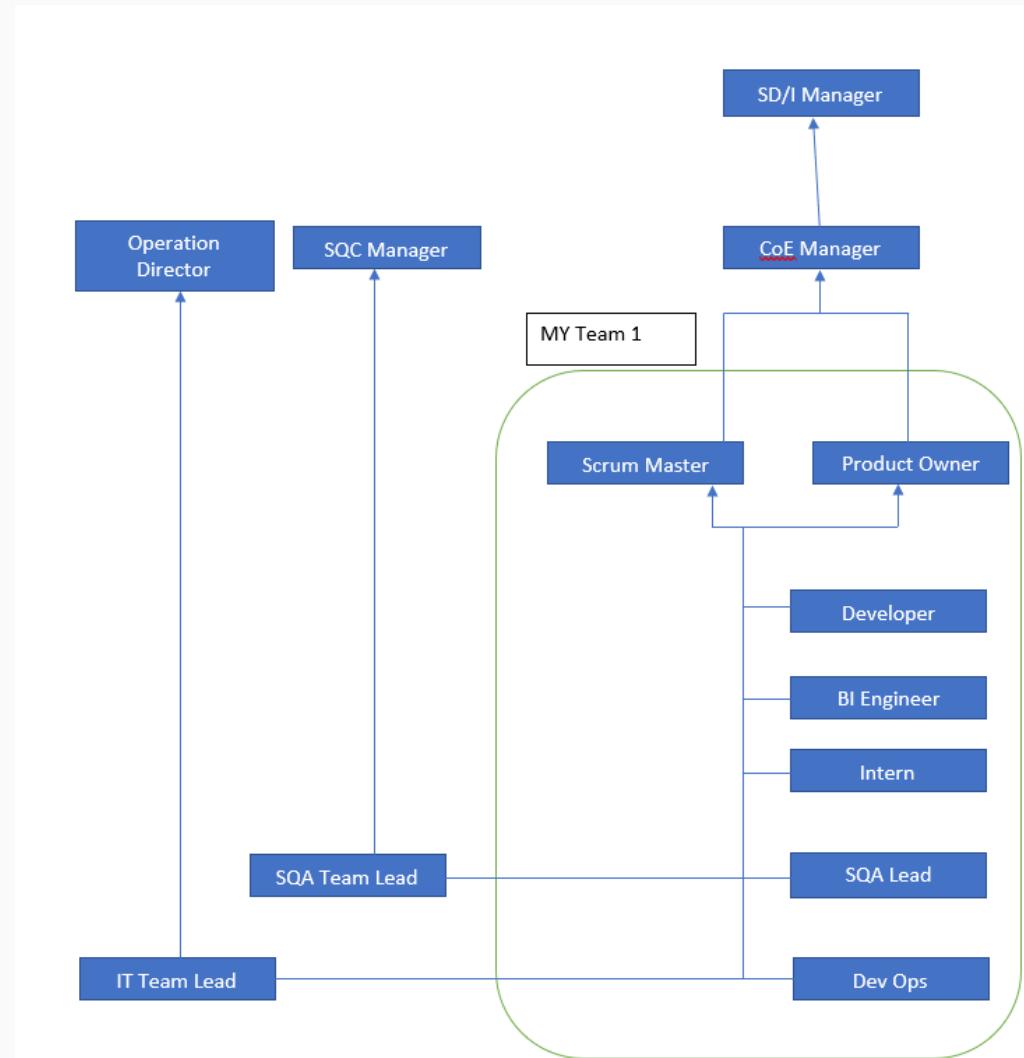
Thailand Beer Support as Software Quality Assurance
at
SICPA Product Security Sdn Bhd

01/09/2021 - 18/02/2022

Putera Muhammad Syabil Bin Sarianto A18CS0235

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Industrial Training Team Organization Structure For MY Team 1



Number	Role	Supervisor(s)
1	Scrum Master/Line Manager	Name: Mr. Nand Kumar Silvarajah Team: 1 Email: Nand.Kumar@sicpa.com
2	Software Quality Assurance Lead (Old)	Name: Mr. Carlos Adjetejy Team: 1 Email: Carlos.Adjetey@sicpa.com
3	Software Quality Assurance Lead (Current)	Name: Mrs. Juliana Jasmani Team: 1 Email: Juliana.Jasmani@sicpa.com

Who is SICPA?

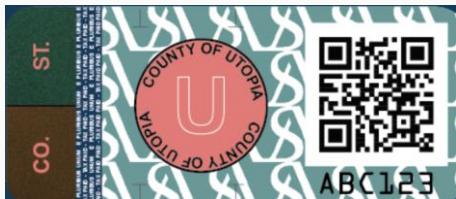
- SICPA Product Security Sdn. Bhd. is a multinational company originated from Switzerland that provides an authenticated solution (security inks) to their clients who requires a traceable and secured service.
- With this solution, clients are able to identify the authenticity of their product by verifying the inks has SICPA's ink properties.
- This solution are mainly used by the government entity to ensure the tracking and movement of a product is monitored.
- One of the SICPA traceable security solution is SICPATRACE®



What is SICPATRACE®?

