Kindle Your Blog

Software Design Document

Comp566-01

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1. Introduction

1.1 Purpose

This is a Software Design Document (SDD) for “Kindle Your Blog” project. The purpose of this document is to describe system overview, architecture and design of the software product. The SDD will include the details of the project’s requirements, interface, design issues, and components.

1.2 Scope

The Kindle Your Blog project is a web-based tool created to help user to get a kindle ebook copy of a whole blog archive. Users can read favorite blog offline every single post.

1.3 Overview

This Software Design Document describes the system overview, system architecture, data design, component design, human interface design, and requirement matrix. System architecture section includes architecture design with flowchart and decomposition description, and design rationale. Human interface design contains overview of user interface, screen images, and screen object and actions.

1.4 Definition and Acronyms

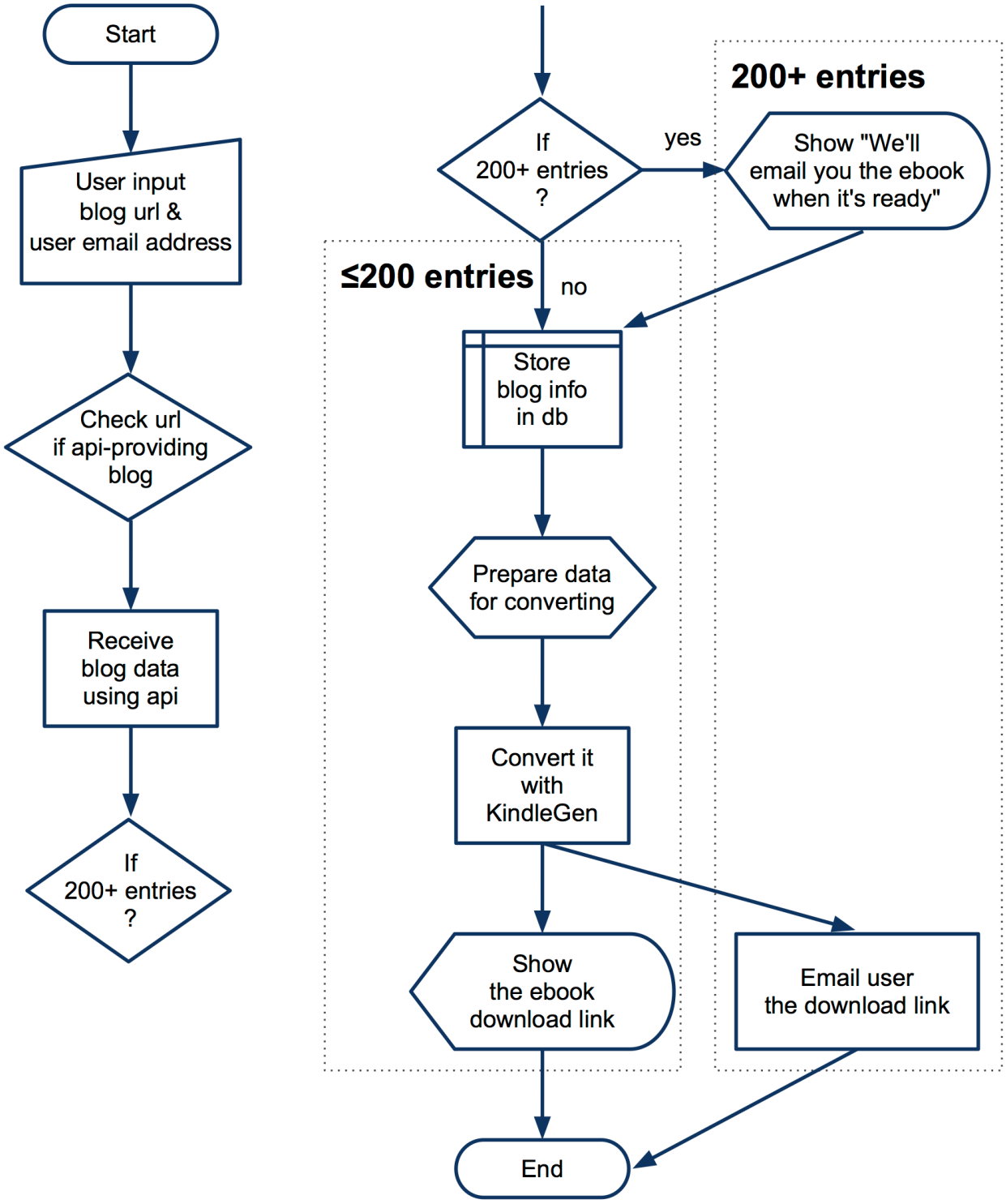
Term	Definition
Kindle (mobi)	Kindle is a ebook reader device made by Amazon, and also an Amazon trademark. Kindle also refers to a ebook format, a.k.a. mobi, that can be read on a Kindle device or an app.
KindleGen	The tool made by Amazon that helps convert a book information and metadata into a kindle ebook.
API	An application programming interface (API) is a protocol intended to be used as an interface by software components to communicate with each other.
Blog	A website where people can post a series of writings.

