Pet Sign In Web Application

CS-670-IA Research Project Seminar

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# Abstract

Pet Sign In is a web application to sign in pets at a work environment. The idea behind this web application is to allow a pet friendly company to keep track when the pet is on the premises and their up-to-date documentation.

# Introduction

## 2.1 Background

This project was something I want to solve in my old job over at Tangoe, Inc. We were allowed to bring our pets (only dogs) to work as long as we provided the latest document. We also had to sign in the receptionist every day, assuring that we agreed to dog policy.

## 2.2 Goals and Objectives

This project’s goal is to simplify the process of getting your dog registered and signed in.

* A dog owner user can:
  + Create an account
  + Associate it with a company ID
  + Create a pet account under that your account
  + Upload required files in accordance with the pet policy
  + Sign their pets in
* An Admin employee can:
  + Create an account
  + Create a company ID
  + Approve accounts that have been associated with the Company ID
  + Approve a pet that was created or updated under an account associated with company ID
  + Give administration rights to accounts associated with company ID do the following task:
    - Approve an employee account
    - Update an employee account
    - Notify an employee account
    - Close an employee account

The only risk assessment if this application is to be stolen or disappear is as followed:

* Negligible
* Loss of personal information

The following is a list of opportunities this product will bring to dog friendly places:

* Free to use
* Mobile friendly website
* Fast registration process
* Easy login process to sign in pet
* One location with everything related to pet
* Using latest security to protect data in transit
* Encrypting resting data for better security
* Database is manually backed up on a weekly basis

## 2.3 Scope

This website is a pet sign in application made available to anyone in a pet friendly company. The idea is to facilitate the sign in process of bringing in your pet to a pet friendly environment. An employee of this pet friendly environment or company will create an account and associate with that company’s distinct ID. Once their account or pet account are approved by an administrator of that company ID, they will be able to sign in their pets. Each and every time an employee signs in a pet, they will be asked to agree to the pet policy of that particular company. An administrator will have several privileges over a non-administrator account, such as approving, update, notify, and close an account.

## 2.4 Intended Audience

The audience for this document is anyone looking to understand this project and how it is designed.

## 2.5 Computer Application

* Agent Ransack
* Fiddler4
* FileZilla
* Google Chrome
* Internet Explorer 11
* Microsoft Excel, PowerPoint, Visio and Word
* MySQL Workbench
* Notepad ++
* PuTTY

## 2.6 Web Application

* CPanel
* Dropbox
* GitHub
* JSFiddle
* Runnables

## 2.7 Languages

* HTML 5
* JavaScript
* PHP
* MySQL

## 2.8 Libraries

* Bootstrap
* jQuery
* Joyride

# 3 Analysis Overview

## 3.1 System Usage

## 3.2 Assumptions, Dependencies and Constraints

The availability of the website will depend on the service availability of the hosting company.

## 3.3 Development Methods

|  |  |
| --- | --- |
| Local Machine | |
| OS Name | Microsoft Windows 7 Professional |
| Version | 6.1.7601 Service Pack 1 Build 7601 |
| OS Manufacturer | Microsoft Corporation |
| System Manufacturer | INTEL |
| System Model | DZ68BC |
| System Type | x64-based PC |
| Processor | Intel(R) Core(TM) i7-2600K CPU @ 3.40GHz, 3401 Mhz, 4 Core(s), 8 Logical Processor(s) |
| BIOS Version/Date | Intel Corp. BCZ6810H.86A.0021.2011.0831.1555, 8/31/2011 |
| SMBIOS Version | 2.6 |
| Total Physical Memory | 16.0 GB |
| Total Virtual Memory | 32.0 GB |
| C Drive | 238 GB |

The software I used to create the database is MySQL Workbench 6.0 CE, and the software I used to write the webpages is Notepad++. I also used some web applications to test some coding in the applications (see 2.6).

# 4 Requirements

## 4.1 Inputs – Data

User:

* Email
  + Extension must match company email address
* Password
  + Password between 8-45 characters long
* Active – 1 use
  + Application functions are disabled if its 0
  + Email needs to be verified via ActivationCode method
* Attempts – 2 uses
  + Each failed login or registration to a registered account attempt adds an increments of 1
  + >4 locks the account
* AdminCode – 3 uses
  + Code 0 is not an administrator
  + Code 1 is an administrator
  + Code 2, 3 and 4 are super administrators
* ActivationCode – 1 use
  + A code sent to the email to verify the email address
* Disabled – 1 use
  + Can only be disabled by administrators

Pet:

* Name
* Breed
* DOB
* Sex (Spayed or neutered)
* Picture
* Document (path/to/file.pdf)

Company:

* Document (path/to/file.pdf)

## 4.2 Outputs – Information

User History

Pet History

## 4.3 Processes – Manual/Automatic

Manual:

* User uploads pet document PDF
* Administrator uploads company pet policy PDF
* User approves, updates, notifies and close accounts
* Backup Database

Automatic:

* User History logging
* Pet History Logging

## 4.4 Storage – Database

* All data will be stored in a MySQL Database.

## 4.5 Control – Interfaces

The website will consist of three roles:

* Administrators
* Registered user associated with a Company ID
* Registered user

Each will have distinct rights and ability throughout the application.