SICPATRACE® is the product from SICPA to the client, mainly the government agencies to keep track of supply chains involved in the manufacture, import, export, and distribution of excise items across the country. Tobacco, alcohol, wine, and beer as well as other consumer items such as soft drinks and mineral water are examples of product categories. In short SICPATRACE® is a tax digital management system that monitor the movement of excise items.

Thailand Beer is customization from SICPATRACE® that provides a solution to track the movement of alcohol in Thailand





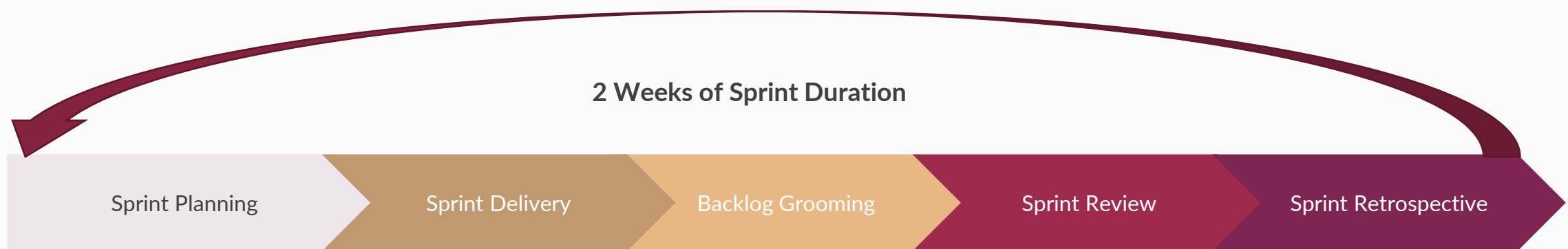
AGILE SCRUM

Software Methodology in SICPA Product Security



Sprint workflow

Agile Scrum in SICPA Product Security usually involves three type of entity which is Product Owner, Development Team and Scrum Master. The practice here uses 2 weeks sprints.



- Sprint planning is a ceremony that require team to identify the scope of the development of the sprint. The scope is usually based on the user story of the task.
- Sprint delivery is the work that the scrum team performs during each sprint to meet the spring goal. This include the daily stand up and backlog update.
- Backlog Grooming is a session where backlog items are discussed and reviewed by the scrum team to keep the backlog items are prepared for the upcoming sprint.
- Sprint review is a demonstration and review session by the scrum team to the client to determine whether the additional changes is needed
- Is a reflection session by the scrum team to determine what went well and what can be improved in the next sprint.

SICPA SCRUM ENTITY

Product Owner

- Product owner is the holder of the product value.
- Product owner seeks to maximize a product's value by managing and optimizing the product backlog
- Product owner need to ensure the development team understand items in the product backlog to the level needed

Scrum Master

- Scrum master is responsible for promoting and supporting scrum as defined in the scrum guide.
- Provide resources to the team and removes all the impediments.
- Facilitate all the scrum ceremony.
- Ensuring that the scope, goals and product domain are well understood by everyone.
- Understanding the product planning in empirical environment.

Development Team

- Development teams are responsible to takes on and determine how to deliver the task in the backlog.
- Ensuring the deliverable is in high value quality.
- Removing the impediments to the development team progress.
- Is a cross functional team to ensure the product increment.



Sprint Testing

A phase where SQA will have to verify all the feature/bugs/changes in the testing environment to ensure the feature is working properly. This phase usually during the sprint execution phase.

Product Factory Acceptance Testing

This is a testing phase that verifies new changes in the half of the manufacturing environment. The purpose of the phase is to prepare a product release that can be used across the team that are working on the same project.

Solution Factory Acceptance Testing

Is a system testing verifies the whole system in fully manufactured environment. The purpose of this phase is to validate the operation of the machine in the factory and web application is working correctly.



User Acceptance Testing

User Acceptance Testing is attesting phase that is being executed by certain user group from the client-side. The purpose of this phase is to ensure the requirement are delivered correctly. During this usually the team will be on standby if there's any issue.

Testing Phase

Experienced in SICPA

Testing Type

1 Feature Testing

Feature Testing is a testing that is done when new feature is added to the software or any existing feature is modified.

2 Regression Testing

A testing technique that validate when new change is added, the existing feature is working expected.

3 Application Programming Interface (API) Testing

A testing technique that validate the API is fulfills its expected functionality, security, performance and reliability. It is performed by making request in the API and validate the response.

4 Boundary Testing

A testing technique that validate the extreme ends or borders between partitions of input data. This test is to verify the different scenarios triggered when different range of data used.