2. System Overview

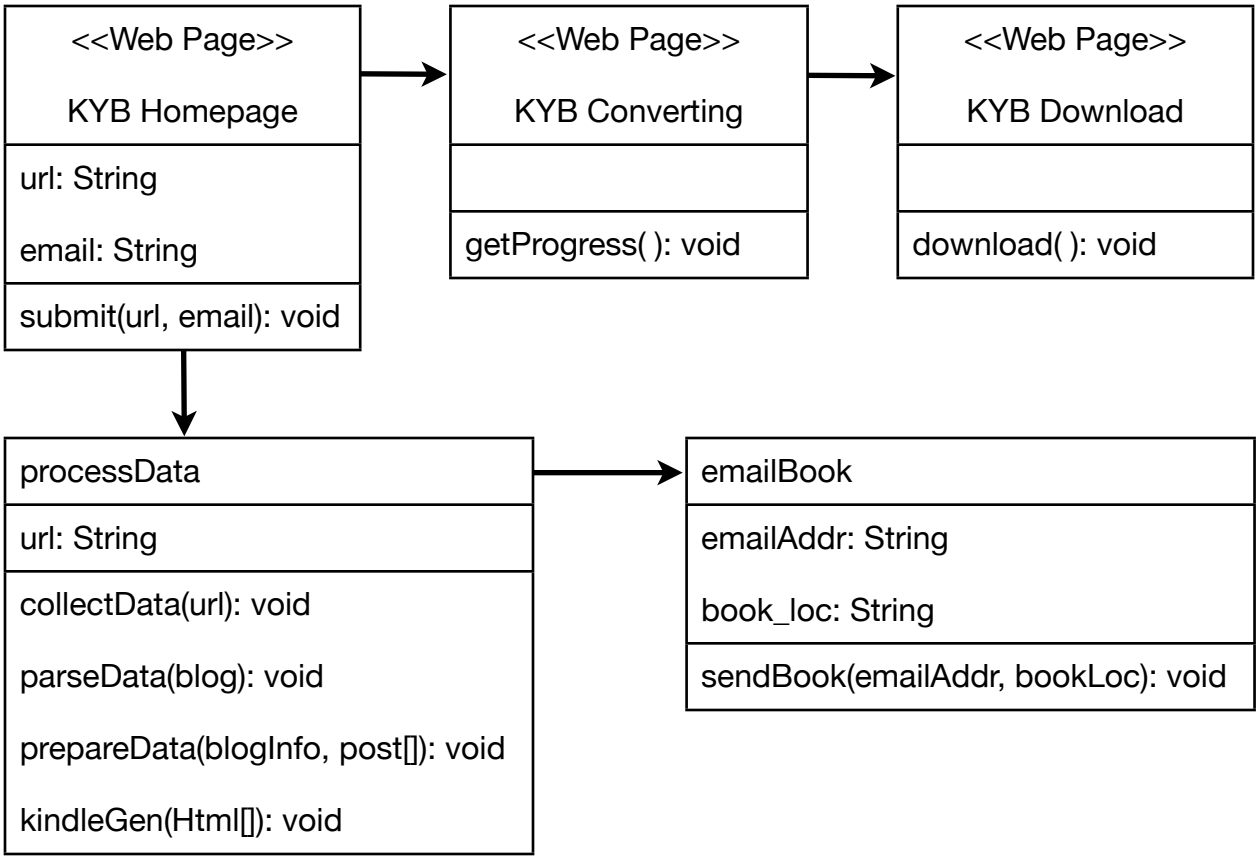
The website will ask a blog address and user email address. The backend server will collect the blog archive and covert it into a kindle ebook. When converting is done, the website will show the download link. When the blog has more than 200 posts, then it will email the user later, instead of making the user wait long time.

