** MINISTRY OF EDUCATION AND TRAINING**

**FPT UNIVERSITY**

Capstone Project Document

**Laptop Reviews**

|  |  |
| --- | --- |
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-Ho Chi Minh City, ***05/2015***-

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***ACKNOWLEDGEMENTS***

We wish to thank various people for their contribution to this project: Our teachers for their advice and participation in the final review, our friends for their valuable technical support.

Special thanks should be given to Mr.Kiều Trọng Khánh, our research supervisor for his professional guidance and the useful, constructive recommendations throughout the course of this project.

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# Definitions, Acronyms, and Abbreviations

|  |  |
| --- | --- |
| LRA | Laptop Review |

# Report No.3 Software Requirement Specification

## User Requirement Specification

### Guest Requirement

Guests is a person who doesn’t have access to the system. Guest can use some functions in the system. To use all functions, guest must login. These are some functions guest can use:

Guests are normal users who don’t have access to the system. Guests can use almost functions but the systems functions. Here are things guests can do with our website:

* Search products and their reviews.
* View products details with all useful information.
* Ask for not available products.
* Ask for notification when asked products are available.

### Staff Requirement

Staff is a person whose work is maintaining the system. Staff will be able to do following things:

* Update dictionary manually or through importing Excel file.
* Modify parser function.
* Train the system so that it can handle some tasks such as managing duplicated products.
* Configure the system
* Force parsing data

### Admin Requirement

Admin is the one who manage the overall system. Admin can do all Staff’s function plus:

* Manage users.

### System Requirement

System is also an actor help run the website. System will handle these works:

* Auto parse the data
* Auto find synonyms and antonyms
* Save not available laptops that request by guests

## System Requirement Specification

### External Interface Requirement

#### User Interface

* + The interface of the website should be clear, easy to understand that does not require much time to learn to use.
  + The error, warning messages must be clear and should not contain technical words that may annoy users.

#### Hardware Interface

* + The system will use the standard hardware and data communication resources that can be easily found on any normal computers.

#### Software Interface

* + Web browsers such as Firefox, Chromes with Resolution (1024\*768) or bigger that support JavaScript and HTML5.

#### Communication Protocol

* Website using HTTP protocol for communication between the web browser and the web server.

