Developing Software Center Using Evolutionary Prototyping Based-on HTML5

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Abstract—The abstract goes here.

I. INTRODUCTION

Software Center has a function to management software, which adds, removes and update software. Its existence is necessary in all operating systems both desktop and mobile devices. This application use on OpenSUSE, Ubuntu, Mac OS X, Android, iOS, BlackBerry and Windows. However, these applications are not in BlankOn Linux as Indonesian local Linux distribution. Installation of applications in BlankOn Linux currently can be done in the traditional way: first from the console (terminal), thi way can be done if you know the name of the application you want to install the package. The second way to use the Synaptic Package Manager a management application packages. Despite using a GUI (graphic user interface) but still only be done if you know the name of the application you want to install the package and limited its use. Making it difficult for an ordinary user to install the application.

Similar applications that have been there is the Ubuntu Software Center for Ubuntu distribution. This application allowing licensed OpenSource applied to BlankOn Linux. However, since these applications have become a trademark of Ubuntu, needs further modification process. This process takes time and is not guaranteed to run well so, what ideas arise if made to start from scratch.

HTML5 is a trend of programming because this technology easy to adapted, can run in many platforms up to desktop utilization [2]. Manokwari Desktop a desktop environment for BlankOn Linux is base on HTML5. Development software center base on HTML5 can run consistent with development of BlankOn Linux [3]. This research tries to make software center HMTL5-based as solution for BlankOn Linux.

II. SIMILAR SOFTWARE CENTER

YaST (Yet another Setup Tool) Software center for open-SUSE. It use to manage all of user need for use openSUSE. Example to install application, package, network setting etc. YaST use ruby and YCP for language programming and Qt for user interface[3].

Ubuntu Software Center Software management for Ubuntu by Canonical. It is free software written in Python, PyGTK/PyGObject based on GTK+ and the further develop-ment of the GNOME application, gnome-app-install.[4][5]

III. HTML5 APP IN DESKTOP

run html 5 on dektop need other program, suck webkit to rendering html 5.

A. Webkit and WebkitGTK+

WebKit is a layout engine software component for render-ing web pages in web browsers. It powers Apple's Safari web browser and was previously used in Google's Chrome web browser. Figure 1 and 2 shows how Webkit work.

WebKit is also used as the basis for the experimental browser included with the Amazon Kindle e-book reader, as well as the default browser in the Apple iOS, Android, BlackBerry 10, and Tizen mobile operating systems. WebKit's C++ application programming interface provides a set of classes to display web content in windows, and implements browser features such as following links when clicked by the user, managing a back-forward list, and managing a history of pages recently visited.[6] bart
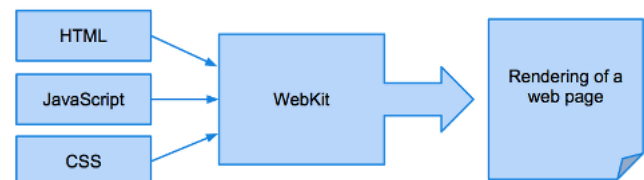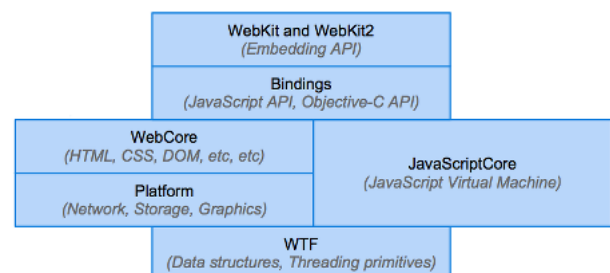

Fig. 1: How Webkit Work

Fig. 2: Webkit Major Components

WebKitGTK+ is the GNOME platform port of the WebKit rendering engine. Offering WebKits full functionality through a set of GObject-based APIs, it is suitable for projects re-quiring any kind of web integration, from hybrid HTML/CSS

applications to full-fledged web browsers, like Epiphany and Midori. Its useful in a wide range of systems from desktop computers to embedded systems like phones, tablets, and televisions. WebKitGTK+ is made by a lively community of developers and designers, who hope to bring the web platform to everyone.[7] webkitgtk.org

B. WarSi

WarSi (Warung aplikasi) gui from apt command

IV. DEVELOPMENT WARSI

A. Design System

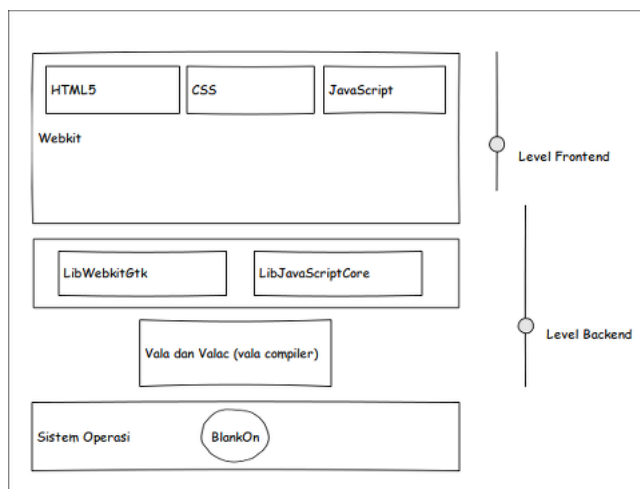Figure 3 show how design of WarSi.

