

CHAPTER IV METHODOLOGY

4.1 Research Design

Author uses applied research as reference research method in developing and designing mobile application for assets control in PT Bingas Manufacturing. The usage of applied research is to provide practical solutions to which improve human conditions, rather than collecting knowledge for knowledge's sake (Schauz, 2014). Since the aim of this research is to provide productive and efficient ways in data entries, the author needs to concern with understanding human behavior from informant's perspective which author to perform observation and interviews in collecting data. Hence, author designs assets control mobile-based to optimize data entries and human resources.

4.2 Data Collection Methods

This section will explain methods which are being used in data gathering for research.

4.2.1 Observation

Observation is a qualitative research method that includes participant's observation and performs research work in the field. Starting from registering assets to perform return empty assets from customers are being observed thoroughly to collect desirable data (Jamshed, 2014).

1.2.2 Interviews

Interviews is an extendable conversation between partners that aims at having an in-depth information about a certain topic or subject (Alshenqeeti, 2014).

In this research, author conducts interviews with operational director and senior

office manager to collect further informations that unable to gather in previous research method. Few questions are being asked by author related to optimizing data entries and also statements are stated by interviewees (Please refer to Appendix 2).

4.3 Process Design

This section will explain briefly about developing and designing assets control application in flowchart.

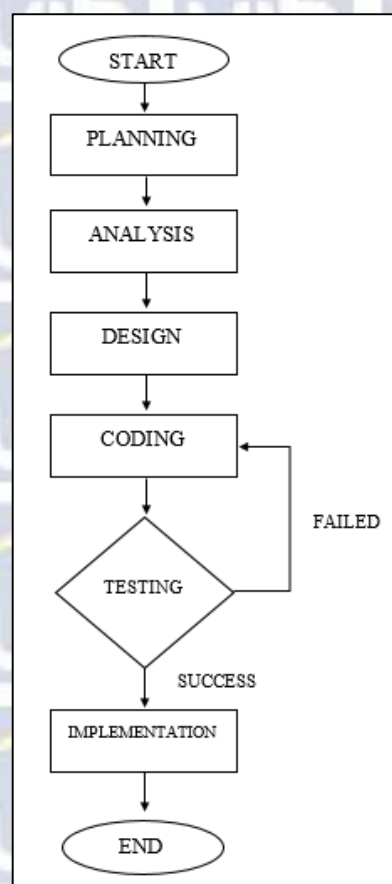


Figure 1 Flowchart of Designated Application

Developing of the apps starts with locating client position and the needs of the apps. Data collection methods are being performed to gather require in-depth informations in developing the apps while designing mock up screens are conducted in the next step continue with coding the apps both frontend and backend. Author

also tests the flow of the apps, validation of specific fields, data stores in database and the user experience in using the apps. If fails in one conditions, adding or updating codes is carried on while if all of verification are successful, the app is ready to be implemented in selected company, in this case PT. Bingas Manufacturing.

4.4 Implementation Phases and Schedule

1. Preparation

Preparation is the first phase to start internship and its project. In this phase, author performs surveys and observations to collect desired informations such as location and environments of internship. Author also identifies research's objective to outcome the topics for internship project.

2. Coding and Testing

Continue with coding and testing phases, author performs writing codes syntax in both front and back-end, and validating codes by testing and debugging each syntax.

3. Implementation

While in implementation phase, author performs research to gather require data and analyze further, following with implementation afterwards. Data consists list of observation's main points and interviews' results.

4. Report and Assessment

Report and assessment is the last step in this internship project. In this phase, author compiles reports, evaluations, and its assessment of internship by superior and a team of lecturer in a session and submission of hardcover to BAAK.

The internship project started in the month of February 2018 and finished in May 2018 as listed in Table 5.

Table 1 Internship Schedule

No	Stages	February 2018				March 2018				April 2018				May 2018			
1	Planning, Chapter I, Chapter III																
2	Data Collecting, Chapter II																
3	Developing Apps, Chapter IV, Chapter V																
4	Implementatio n, Chapter VI, Chapter VII																
5	Submission and Client Confirmation																

