Searching Engines For Mobile Application Shopping Guide At Factory Outlet

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ABSTRACT

Factory Outlet Black and White is a business engaged in the retail sale of clothing. Factory Outlet Black and White is a retail business that is engaged in the sale of clothing. So as to facilitate the customers or people who love to shop at discount time very short and easy, and therefore built application Mobile Searchin Engine to help customers or the public in guiding a guide to online shopping technology using Location Based Service that displays it into a map of the android smartphone. Applications built to show the products offered, the size of the product, product price, stock products, as well as the shortest distance between the Factory Outlet and Customers.

Keywords *: Mobile Searching Engine, Location Based Service, smartphone android, Maps.*

1. PRELIMINARY

The development of technology is progressing very rapidly, one of which is a computer technology. However, not all information about Factory Outlet in Tangerang on the website and social media. other results were obtained that the public wanted more information such as information regarding its location, any of the products offered, the size of which is available from the product, the price of the product, the stock of the product, and many public trouble to locate and select Factory Outlet Black and White from the closest distance customers that they will visit. Accuracy in choosing places Factory Outlet in accordance with the needs and mileage is very important considering the Factory Outlet Black and White is scattered over several Tangerang City area is quite spacious

1.1 Mobile Searching Engine

Programs that can receive a search warrant, comparing it with the key words contained in the index and deliver results. Search engine optimization and placement sites focus position on search engines, which is a another concept to improve the design of a website.

Search engines are applications provided by certain commercial organizations that provide services in the field of internet. When you wish to search for an exact information visit search engines. Search Engine or websites search engine best known today is the Google search engine in the world. Below is some kind of searching engine that is often used by the user. In addition to web search, Google also provide image search, news search and the search in the archives of USENET (newsgroups).
Excess
1. The speed and ease in finding.
2. The more sophisticated with features that he had.
3. Google is the only search engine that has an cach. Given this cache, the searcher can save search time, because the search results are displayed.
4. Can find all the information such as images, news articles, entertainment, etc.
Disadvantages
1. With the advantages it has, it turns out these search engines so shooting the spamer to display ads that are not needed.
2. Users are also difficult to distinguish between advertising and not advertising on its search pages. Appearance ads only distinguished from the original results through a point in front of him.
3. Site search engine this one in favor of their ability to understand human language.
Users may be able to use full sentences, not keywords.

1.2 Technology Location Based Service

Location Based Service (LBS) or a location-based service is an information service that can be accessed via mobile devices using the mobile network, equipped with the ability to take advantage of the location of the mobile device. LBS can enable two-way communication and interaction. LBS can be described as a service that is at the confluence of three technologies namely the Geographic Information System (GIS), Internet Service and mobile devices, such as in figure 1. [1]

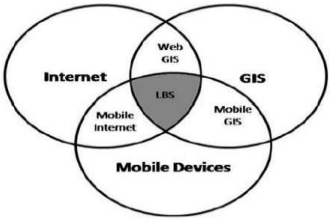


Figure 1. Technology Location Based Service [1].

1.2.1 Component Location Based Service

In using Location Based Services or location-based services are some of the necessary elements, among others:

1. Mobile Devices

A tool that can be used to request information and may be required such as mobile smartphone devices that have the facility of navigation.

2. Communication Network

The cellular networks that transmit user data and service requests.

3. Positioning Component

To be able to process the service must determine the user's location. The user's position can be obtained using a communications network or by using a Global Positioning System (GPS).

4. Service and Application Provider

Service providers are responsible for cellular users at the time of processing a service.

5. Data and Content Provider

The service provider information and data that may be requested by the user.

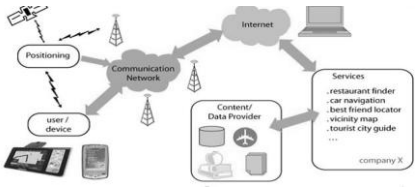


Figure 2. An example of the basic components of the LBS [1].

1.3 Google Maps

Google Maps is a free service from Google about a wide range of mapping technology. Google Maps displays a world map digitally so much easier when you want to know a certain location. Google Maps offers several advantages such as a road map, showing the route to a desired trip either via the driveway [2].

