

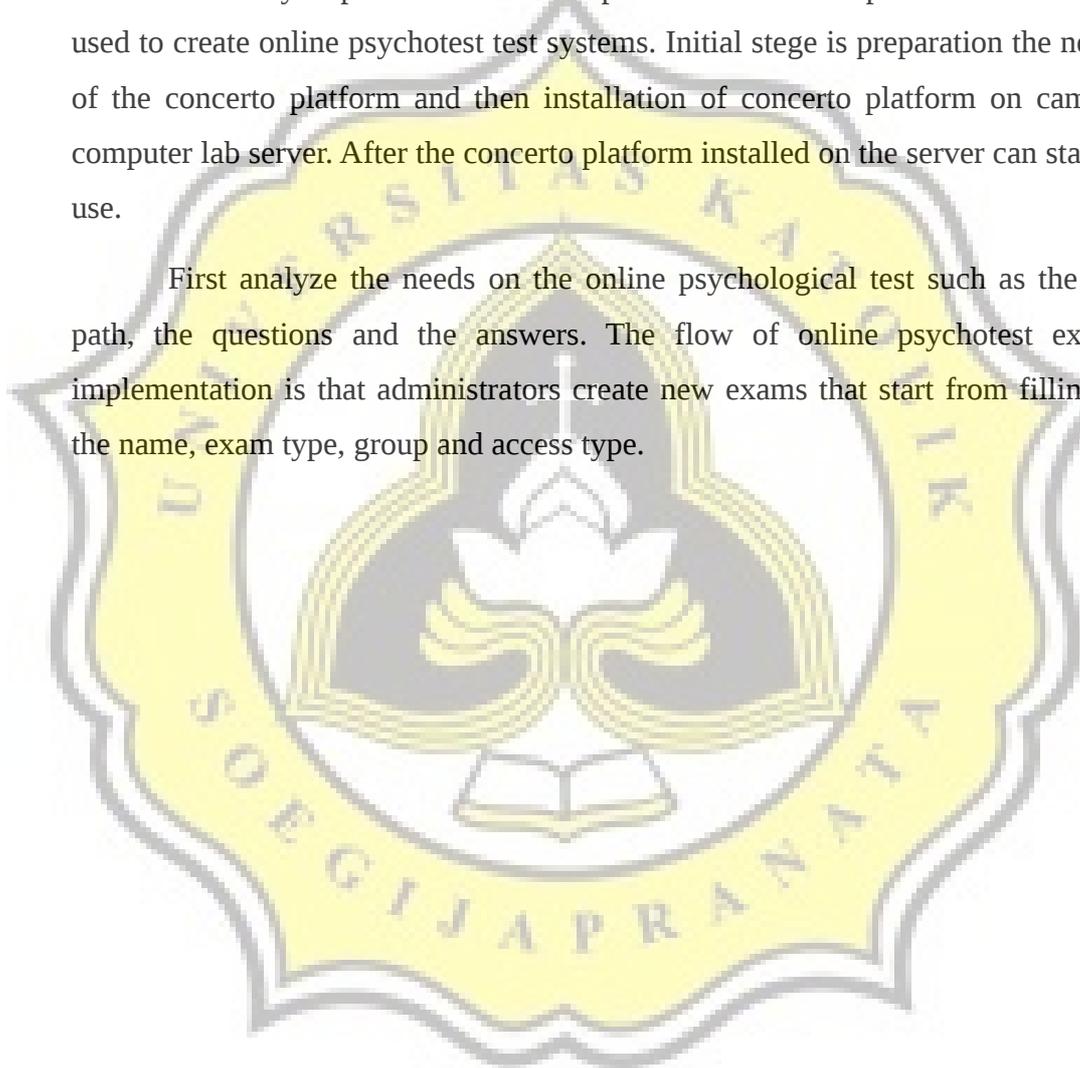
CHAPTER 4

ANALYSIS AND DESIGN

4.1 Analysis

The analysis phase discusses the plot of the concerto platform that will be used to create online psychotest test systems. Initial stege is preparation the needs of the concerto platform and then installation of concerto platform on campus computer lab server. After the concerto platform installed on the server can start to use.

First analyze the needs on the online psychological test such as the test path, the questions and the answers. The flow of online psychotest exams implementation is that administrators create new exams that start from filling in the name, exam type, group and access type.