## 4.6 Timelines and deadlines

|  |  |  |
| --- | --- | --- |
| Phase | Start Date | End Date |
| Iteration 1 | | |
| Phase | Start Date | End Data |
| Inception | 05/17/2015 | 11/03/2015 |
| Iteration 2 | | |
| Elaboration | 11/04/2015 | 11/29/2015 |
| Construction | 11/30/2015 | 12/07/2015 |
| Iteration 3 | | |
| Inception | 12/08/2015 | 12/09/2015 |
| Elaboration | 12/09/2015 | 12/09/2015 |
| Construction | 12/09/2015 | 12/09/2015 |
| Iteration 4 | | |
| Inception | 12/09/2015 | 12/15/2015 |
| Elaboration | 12/09/2015 | 12/30/2015 |
| Construction | 12/09/2015 | 12/30/2015 |
| Iteration 5 | | |
| Inception | 12/31/2015 | 12/31/2015 |
| Elaboration | 12/31/2015 |  |
| Construction | 12/31/2015 |  |
| Iteration 5 | | |
| Transition |  |  |

## 4.7 Training

A help how to will be available on the website. I will be using Joyride (see 2.6) as the tour.

## 4.8 Security and Audits

* Website is forced into a HTTPS/SSL connection therefore all sessions are protected
* Every action taking on an account will be logged in the history tab of that particular account, as well as the pet.
* The dashboard will show a brief history of the user’s account.
* All actions can notify the account holder of a new log.
* A two factor login will be optional (via email or possibly phone multimedia message).

## 4.9 Use Cases

|  |  |
| --- | --- |
| Use Case Name | Register |
| Description | Register an account |
| Actors | User |
| Pre-Conditions | 1. Valid email address and password between 6-45 characters long |
| Basic Flow | 1. Click on the Register button  2. Enter company email address  3. Enter a password between 6-45 characters long |
| Post Conditions | 1. User is logs into the dashboard page |
| Alternate Flows | None |
| Notes | None |

|  |  |
| --- | --- |
| Use Case Name | Sign In |
| Description | Sign into the web application |
| Actors | Registered user |
| Pre-Conditions | 1. Be a registered user or approved registered member of a company |
| Basic Flow | 1. Enter an email address  2. Enter the password |
| Post Conditions | None |
| Alternate Flows | None |
| Notes | None |

|  |  |
| --- | --- |
| Use Case Name | Sign In Pet |
| Description | Sign in the pet |
| Actors | Registered user |
| Pre-Conditions | 1. Be a registered user or approved registered member of a company  2. Have a registered pet or approved pet of a company  3. Signed in already |
| Basic Flow | 1. Click on sign in “Pet’s Name”  2. Check the “Agree” w/ policy check box |
| Post Conditions | None |
| Alternate Flows | None |
| Notes | None |

|  |  |
| --- | --- |
| Use Case Name | Add Pet |
| Description | Add a new pet |
| Actors | Registered user |
| Pre-Conditions | 1. Be a registered user or approved registered member of a company  2. Have a registered pet or approved pet of a company  3. Signed in already |
| Basic Flow | 1. Click on sign in “Pet’s Name”  2. Check the “Agree” w/ policy check box |
| Post Conditions | None |
| Alternate Flows | None |
| Notes | None |

## 4.10 Assess Project Worth in terms of Cost vs. Value

### 4.10.1 Estimated Costs

Total Development Cost Esxtimate: $0.00

|  |  |  |
| --- | --- | --- |
| Operation Cost | | |
| Name | Description | Cost |
| Computer Hardware |  | $0.00 |
| Computer Software |  | $0.00 |
| Hosting |  | $0.00 |
| Books |  | $0.00 |
| Others |  | $0.00 |
|  | Total |  |

|  |  |  |
| --- | --- | --- |
| Personal Cost | | |
| Name | Description | Cost |
| Programmer |  | $0.00 |
| Database Administrator |  | $0.00 |
| System Analyst |  | $0.00 |
|  | Total |  |

### 4.10.2 Value

## 4.13 Preliminary Project Plan

### 4.13.1 Master Schedule

### 4.13.2 Resource Assignment

**Personnel:**

* 1 Programmer/DBA/System Analyst

## 4.14 Browser Compatibility

|  |  |
| --- | --- |
| Browser | Version |
| Chrome |  |
| Firefox |  |
| Internet Explorer |  |
| Opera |  |
| Safari |  |

## 4.15 Security Preventions

### 4.15.1 Overview

A variety of Open Web Application Security Project’s (OWASP) suggestions will be applied.

### 4.15.2 Information Gathering

Because I’m being hosting by a commercial company, it simple for someone to navigate the different services offered by the company and determine the sort of system I’m running on.

### 4.15.3 Business Logic, Authentication and Authorization

### 4.15.4 Session Management

### 4.15.5 Data Validation

### 4.15.6 Denial of Service

My system is vulnerable to Denial of Service.

### 4.15.8 Ajax

# 5 Design

## 5.1 Use Case Diagram

## 5.2 Context Dataflow Diagram

## 5.3 Entity Relationship Diagram

## 5.4 Class Diagram

## 5.5 Dataflow Diagram

## 5.6 Data Structured Diagram

## 5.7 Activity Diagram

## 5.8 Conceptual Website Diagram

## 6 Database Stored Procedures

# 7 Screenshots