1.3.1 Google Maps API

Google Maps API is a service that allows Google Maps to be integrated into applications that do require this feature of Google Maps. Google Maps API is a Javascript library. By using the Google Maps API can be easier for developers to create applications that require the technology map in it and do not need to think how to do it manually for using the Google Maps API is now all that is needed related technology digital maps are already quite complete and can be utilized for applications required.

To use the Google Maps API on a mobile device, for example android Google Maps API which can be used at this time has reached version 2. Progress on Google Maps Version 2 has features - a full feature from previous versions one can display the map for desired angle and form 3D view. In addition to the Google Maps API available several models displayed map like Roadmap, Satellite, Terrain and Hybrid [2].

1.4 History of Android

Android is an operating system for mobile devices based on Linux that includes into the operating system, middleware and applications. Android provides an open platform for developers to create their applications. Initially, Google Inc. bought Android Inc. which is the newcomers who make software for mobile phone / smartphone. At the inaugural release of Android, 5 November 2007, along with the Open Handset Alliance Android states support the development of open source on mobile devices.

In this world there are two types of distributors operating system Android. The first fully supported by Google or Google Mail Services (GMS) and the second. distribution without direct support Google's otherwise known as the Open Handset Distribution (OHD). On vortex September 2007 Google introduced the Nexus One, one type of smartphone that uses Android as its operating system. As the formation of the Open Handset Alliance, OHA is their first product, Android, a mobile device which is a modified Linux kernel 2.6. Since android release has been carried out various reforms in the form of bus services, and the addition of new features. At a time when most of the vendors - smartphone vendors already produce smartphones based on android, android This is because it is the operating system that is open source so freely distributed and used by any vendor. The rapid growth of Android in addition to the factors mentioned above are for android itself is a platform that is very complete both the operating system, applications and tools that allow dikemebangan, market android applications and as well as the support of a very high from the open source community in the world, so that android continues to grow rapidly both in terms of technology and in terms of the number of devices that exist in the world [3].

1.4.1 Android Version

There is the uniqueness of the name of the android operating system which uses the name of the dessert (Dessert) and any rise in the name of the operating system version has berutan prefix letters in alphabetical order. The following versions - android version ever released:

1. *Android 1.1*

Initially version of the android operating system was released the T-Mobile G1. This version is an update to fix several bugs and replace the API and adds several other features.

2. *Android 1.5 (Cupcake)*

This version was first released in mid-May 2009. Starting from this version of the android version naming began using the name of desserts (dessert). This operating system based on Linux kernel and added a few updates as well as new UI of the android before.

3. *Android 1.6 (Donut)*

Was first released in September 2009. It has a search feature enhancements and UI more user friendly. In this version already supports CDMA / EVDO, 802.1x, VPNs and then support the screen with WVGA resolution.

4. *Android 2.0 / 2.1 (Eclair)*

This version was first released, due to the addition of features for hardware optimization, improved Google Maps 3.1.2, UI changes with the new browser and support for HTML5.

5. *Android 2.2 (Froyo: Frozen Yoghurt)*

Was first released Google Nexus One smartphone. In this version is support for Adobe Flash Player 10.1, an increase in the speed of opening and closing applications and use an SD Card as a storage media applications.

6. *Androidd 2.3 (Gingerbread)*

First designed and to be able to maximize the ability of apps and games to start the use of Near Field Communication (NFC).

7. *Android 3.0 / 3.1 (Honeycomb)*

Released on February 22, 2011 and the Motorola Xoom is the first use. This version is designed for optimization

8. *Android 4.0 (Ice Scream Sandwidch)*

Released on October 19, 2011 and were first used in the Samsung Galaxy Nexus smartphone. In theory all previous versions of android devices, Gingerbread can be updated to Android 4.0 Ice Scream Sandwidch.

9. *Android 4.1 (Jelly Bean)*

Android Jelly Bean is made by having advantages and new features. The new additions include increasing the input keyboard, new design search feature, a new UI and search through Voice Search is faster. Android Jelly Bean was first used on a product, namely the Asus tablet Google Nexus 7.

1.4.2 Android Architecture

Android architecture consists of several layers that support specific functions of the operating system. Here layer - layer architecture android:

1. *Applications and Widgets*

A layer associated with the application. Usually by downloading an application and then do the installation of systems that can run the application. On the layer there are applications like email client, SMS program, calendar, maps, browser.