### System Overview Use Case

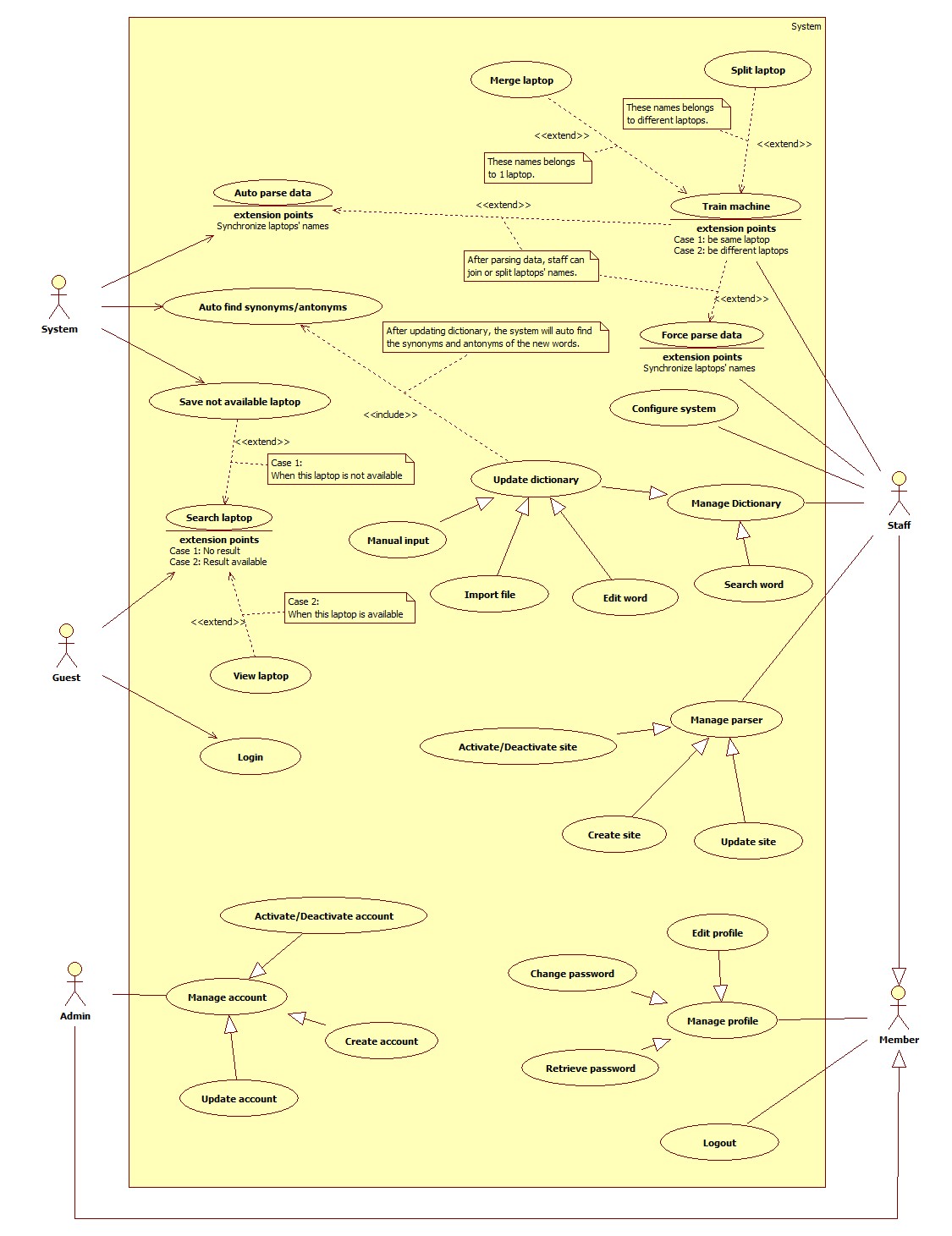


Figure 1: System Overview Use Case

### List of Use Case

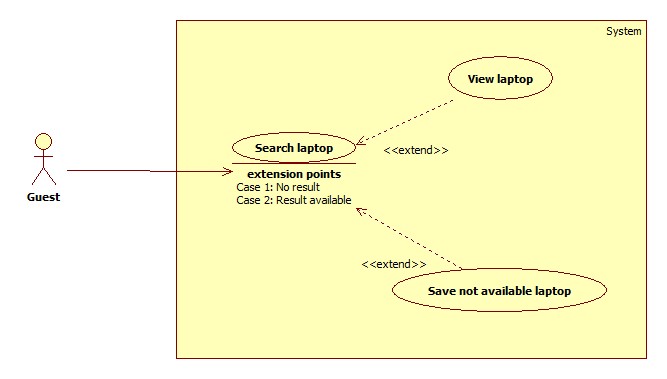
#### <System> Overview Use Case

##### <System> Auto Parse Data

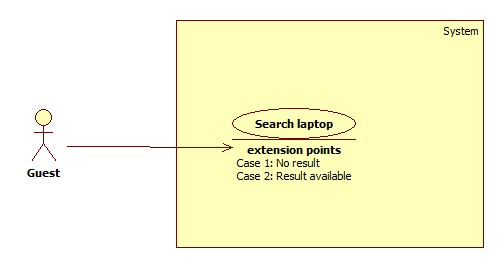
##### <System> Auto Find Synonyms/Antonyms