3. System Architecture

3.1 Architectural Design



3.2 Decomposition Description



3.3 Design Rationale

I choosed Tumblr blog API specifically, because it is more efficient than scripting every single page of blog. In this way, the app has access to only Tumblr blogs. However, many power bloggers use tumblr blogs these days, so users will have plenty of choices.

4. Data Design

4.1 Data Description

If you ping with blog url, the Tumblr blog API print out a blog's title and subtitle, and the blog's posts with its title and entries. KYB saves the post_id as filename in the blog_id folder. KindleGen will convert the HTMLs with the data from database into kindle ebook format.

4.2 Data Dictionary

name	type	size
blog_id	int	3
blog_subtitle	string	40
blog_title	string	30
post_id	int	6
post_title	string	30

5. Component Design

5.1 Homepage (pseudo code)

```
submit(url, email) {
        processData(url)
        saveEmailAddr(email, url)
}
```

5.2 Converting page

getProgress( )

5.3 processData

```
processData(url) {
        blog = collectData(url)
        blog info, posts = parseData(blog)
        htmls = prepareData(blog_info, posts)
        kindleGen(htmls)
}
```

5.4 Download page

download( )

5.5 emailBook

emailAddr = email

bookLoc = blog_id

sendBook(emailAddr, bookLoc)

6. Human Interface Design

6.1 Overview of User Interface

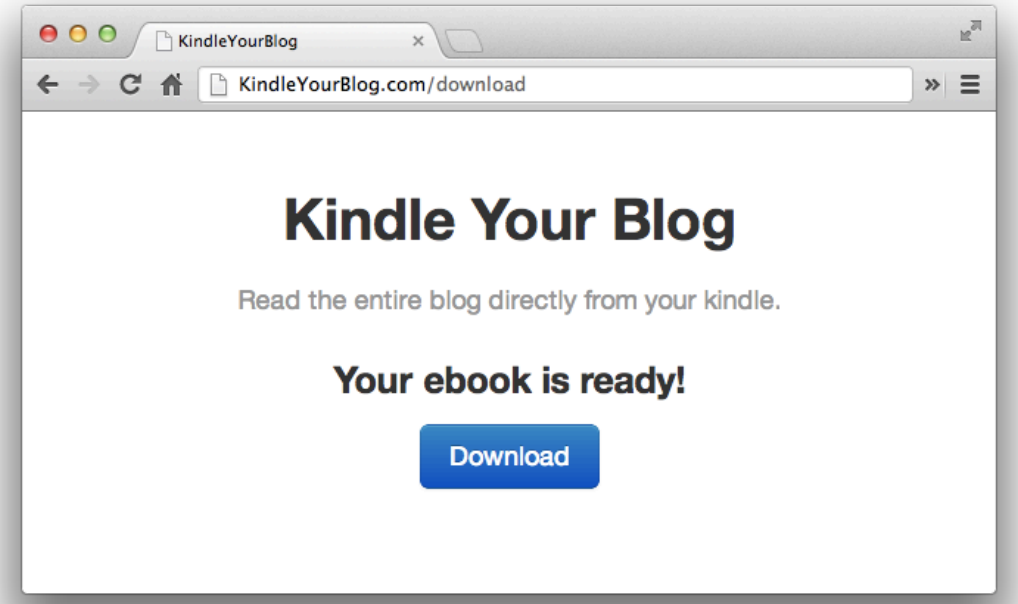
The website will have three main pages: the main welcoming homepage, converting and download page. When user clicks the Kindle It! button, then the website will check any error of the blog and email address. If both are correct, the website will show converting page while converting. When the converting is done, the website will take the user to download page. When the converting takes long, it will email the link instead.

6.2 Screen Images

6.2.1 Homepage

6.2.2 Converting

6.2.3 Download



6.3 Screen Objects and Actions

Homepage has 2 input boxes and 1 button. Both boxes are required in order to go to next page, converting. Converting page has 1 progress bar. The progress bar will let the user know how much it is processed. Download page has 1 button. The button will let user have the kindle ebook of the blog archive.

7. Requirements Matrix

SRS	Functional Requirement	SDD
3.2.1	Collect blog archive	5.1, 5.3, 6.2.1
3.2.2	Convert archive into Kindle ebook	5.3, 6.2.2
3.2.3	Download ebook	5.4, 5.5, 6.2.3