2. *Applications Frameworks*

Android included into the Open Development Platform that is offered to developers to build great applications and innovative. Developers are free to access the hardware, access to information resources, run background services, set alarms, add a status notification and others - others.

Examples of services running in the background is the Asynchronous Task which is an abstract class that is used to perform operations in the background. Developers also have access to the API framework as that of the application on core categories. Applications components included in the Framework are as follows:

a. views

b. Content Provider

c. Resource Manager

d. Notification Manager

e. Activity Manager

3. *Libraries*

A layer in which the features - the features of android are and provides a set of libraries in C / C ++ that can be used by the various components of android. Here are some libraries that exist on android:

a. *Media libraries for media playback pictures, audio and video.*
b. *Libraries for management views*
c. *SGL Graphics and OpenGL libraries for 2D and 3D graphics*
d. *SQLite libraries for database support*
e. *Libraries SSL and integrated with the WebKit web browser and security.*
f. *Libraries Live Webcore include a modern web browser with engines embedded web view.*
g. *3D libraries for implementation of the OpenGL ES 1.0 API's.*

4. *Android Runtime*

A layer which makes android app can be run where, in the process using the Linux implementation. Dalvik Virtual Machine (DVM) is the basic form of the machine android application framework. There are two parts to the Android Runtime, namely:

a. *Core Libraries*

Core android application libraries created using the Java programming language.

Dalvik Virtual Machine is not a Java Virtual Machine

b. *Dalvik Virtual Machine (DVM)*

Register-based virtual machine optimized to function efficiently in the development of the Linux kernel to do threading.

5. Linux Kernel

A layer where the core of the android operating system is located. Its presence can set the system processing, memory, resources, drivers and other android operating system. Linux kernel used android is linux kernel. Easier for android architecture can be seen in Figure 3:

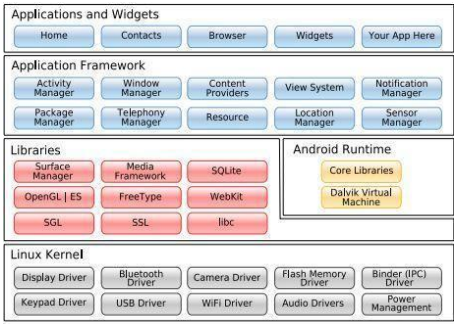


Figure 3 Linux Kernel [3]

1.4.3 Android Components

Android applications built using the Java programming language to create applications android contained therein several main components, namely:

1. *Activites*

Is a display (User Interface) for user interaction with the application android usually have more than one activity depends on the purpose and design of the application.

2. *Service*

Service does not have a graphical user interface, but the service can run in the background. For example, a media player is playing music from a list of existing songs, this application will have two or more activity that allows the user to other activities such as writing text for the music is still running. To do that, the media player activity could start the service in which the service will run on the main thread of the application process.

3. *Broadcast Receiver*

Broadcast Receiver is the application components that are system-wide broadcast announcements. Some examples of broadcast sent by the android operating system is the emergence of notification when a new application is installed / updated, the screen is off, the operating system finishes booting, or phone calls, and so on. Broadcast Receiver does not have a display, but can run an activity or show notifications in the Notification Bar.

4. *Content Provider*

A content provider set up a set of application data is divided into the content provider can store data in a file system, an SQLite database, web, or other data storage methods that can be accessed by the application via the content provider. For example, the android system provides a content provider which set user contact information.

5. *Intent*

Intent is an Asynchronous message which applications to deliver functionally request of different components in the system android.

2. CONTENTS OF RESEARCH

Analysis system needs to do to get information about the model, the specification of the software required by the user. The section also will do an analysis of the current system, the results can be used to identify and evaluate the various issues involved, among which weaknesses, needs, what obstacles there are in the system at the Factory Outlet Black and White in Tangerang. The results of the analysis carried out will produce some conclusions and suggestions are used for improvement of the system that can be used as a basis for designing information systems to be built. Analysis of this system is divided into two parts, namely:

2.1 Analysis of the Problem

Based on the background described problems should be obtained, namely difficulty of getting information about Factory Outlet Black and White, then by the application of mobile technology can help to search for information about Factory Outlet Black and White.