Fig. 3: Design System

B. Development Method

System development methods used in this study is the method of Evolutionary Prototyping. Evolutionary prototyping method has the steps as shown in Figure 3.
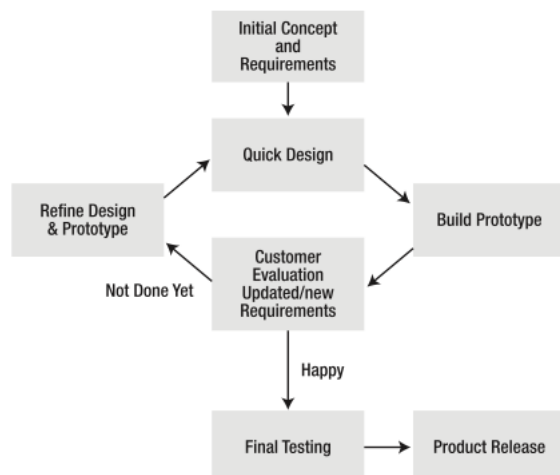

Fig. 4: Evolutionary Prototyping Process Model

Evolutionary prototyping provides other benefits including:

- the clarification of management and user requirements;

- the ability to uncover missing or previously unknown requirements;

- the flexibility to meet changing constraints for software systems;

- the provision of a method whereby users, management, and developers can communicate about systems;

- the easing of maintenance tasks;

- the creation of better user interfaces;

- prototyping with quality; and

- the ability for developers to reflect on lessons learned during system development.

Step of Evolutionary Prototyping:

1) Initial Consep and requirment: what konsep

2) Quick Desain:

3) Build Prototype:

4) Costumer Evaluation, Update:

5) If not done yet, Refine design and prototype:

6) IF happy, final testing and produck release:

C. UML (Unified Modeling Language

1) Use Case Diagram: Figure 4 show the use case diagram for software center.
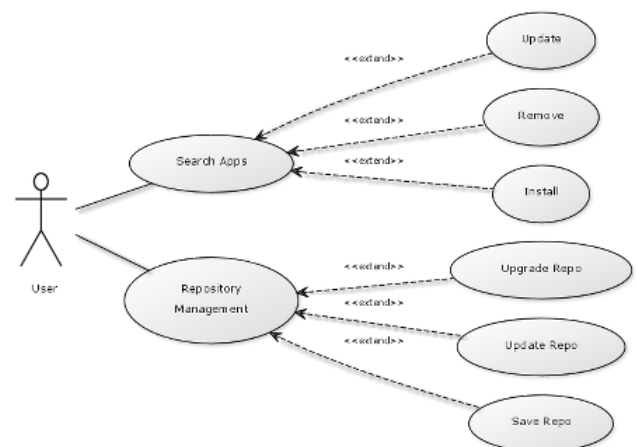

Fig. 5: Use case Diagram

This is a description of the process in the use case diagram:

- Search Application
  This process is performed to find the application as the user desires. Once the search is complete the user can install / remove applications and application upgrades.

- Repository Management
  This funtions make user can change source repository, save, update and upgrade system.

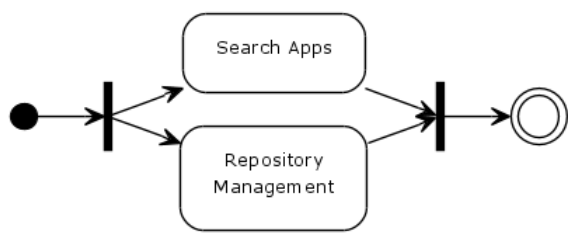*2) Activity Diagram:* Figure 5 show activity diagram generaly.

Fig. 6: Activity Diagram
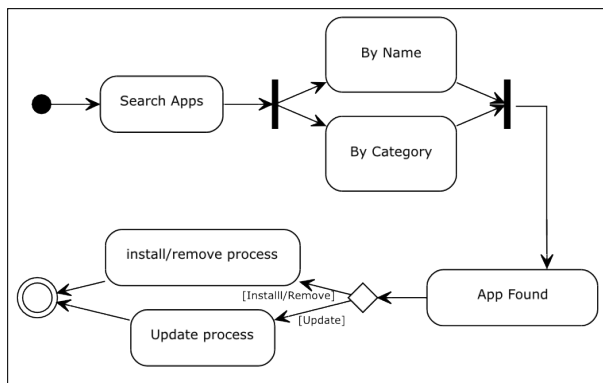
Activity Diagram Search Applications

Fig. 7: Activity Diagram Search Application

Figure 6 is an activity diagram for a search application. Search Application is divided into two, namely by entering a keyword in the search field and the search for applications by category. Process for Figure 6 are:

- Users select search for applications by name or by category of applications,
- If you select by name, users enter a keyword or the name of the application you are looking for in the search field to find the application,
- If you select a category based application, the user selects a category that existed until the application is found,
- Application is found, the user chooses to install/remove or update the application,
- Installation process, and the process is complete.
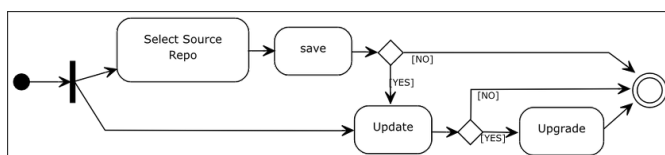
Activity Diagram Repository Management

Fig. 8: Activity Diagram Repository Management

Process for Figure 7 are:

- User select a menu from the main menu next repository, system will display the page repository, there are two options, choose source repository or directly perform the update,
- User can make changes to the repository by selecting the list repository that is already available,
- When the user makes changes to the repository, the system will saved the changes,
- When the user performs an update to the update repository the repository will be made and the system will display the process update,
- After update user can upgrade system if available, then the system will display the process upgrade.
- Process is completed.

3) Squence Diagram: (need redraw)

D. Result Development

E. Testing

blackbox model for same hasil (diagram pie)

V. CONCLUSION

The conclusion goes here.

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