##### <System> Save Not Available Laptop

#### <Guest> Overview Use Case

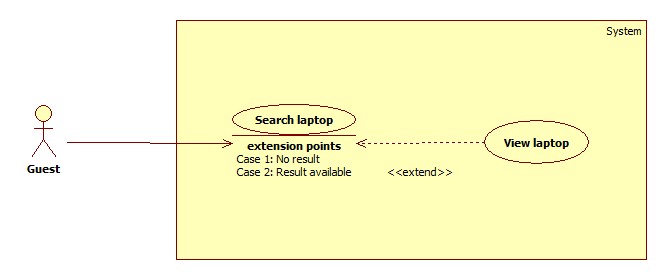


##### <Guest> Search Laptop



|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB001** | | | |
| **Use Case No.** | SB001 | **Use Case Version** | 2.0 |
| **Use Case Name** | Search Laptop | | |
| **Author** | Dinh Huu Toan | | |
| **Date** | 18/05/2015 | **Priority** | High |
| **Actor:**   * Guests   **Summary:**   * This use case allows guest to search and view laptops brief information.   **Goal:**   * A list of appropriate laptops will be shown to user.   **Triggers:**   * Guest wants to search for laptops’ information. * Guest can choose brand of the laptops to maximize the search result. * Input laptop name into search textbox then click “Search”.   **Preconditions:**   * N/A.   **Post Conditions:**   * **Success:** A list of appropriate laptops is shown along with laptops’ information: name and percentage of positive comments. * **Fail:** Show an error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Guest inputs the laptop’s name into textbox, choose the brand or they can leave it the default value. |  | | 2 | Guest clicks “Search” button | * System will show a list of appropriate laptops as a grid which contains 3 laptops in one row.[Alternative 1] * A laptop will show in a square frame with following information: * Laptop’s image * Name * Percentage of positive comments |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | System cannot find searched laptops | * System will show a pop-up. In that pop-up include: a message: “This laptop is not available. Would you like to receive information about this laptop when it’s available?”, a textbox for inputting email, and “Submit”/”No, Thanks!” buttons |   **Exceptions:** N/A  **Relationships:** N/A  **Business Rules:**   * Guest can leave the search textbox empty, then all laptops available in the database should be listed. * Guest can choose Brand when searching to maximize the result * Results will be ordered by matching percentage | | | |

##### <Guest> View Laptop Detail through Search



|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB002** | | | |
| **Use Case No.** | SB002 | **Use Case Version** | 2.0 |
| **Use Case Name** | View laptop detail | | |
| **Author** | Dinh Huu Toan | | |
| **Date** | 18/05/2015 | **Priority** | High |
| **Actor:**   * Guests   **Summary:**   * This use case allows guests to read laptop full details.   **Goal:**   * Show detail information of choosing laptop.   **Triggers:**   * Guest wants to read laptop details includes: name, reviews, specifications and images * Click “Details” link on each result found.   **Preconditions:**   * N/A.   **Post Conditions:**   * **Success:** Navigate to new page shows laptops’ information: name, reviews statistic, and images. * **Fail:** Show an error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Guest clicks “Detail” link on one result | * Navigate to “Detail” page with following information:   + Name of laptop   + Image slide show   + Specifications   + Statistic: number of Positive/Negative/Neutral reviews   + Reviews which are ordered by Positive/Negative and Neutral   + Suggested laptops |   **Alternative Scenario:** N/A  **Exceptions:** N/A  **Relationships:** Search Laptop  **Business Rules:**   * Details of laptop should be well-organized so that guest can easily read them. | | | |