Location of Factory Outlet locations are indispensable for customers who love to shop, often the public or customers do not know where the location of the FO that is around. So that information about the location of FO and FO in sekitarpun still not much to know. One of them FO Black and White, In order for the community and customers know the location of the location information and the FO, he built a mapping application to find out about the information FO Black and White and the location of the location of the FO. With applications that tech android-based Location Based Service to facilitate the public or customers in search of FO location nearest the customer's location, ordering goods on certain days and hours. Location Based Service implementation

services, can assist in the creation of mapping applications in the search for the location of the nearest outlet through mobile technology.

Based on the existing problems, the necessary development of this application in order to solve the existing problems. in order to facilitate the public or customers to get information about the FO and the menerapan LBS can enable customers to search for items based on the location of the nearest of these customers.

Construction of shopping guide app Factory Outlet Black and White. Application Factory Outlet Black and White can be recognized by people outside the community Tangerang and Tangerang in shopping and certainly can increase turnover Factory Outlet Black and White them.

2.1.1 Analysis System Running

Analysis of current procedures aim to know in detail the process of what is being done in the transaction processing Factory Outlet Black and White Tangerang City, namely :

1. *Procedure FO search of goods in the running.*

2.1.2 Procedures Guide Search Goods for Running On FO

Procedures manual selection of goods Factory Outlet Black and White City Tangerang is running is as follows:

a. *Customers can request the goods on Outlet searching.*
b. *Officers help search request customer goods.*
c. *If the goods are there, then the officer carrying goods to the customer and if the goods do not exist, then the officer salesperson can inform the customer if the item does not exist.*
d. *The customer gets the goods no information from the clerk.*
e. *After obtaining the information items sought does not exist, then the customer can continue to search items in the outlet or if you do not want to find the process is complete.*

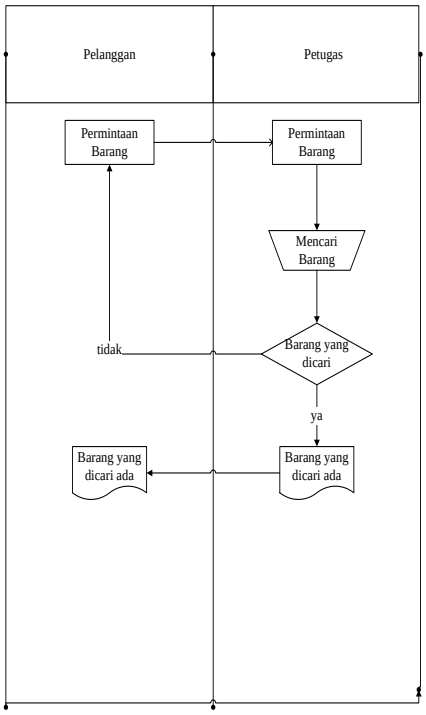


Figure 4 Flowmap FO search items in the running

2.1.3 Analysis of the system to be built

Analysis of the procedures that will be built aims to learn in detail the process of what is being done in the transaction processing Factory Outlet Black and White Tangerang City, namely:

1. *The search procedure of goods through the system.*

2.1.4 Procedures based on the location nearest search and search items on the proposed system

Search procedures goods Factory Outlet Black and White on the proposed system is as follows:

a. Customers looking for the nearest FO through the system.
b. Customers select the closest FO through the system.
c. The system displays the details of goods.
d. Customers searching goods.
e. The system displays the items sought.

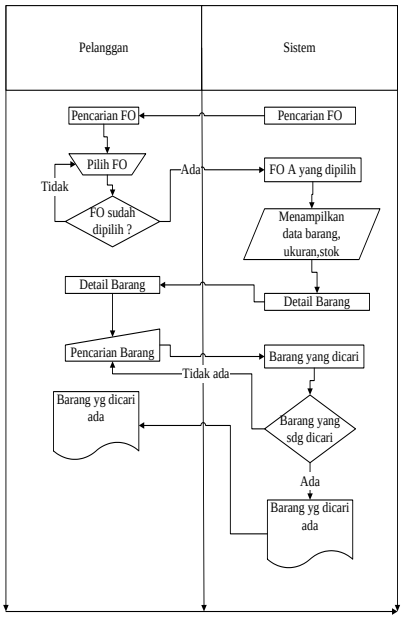


Figure 5 Flowmap FO search and search items by the proposed system

2.1.5 Analysis of Non-Functional Requirements

Analysis of non-functional requirements is the analysis required when determining the system requirements specification. This specification includes elements or components of what is needed for the system to be built until the system is implemented.