5 End to End (E2E) Testing

A testing technique that validate the entire product from the beginning to the end of flow. This is to ensure the flow is behaving as expected.

6 Web Automation Testing

Automation testing is the process of testing that makes use of special software tools to control the execution of tests.

Tool Used During Industrial Training

Tools that is used and Software Quality Assurance during Industrial Training



JIRA

JIRA is agile project management tool that allows the user to track they product developed and allow bug tracking. This tool also embedded BitBucket that allows the developer to use as versioning control



Jenkins Job

Jenkins Job is an open source automation server which enables developers around the world to reliably build, test and deploy their software to the environment.



Postman API

Postman is an application that is used for create, share, and API testing. This tool can validate the API by referring to the its reponds.

Tool Used During Industrial Training

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SQL Developer

Oracle SQL Developer is an integrated development environment(IDEA) for working with SQL in Oracle database.



Retrium

Retrium is an application that enables us to organize retrospective documentation in one place.

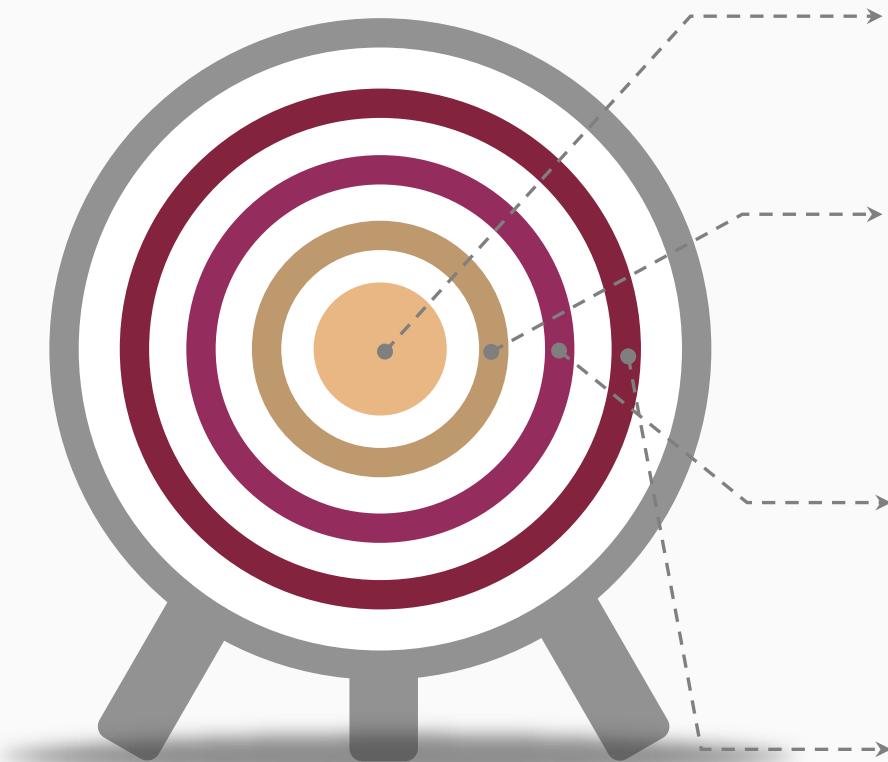


Cucumber

Cucumber framework is a test automation framework that support BDD. This framework divide into two part which is the feature files and the step definition part.



SKILL OBTAINED



Creation of effective test cases

Learned how to properly write/create a test case that can be followed in future.

Raising a good bug report

Learned how to properly raise a bug ticket in JIRA that can be used and referred by the developer.

Improvement of soft skills

Learned how to have an effective review session during the meeting. This include with the team and client.

Improvement the way of SQA thinking

Learned on how to include all the scenarios when testing a feature.

Challenges During Industrial Training

List of challenges face during industrial training with SICPA

Language Barrier

The difficulty of testing Thai web application and understanding Thai language feedback is high.

Continuous Requirement

New or change of requirement keeps on coming when practicing agile methodology.

Vague Requirements

Requirements and feedback is not clear as sometimes the written feedback has too little information.

Practicing two weeks sprint

Practicing two weeks sprint is hard especially when new feedback keep on coming and it is urgent.





Conclusion

- SICPA Product Security Sdn Bhd is a good place to grow especially for trainee/fresh graduates/interns as it expose them to the real software house environment.
- For example, using and practicing correct software methodology.
- They also will make sure that there is a room to grow as most task is monitored by seniors.
- If in any case there a blocker or trouble doing a task, seniors will always gives input to help.
- SICPA also expose trainee/intern/fresh graduate with client side meeting to ensure the deliverable of the product is in high priority.



THANK YOU



In the Name of God for Mankind

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Reflection

Putera Muhammad Syabil Bin Sarianto
A18CS0235