SOFTWARE REQUIREMENTS SPECIFICATION

For

PET ADOPTION SYSTEM

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1. Introduction

1.1.Purpose

The main purpose of this document is to illustrate the project pet adoption system. The purpose of this project is to create a informative interface that has adoptee and adopter's data.This document gives a clear outline design of the project and specifies the hardware and software requirements of the project. This document includes hardware and software specification, UML diagram , schema and the ER diagram of the project.

1.2 Scope of Development Project

Pet adoption system enables the International animal welfare association to take survey on permanent sheltering of animals and to check the medical and psychological status of adoptee globally every year. The data of tracking chip number in animals are used to locate the lost animals that are adopted. Pet adoption system stores and maintains the data of animal(adoptee) and the person who adopts the animal(adopter) inorder to easily access the information about adoptee and adopter.

Pet adoption system enables to take survey on how humans are affectionate toward pet animals and the bond between humans and pets.it is also used to find the information of the adopter who lost their pets. Pet adoption system also has the data of the adoptee so that an lost pet animal can be identified with the data stored in the database.

The language used for developing the project is Java as it is quite advantageous than other languages in terms of performance, tools available, cross platform compatibility, libraries and development process.

USE CASE DIAGRAM :-

1.1References

Books

- Software Requirements and Specifications: A Lexicon of Practice, Principles and Prejudices (ACM Press) by Michael Jackson
- Software Requirements (Microsoft) Second Edition By Karl E. Wiegers
- Software Engineering: A Practitioner's Approach Fifth Edition By Roger S. Pressman