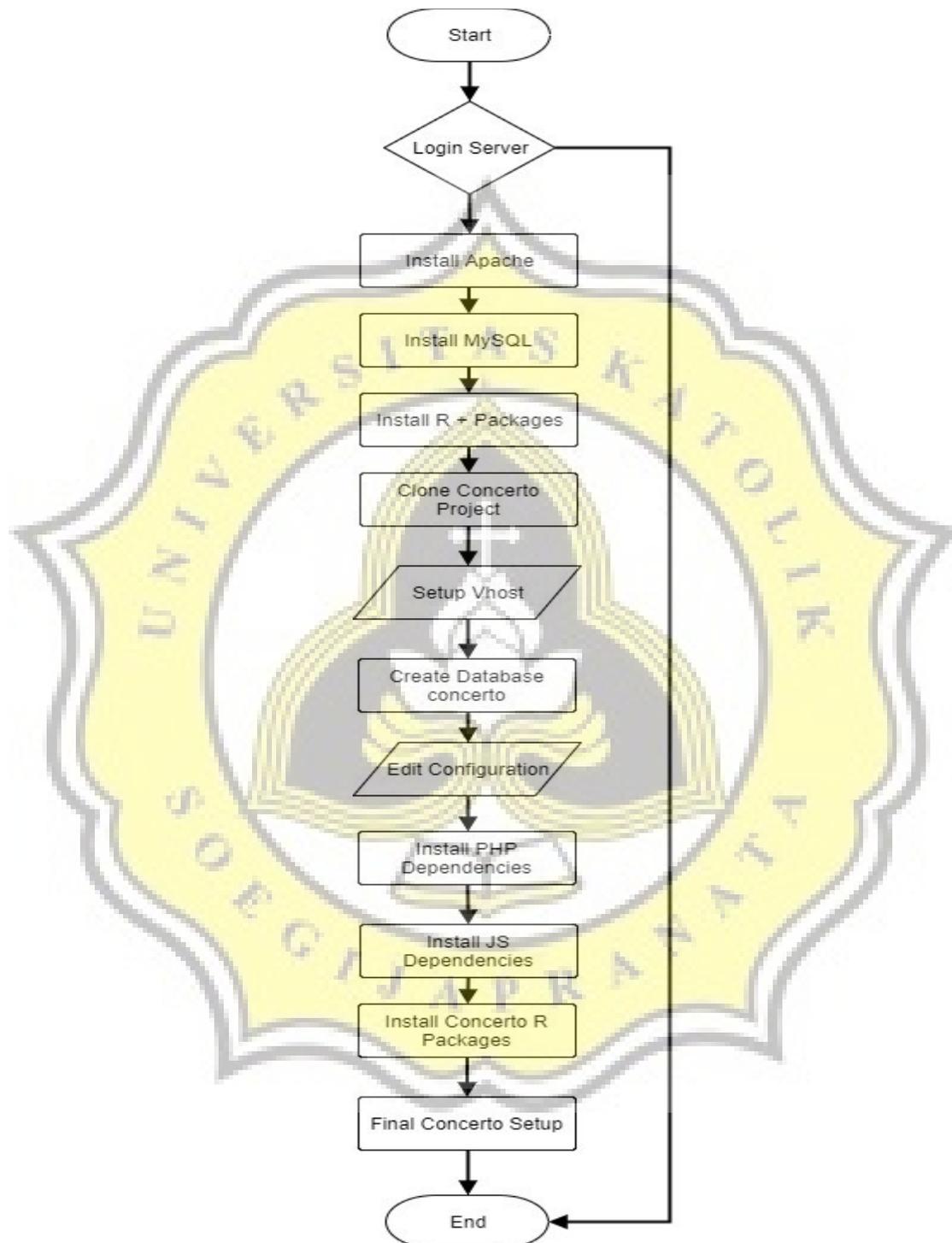


Illustration 4.1: Diagram Analisis Masalah

First step is login into computer that will be use as the server of the online psychotest. Then install Apache, MySQL and R packages. Next step is clone the

concerto platform from the repository. Then manually edit and setup vhost configuration. Then create database name “concerto” and manually edit configuration file. Next step is install PHP and JS dependencies in concerto platform. Then install concerto R packages. Then final concerto setup.

The software that required before install concerto platform are:

1. Ubuntu OS 16.04

Ubuntu OS version 16.04 is need to install concerto platform because concerto only support Ubuntu OS and Windows OS as server. The campus server using Ubuntu OS so this research fit as the requirement.

2. Apache Server (PHP v5.4)

Apache Server use as application that run PHP on the server. Concerto platform using Symfony PHP framework.

3. MySQL v5+

MySQL is application that can run database. MySQL use as the database system from the concerto platform.

4. R v3+

Concerto platform use R as the online test engine. Packages that needs in R are rjson, jsonlite, RMySQL, session, catR, digest, ggplot2, base64enc,

5. Git

Git is a version control system for tracking changes in computer files and coordinating work on those files among multiple people. Git use to clone / download concerto platform from repository to server.

6. NPM & Bower

NPM is packages manager for node JS and bower is javascript dependency manager. NPM & Bower use as dependency manager for javascript use in concerto platform.

4.2 Desain

Design on the concerto platform discusses the components contained in the system. Header on the system there are components of logout button and user name. Then there is the menu described as follows:

1. Test: Menu test is used to manage test data. Management includes creating new tests, editing, deleting and exporting.
2. Templates: Menu templates are used to manage template data used for test.
3. Data Tables: Menu data tables are used to manage data tables that exist on the system.
4. Files: The files menu is used to manage the files on the system.
5. Users: The users menu is used to manage users who can access the system.
6. Test Wizards: The menu test wizards are used to make exams with wizards or brief modes.