##### <Guest> Login

#### <Member> Overview Use Case

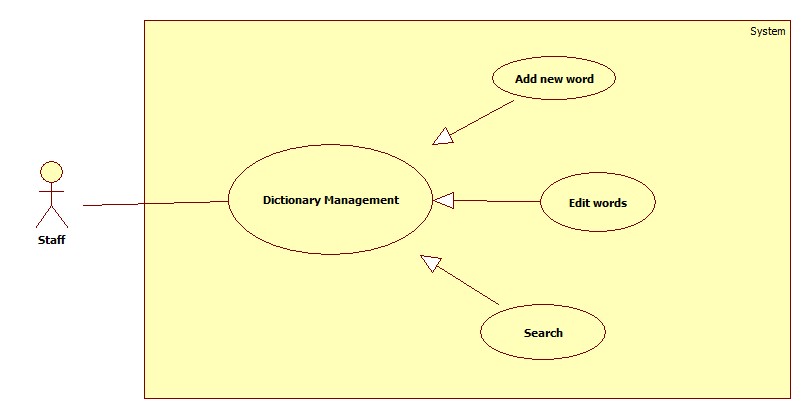
##### <Member> Edit Profile

##### <Member> Change Password

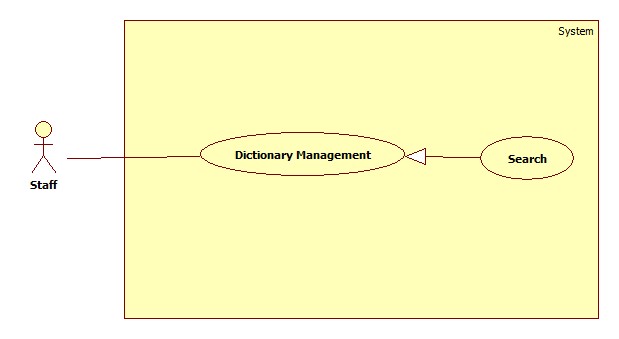
##### <Member> Retrieve Password

##### <Member> Log out

#### <Staff> Overview Use Case

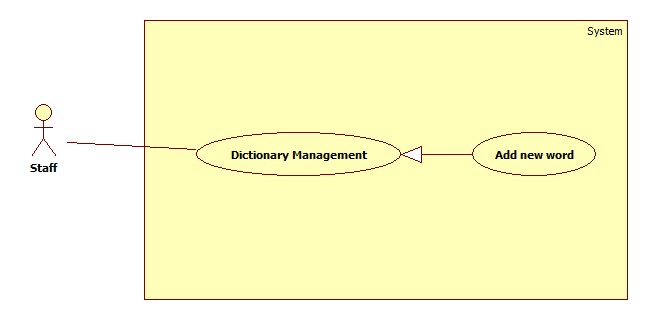


##### <Staff> Search Word



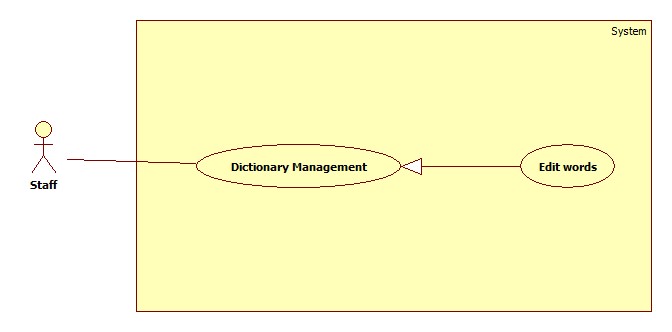
|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB003** | | | |
| **Use Case No.** | SB003 | **Use Case Version** | 2.0 |
| **Use Case Name** | Search Dictionary | | |
| **Author** | Dinh Huu Toan | | |
| **Date** | 03/06/2015 | **Priority** | High |
| **Actor:**   * Staff   **Summary:**   * This use case help staff to search for available word in dictionary   **Goal:**   * Show appropriate word to staff.   **Triggers:**   * Staff want to search words in dictionary for editing or viewing. * Click “Dictionary”, then “Dictionary Management” then input the word they want to search into search textbox   **Preconditions:**   * User should login to the system under Staff role.   **Post Conditions:**   * **Success:** Show list of appropriate words with definition field when pointing to each word. * **Fail:** Show an error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff click “Dictionary”, then “Dictionary Management” | * Navigate to “Dictionary Management” page with following information:   + Search textbox   + Add button   + Edit button   + List of words   + Definition of selected word include: definition, synonyms, antonyms, type of word (Pros/Cons/Neural) | | 2 | Input search string into search textbox | * The list of words will be filtered and show only words that match search string. [Alternative 1] |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | System cannot find word match search string | * System will show a pop-up. In that pop-up include: a message: “This word is not available in the dictionary. Do you want to add it to dictionary?”, and “Add”/”No, Thanks!” buttons |   **Exceptions:** N/A  **Relationships:** Dictionary Management  **Business Rules:**   * The list should be filtered at the same time the search string is inputted * The list is sorted by matching percent | | | |

##### <Staff> Manual Input



|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB004** | | | |
| **Use Case No.** | SB004 | **Use Case Version** | 2.0 |
| **Use Case Name** | Add new word | | |
| **Author** | Dinh Huu Toan | | |
| **Date** | 03/06/2015 | **Priority** | High |
| **Actor:**   * Staff   **Summary:**   * This use case help staff to add new word to dictionary   **Goal:**   * New word is added to dictionary   **Triggers:**   * Staff want to add word to dictionary. * Click “Dictionary”, then “Dictionary Management” then click “Add” button   **Preconditions:**   * User should login to the system under Staff role.   **Post Conditions:**   * **Success:** New word is added to dictionary. * **Fail:** Show an error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff click “Dictionary”, then “Dictionary Management” | * Navigate to “Dictionary Management” page with following information:   + Search textbox   + Add button   + Edit button   + List of words   + Definition of selected word include: definition, synonyms, antonyms, type of word (Pros/Cons/Neural) | | 2 | Click “Add” button | * A pop-up appear with the following fields: * Word: input the characters of that word * Type: Choose whether this word is Pros/Cons or Neutral * Synonyms: Input word’s synonyms. Each synonym is separated by “,” * Antonyms: Input word’s antonyms. Each antonyms is separated by “,” * Add button | | 3 | Staff fill in all fields and click “Add” | * New word is added to the dictionary. Show success message [Alternative 1] |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Added word is already in dictionary | * System will show a pop-up. In that pop-up include: a message: “This word is already in the dictionary. Do you want to edit it?”, and “Edit”/”No, Thanks!” buttons |   **Exceptions:** N/A  **Relationships:** Dictionary Management  **Business Rules:**   * After successfully add new word, system will show that word definition field for staff to check again. | | | |