2. Overall Descriptions

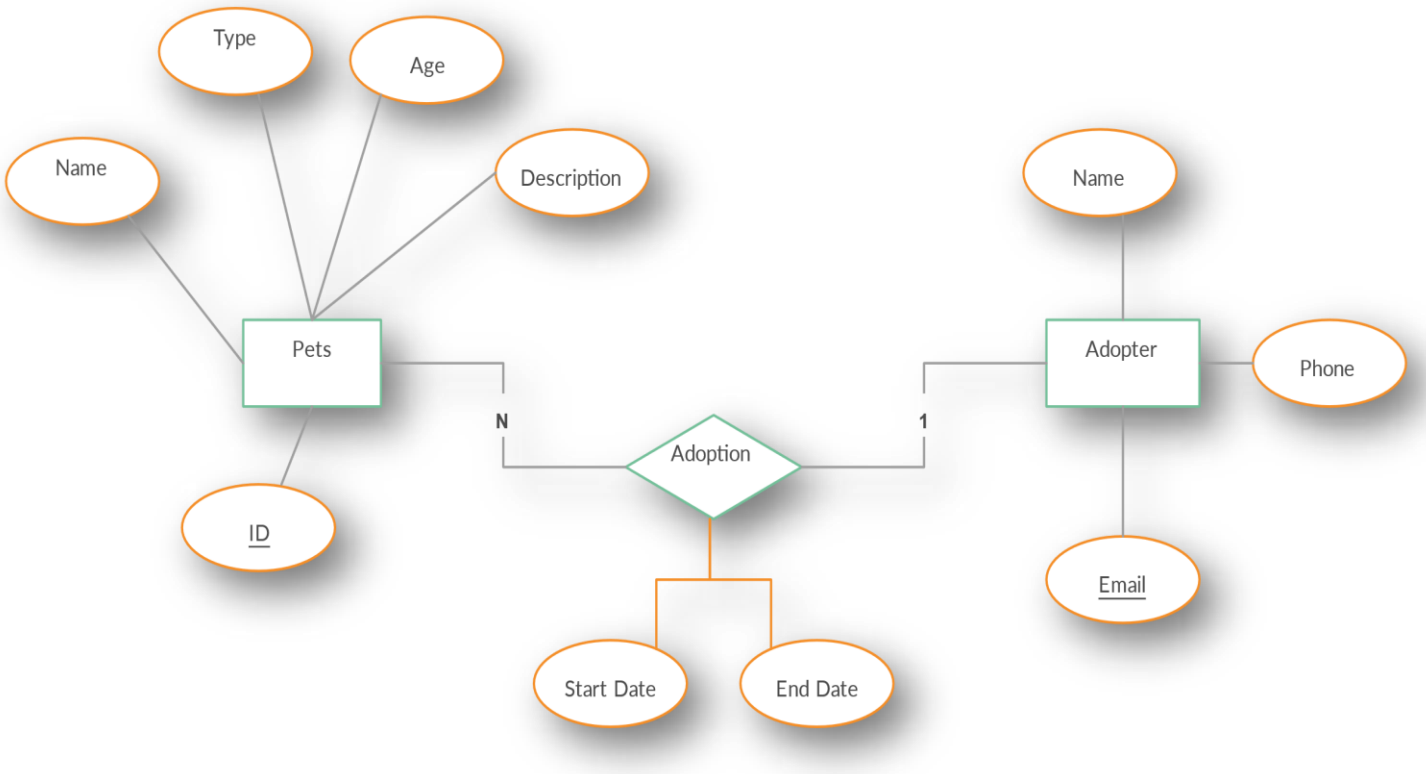
2.1 Product Perspective

Use Case Diagram of Library Management System

This is a broad level diagram of the project showing a basic overview. The users can be either adopter or association. This System will provide a search functionality to facilitate the search of resources.

ER DIAGRAM :-

Entity Relationship Diagram of Pet adoption system



The pet adoption provides real time information about the animal adopted in the date and the adopter information. The main purpose of this project is to store the adoptee and adopter information in a database for future use. This software is capable of managing adopter and adoptee details, Generating various Reports for Record-Keeping according to end user requirement. The Association will act as the administrator to control and manage adopter and adoptee details . The medical status of adoptee is uploaded in the adoption database every 3 months. The adoptee and adopter's details can be fetched by the association from the database as and when required.

2.1 User Classes and Characteristics:-

The system provides different types of services based on the type of users. The association will be acting as the controller and he will have all the privileges of an administrator. The member can be either a adopter or member of the association who will be accessing the adoption database.

2.2 Operating Environment:-

The product will be operating in windows environment. The pet adoption System is a website and shall operate in all famous browsers, for a model we are taking Microsoft Internet Explorer,Google Chrome,and Mozilla Firefox.Also it will be compatible with the IE 6.0. Most of the features will be compatible with the Mozilla Firefox & Opera 7.0 or higher version.

2.3 Assumptions and Dependencies:-

The assumptions are:-

- The coding should be error free
- The system should be user-friendly so that it is easy to use for the users
- The information of aadopter and the adoptee must be stored in a database that is accessible by the website
- The system should have more storage capacity and provide fast access to the database
- The system should provide search facility and support quick transactions
- The pet adoption System is running 24 hours a day

2.4 User Diagram:-

The dependencies are:-

- The specific hardware and software due to which the product will be run
- On the basis of listing requirements and specification the project will be developed andrun
- The end users (association) should have proper understanding of the product
- The system should have the general report stored
- The information of all the adopters must be stored in a database that is accessible by the pet adoption System
- Any update regarding the adoptee and adopter from the association is to be recorded to the database and thedata entered should be correct

2.5 Requirements:-

Software Configuration:-

This software package is developed using java as front end which is supported by sun microsystem.
Sql: mysql
Os:windows10
IDE: Intelij IDEA community

Basic Hardware Configuration:-
Processor: Intel core i3 10^{th} Gen
Hard Disk: 512GB
RAM: 4GB or more

2.6 Data Requirement:-

The inputs consist of the query to the database and the output consists of the solutions forthe query. The output also includes the user receiving the details of their accounts. In this project the inputs will be the queries as fired by the users like create an new adoptee and adopter details, searching information about adoptee and its details. Now the output will be visible when the user requests the server to get details of the adoptee.

3. External Interface Requirment:-

3.1 GUI

The software provides good graphical interface for the user and the administrator can operate onthe system, performing the required task such as create, update, viewing the details of the book.

- It allows user to view quick reports like Book Issued/Returned in between particular time.
- It provides stock verification and search facility based on different criteria.
- The user interface must be customizable by the administrator

- All the modules provided with the software must fit into this graphical user interface andaccomplish to the standard defined

The design should be simple and all the different interfaces should follow a standard template

- The user interface should be able to interact with the user management module and a partof the interface must be dedicated to the login/logout module

4 .System Features :-

The users of the system should be provided the surety that their account is secure. This ispossible by providing:-

- User authentication and validation of members using their unique member ID
- Proper accountability which includes not allowing a member to see other member's account. Only administrator will see and manage all the adoptee information.

