CHAPTER I
INTRODUCTION

1.1 Background of Research

In getting information, obviously the one needed is the latest relevant data to avoid obsolete information (Wang, Qiu, & Guo, 2017). But, to get real-time data from is a process that run continuously. To fulfill that criteria, a software that run indefinitely is necessary. One of the methods to get latest data from internet is web scraping. According to Krunal (2014), web scraping is a process to collect data from World Wide Web by getting portions of information needed from a website. Those data are unorganized and cannot be used as information. According to Vargiu and Urru (2013), main goal of web scraping is collect desired data and serve it in other form such as spreadsheet or other type of readable format. According to above statement, scrapped unorganized data will be converted to organized data (Pereira & Vanitha, 2015). For example, by compiling scrapped data into spreadsheet to make it legible.

To develop web scraping application, a good method would be Extreme Programming (XP). According to Prabowo, Sholiq and Muqtadiroh (2013), XP is a software manipulation process that using object oriented approach and the target of this method is small or medium team and also team that face quick changing requirement. One of XP benefits is reduced by lengthy process and enable a team to release finished module, so the team can continue with the other module development easily. These criteria is very helpful in developing web scraper where a scrapped website can change the view at any moment (Pomonis, Christodoulou, & Gizas, 2013) .

The Japanese unemployment rate was persistently low for a long period, compared with other developed countries. Among those unemployed, about 12,6 % cannot find desired job and 9,9% don't know about the job requirement. These are part of problems in finding job in Japan.

Content is the most important element in a website, especially in websites that provides job vacancy (Bakker, 2014). Those job vacancy content can be obtained from 3rd party and with web scraping. In this research, we will research the web scraping method. Web scraper will collect data from other website and import the data to database and used as additional content. According to above statements, writer decided "Web Scraper Development for Job Search Application Using Web Service in Japan" as topic of this research.

1.2 Research Question

According to background of research stated above, we can state the questions of research as stated below:

1. What is the process of getting information from internet with web scraping?
2. How to use information extracted to help developing job search application?
3. How to develop system to get job vacancy information?

1.3 Research Scope

To keep the discussion inside the scope of problem, scope of research is needed. The scopes of research are stated as below:

1. Web scraper development for job search application in Japan using JAVA programming language with JSoup library, web service using Laravel and database using MySQL.
2. This research will discuss about process of extracting information for job search application in Japan.

1.4 Research Objective

Based on scopes of problem stated above, the objectives of this research are stated as below:

1. To prove our ability in Computer Science especially about web scraping and web service development.
2. As one of requirements to attain bachelor degree in Information System Program from Universitas Internasional Batam.
3. To contribute to knowledge and as academic reference about web scraping with Java and web service using Laravel.

1.5 Research Benefit

This research has benefits for multiple party as stated as below:

User

Have access to job vacancy information in internet in Japan more easily.

Academics

Can enhance knowledge about web scraping and web service especially in job search application.

1.6 Report Writing Format

This report writing format was made to make report writing progress easier.

CHAPTER I INTRODUCTION

This chapter discuss about the reason of determining title, research question, scope of the research, benefits of the research, objectives of the research.

CHAPTER II THEORITICAL FRAMEWORK AND HYPOTHESIS FORMULATION

This chapter discuss about scientific theory that has been studied, and discuss about research findings that conducted before related with this research.

CHAPTER III RESEARCH METHODOLOGY

This chapter discuss about method that is used to develop a software that consists of steps such as literature review, analysis, development and implementation.

CHAPTER IV IMPLEMENTATION AND DISCUSSION

This chapter discuss about database design, interface design, flowchart, result and procedures for system usage.

CHAPTER V CONCLUSIONS AND SUGGESTION

This chapter discuss about research conclusions, limitations and recommendations.