##### <Staff> Edit Word



|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB005** | | | |
| **Use Case No.** | SB005 | **Use Case Version** | 2.0 |
| **Use Case Name** | Edit word | | |
| **Author** | Dinh Huu Toan | | |
| **Date** | 03/06/2015 | **Priority** | High |
| **Actor:**   * Staff   **Summary:**   * This use case help staff to edit word in dictionary.   **Goal:**   * Selected word is edited.   **Triggers:**   * Staff want to edit word in dictionary. * Click “Dictionary”, then “Dictionary Management”. Staff will search for the word they want to edit and then click “Edit”   **Preconditions:**   * User should login to the system under Staff role. * That word should be available in the dictionary.   **Post Conditions:**   * **Success:** Edited information will be saved. * **Fail:** Show an error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff click “Dictionary”, then “Dictionary Management” | * Navigate to “Dictionary Management” page with following information:   + Search textbox   + Add button   + Edit button   + List of words   + Definition of selected word include: definition, synonyms, antonyms, type of word (Pros/Cons/Neural) | | 2 | Search for the word they want to edit | * The list of words will be filtered and show only words that match search string. [Alternative 1] | | 3 | Staff click “Edit” | * A pop-up appear with the following fields: * Word: characters of that word. Staff can edit this word * Type: Staff can choose new type of the word * Synonyms: show all the synonyms of the words. Staff can add, edit or delete these synonyms. * Antonyms: show all the antonyms of the words. Staff can add, edit or delete these antonyms. * Edit button |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | System cannot find word match search string | * System will show a pop-up. In that pop-up include: a message: “This word is not available in the dictionary. Do you want to add it to dictionary?”, and “Add”/”No, Thanks!” buttons |   **Exceptions:** N/A  **Relationships:** Search Dictionary  **Business Rules:**   * After successfully edit word, system will show that word definition field for staff to check again. | | | |

##### <Staff> Import File

##### <Staff> Create Site

##### <Staff> Update Site

##### <Staff> Activate/Deactivate Site

##### <Staff> Configure System

##### <Staff> Force Parse Data

##### <Staff> Merge Laptop

##### <Staff> Split Laptop

#### <Admin> Overview Use Case

##### <Admin> Create Account

##### <Admin> Update Account

##### <Admin> Activate/Deactivate Account

## Software System Attribute

### Usability

#### Graphic User Interface

* All the texts, labels and should be written in Vietnamese.

#### Usability

* Admin, staff should need less than one week of training to be productive with the system.
* Guest and member can use the system easily without training.

#### Installation

* The system must be easy to deploy. Customer can deploy successfully and learn to configure, maintain the system within one day of training.
* The mobile app must be easy to install. Compatible with almost Android Phone.
* The attached manual guide must be clear. User can read and do themselves without developer’s help.

### Reliability

* N/A

### Availability

* N/A

### Security

* Privacy: Each role of user has a specific permission to interact with system.
* System always checks authorization and authenticated before doing anything.
* Only admin can grant permission to staff.