5. Other Non-Functional Requirements:-

a. Performance Requirement:-

The proposed system that we are going to develop will be used as the Chief performance system within the different campuses of the university which interacts with the university staff and students. Therefore, it is expected that the database would perform functionally all the requirements that are specified by the university.

i. The performance of the system should be fast and accurate
ii. Pet adoption System shall handle expected and non-expected errors in ways that prevent loss in information and long downtime period. Thus it should have inbuilt error testing to identify invalid username/password
iii. The system should be able to handle large amount of data. Thus it should accommodate high number of adoptee and adopters without any fault

b. Safety Requirements:-

The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup so that the database is not lost. Proper UPS/inverter facility should be there in case of power supply failure.

c. Security Requirement:-

i. System will use secured database
ii. Normal users can just read information but they cannot edit or modify anything exceptttheir personal and some other information.
iii. System will have different types of users and every user has access constraints
iv. Proper user authentication should be provided
v. No one should be able to hack users' password
vi. There should be separate accounts for admin and members such that no member canaccess the database and only admin has the rights to update the

database.

d. Requirement attributes

i. There may be multiple admins creating the project, all of them will have the right tocreate changes to the system. But the members or other users cannot do changes
ii. The project should be open source
iii. The Quality of the database is maintained in such a way so that it can be very userfriendly to all the users of the database
iv. The user be able to easily download and install the system

e. Business Rules

A business rule is anything that captures and implements business policies and practices. A rule can enforce business policy, make a decision, or infer new data from existing data.This includes the rules and regulations that the System users should abide by. This includes the cost of the project and the discount offers provided. The users should avoid illegal rules and protocols. Neither admin nor member should cross the rules and regulations.

f. User Requirement

The users of the system are members of the association who act as administrator to maintain the system. The members are assumed to have basic knowledge of the computers and internet browsing. The administrators of the system should have more knowledge of the internalsof the system and is able to rectify the small problems that may arise due to disk crashes, power failures and other catastrophes to maintain the system. The proper user interface, user manual, online help and the guide to install and maintain the system must be sufficient to educate the users on how to use the system without any problems.
The admin provides certain facilities to the users in the form of:-

i. Backup and Recovery
ii. Forgot Password
iii. Data migration i.e. whenever user registers for the first time then the data is stored in theserver
iv. Data replication i.e. if the data is lost in one branch, it is still stored with the server
v. Auto Recovery i.e. frequently auto saving the information
vi. Maintaining files i.e. File Organization
vii. The server must be maintained regularly and it has to be updated from time to time

6. Other Requirements

a. Data and Category Requirement

There are two categories of users namely adopter and the association. Depending upon the category of user the access rights are decided. It means if the user is an administrator then he can be able to modify the data, delete, append etc. All other users except theassociation only have the rights to retrieve the information about database. Similarly there will be different categories of animals available. According to the categories of animals their relevant data should be displayed. The categories and the data related to each category should be coded in the particular format.

Glossary

The following are the list of conventions and acronyms used in this document and the project as well:

i. Administrator: A login id representing a user with user administration privileges to thesoftware
ii. User: A general login id assigned to most users
iii. Client: Intended users for the software
iv. SQL: Structured Query Language; used to retrieve information from a database
v. SQL Server: A server used to store data in an organized format
vi. Layer: Represents a section of the project
vii. User Interface Layer: The section of the assignment referring to what the user interactswith directly
viii. Application Logic Layer: The section of the assignment referring to the Web Server. Thisis where all computations are completed
ix. Data Storage Layer: The section of the assignment referring to where all data is recorded
x. Use Case: A broad level diagram of the project showing a basic overview
xi. Class diagram: It is a type of static structure diagram that describes the structure of a system by showing the system's cases, their attributes, and the relationships between the classes
xii. Interface: Something used to communicate across different mediums
xiii. Unique Key: Used to differentiate entries in a database

Class Diagram:-

A class is an abstract, user-defined description of a type of data. It identifies the attributes of the data and the operations that can be performed on instances (i.e. objects) of the data. A class of data has a name, a set of attributes that describes its characteristics, and a set of operations that can be performed on the objects of that class. The classes' structure and their relationships to each other frozen in time represent the static model.

In this project there are certain main classes Which related to other classes required for their working. There are different kinds ofrelationships between the classes as shown in the diagram like normal association, aggregation, and generalization. The relationships are depicted using a role name and multiplicities. Here and are the most important classes which are related to other classes.