This analysis also menentukkan system specifications necessary inputs, outputs to be produced systems and processes needed to process the input so as to produce the desired output.

2.1.6 Business Rules

2.1.6.1 Analysis of business rules that are running

The business rules are running contains the analysis of the rules that apply to the current system. Below are the business rules that apply in the Factory Outlet Black and White Tangerang City.

1. *The process of selection and purchase of goods by the customer is done on the opening hours at FO.*
2. *Purchase of goods exceeding of stocks available FO, can make a reservation by direct confirmation with FO officer with the desired amount and completed at the agreed time.*
3. *Receipt 2 sets with the first double for the customer and FO second copy for your records.*
4. *Each FO store data in the database the number of stocks respectively*

2.1.7 Layout Analysis

Analysis layout aims to provide location information FO located by address, longitude and latitudenya to be displayed on the system to be built. FO above meets the layout analysis information displayed on the system to be built. However, longitude and latitude can be changed if the FO to move the location address. To find information about the location of FO on the view that the proposed system.

Then open the FO desired information on the proposed system. After that FO information display systems and items in the FO. Customers open one of the links on the desired item. After that comes the information display items and stock status whether or not the goods in the FO.

2.1.8 Analysis Software

Analysis of software that aims to explain the overall software and programming languages that are used to support applications that are built.

1. *Windows Operating System and Professional*
2. *Application Eclipse IDE*
3. *JDK v 1.6 and Android SDK windows*
4. *Platform Android Gingerbread version 2.3+.*
5. *The Java programming language*
6. *MySQL database*
7. *JSON, for data exchange between applications built with databases in factory outlet*

2.1.9 Analysis Hardware

Hardware needed today is based on the minimum requirements that must and can be met, among others:

a. Hardware Application Backend

On the backend applications, applications that can run on a computer device with computer hardware requirements specification as follows:

1. *Processor with a minimum speed of 2.0 GHZ*
2. *512 MB RAM*
3. *Hard drive 20 GB*
4. *Mouse*
5. *Keyboard*
6. *Monitor*

b. Hardware Application Frontend

Frontend applications run on a SmartPhone device that is SmartPhone with Android platfrom. The hardware requirements for the SmartPhone namely:

1. *Resolution 240 x 320 Pixels*
2. *Memory 100 MB*
3. *Cpu 300 MHZ*
4. *Wlan Wi-Fi*
5. *3G Network UMTS*
6. *GPS A-GPS*

2.1.10 Network Analysis

Network analysis is to facilitate describe the network that will constructed and functions to access the application to be built. The layout of the computer networks that can be described in Figure 5 below:

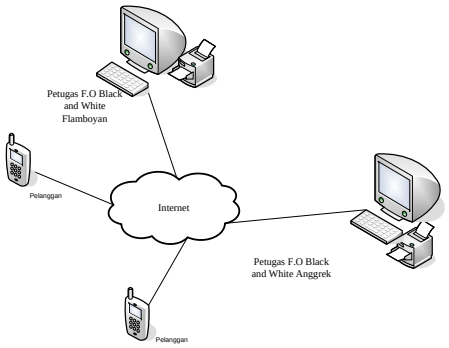


Figure 5 Network Architecture Needed

2.1.11 Analysis of Location Based Service

Analysis of Location Based Service (LBS) or a location-based service applications that are built akanp serves as an information service that can be accessed via mobile devices using the mobile network, which is equipped with the ability to take advantage of the location of the mobile device. LBS technology applied.

3. Conclusion.

Mobile application development Searching to guide shop at Factory Outlet Black and White can assist the public in seeking information Factory Outlet Black and White online using android smartphone.

With the construction of Searching Mobile app for shopping guide on Factory Outlet Black And White can help customers in finding information about goods offered, size, color, ddan stock items available.

With the implementation of Location Based Service technology into these applications, it can be easier for customers to find the nearest location customers with Factory Outlet

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