### Maintainability

* N/A

### Portability

* N/A

### Performance

* N/A

## Conceptual Diagram

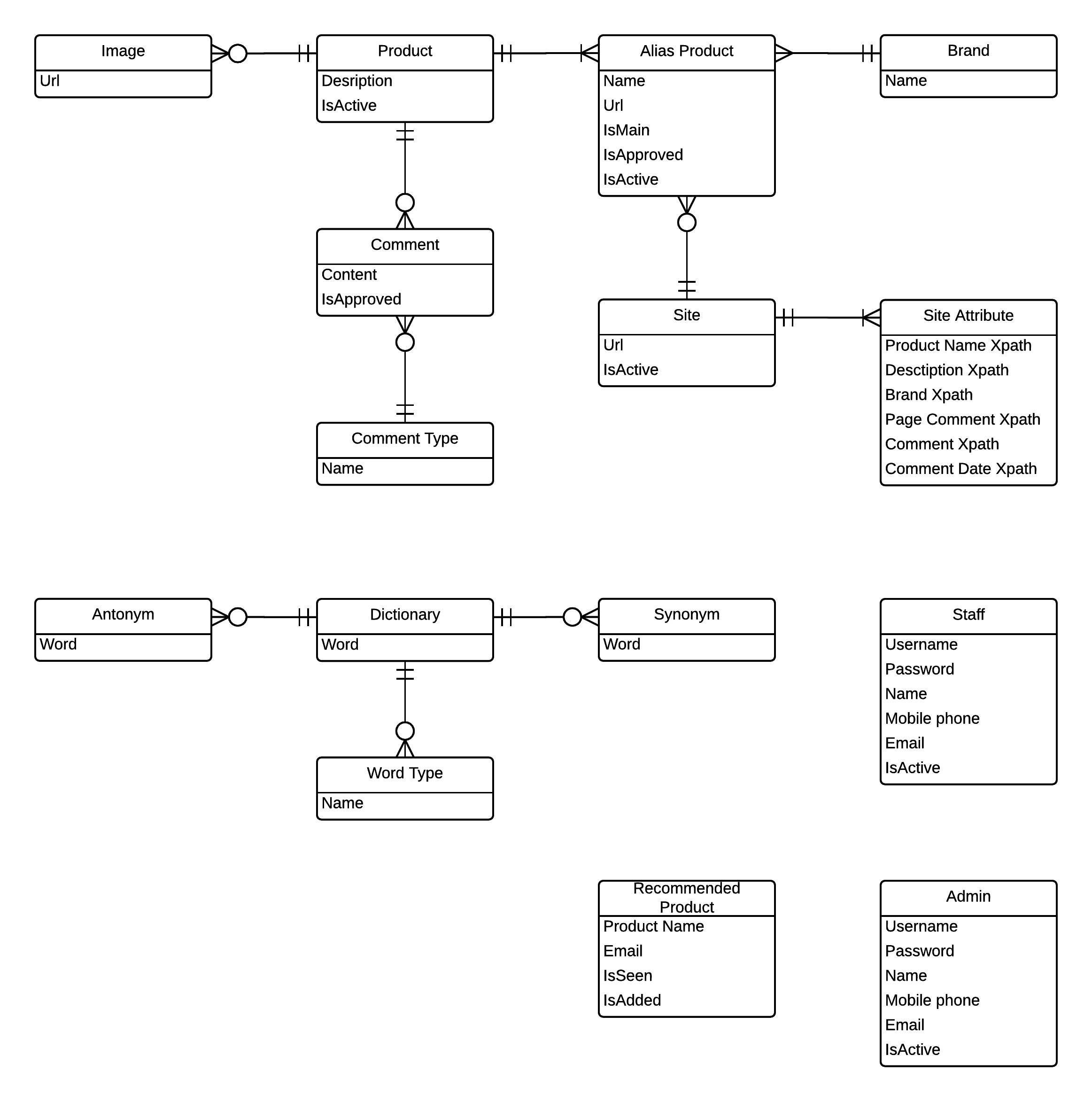


Figure 2: Conceptual Diagram

Data Dictionary

|  |  |
| --- | --- |
| **Entity Data dictionary: describe content of all entities** | |
| **Entity Name** | **Description** |
| Codetype | Describe all codetype in the system. |
| ParseInfo | Describe all data needed to parse 1 specified product |
| Hardware | Describe all hardwares of a product. |
| Product | Describe all products in the system. |
| ProductAttribute | Describe relationship between Attribute and Product. |
| AliasProdcut | Describe all alias name of product in the system. |
| Dictionary | Describe all possible hardwares names in the system. |
| Account | Describe all accounts in the system. Account includes: admin, staff, member, guest… |
| RecommendProduct | Describe the product that user recommend for system. |
| History | Describe all compare histories of user in the system. |
| HistoryDetail | Describe details of any history in the system. |
| Role | Describe all roles in the system. One user has only one role. |
| LogFile | Describe all log files of the system. |
| ParserAttribute | Describe all Xpath to parser auto hardware |
| RatingProduct | Describe relationship between Attribute and Product. |
| Brand | Describe all brand that product is included. |
| Store | Describe all store that product is included. |
| MostViewProduct | Describe how much time that 1 product are viewed. |