Monitoring And Alerting In A Domain Name System

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Batch 51

Overview:

To create a web application that holds a domain name registry service along with an alerting system that identifies the expiry date of domains i.e whether or not a particular/suggested domain name is in use.

Modules:

- **User Administration**: This module allows an admin to oversee/monitor the details of the entire site. He/she has the ability to select, add, delete, modify and correct errors for both the website and user data.

- **User Registration**: This module will allow users to register via the site. A site visitor is a user and he/she has the access to search a domain(s) and purchase it from the client (openSRS). However, the domain should include an expiry period. This period can be informed to the user via mail.

- **User Verification via Email**: For security purposes, an email can be sent to the user on confirming the authenticity.

- **Registrar API**: Over here, by integrating an API into our project, we're able to check the domain availability.

- **Domain renewal via auto mail alert**: Admin will inform the user via mail on the domain renewal before the expiration period/day.

- **Report**: A report will be created in the database regarding the expiry of domains. These expired domains are updated daily as well.

Design of the site:

1) Login page:

The page will comprise of the website logo along with the buttons needed for logging and signing up. By clicking on these buttons, a separate page or modal will be initiated. These will be done according to the respective button cases.

---Sign up modal/page: This page will have the following fields in order for the user to sign up :

- first_name: User should enter his/her firstname and it's mandatory to be completely in an alphabetic type.

- last_name: User should enter his/her last name. It should validate only an alphabetic type with no other symbols and numbers just like the first_name field.

- Email: This allows users to enter their email address. Email can include an alphanumeric type however it must contain the 'at' or '@' symbol.

- Password: A field to input the password. Passwords are to be at least 8 characters in terms of length and can contain special characters. The password can be an alphanumeric datatype.

- Captcha can be used in order to avoid robots invading the website.

- A button for signing up.

- The login modal can implement social media link integration wherein users have the opportunity to login with their twitter, facebook or gmail account. In case if users forget their passwords, there is a provision to reset the password.

---**The login modal will have the following textboxes and the login button:**

- Username: User can enter his/her username in this field. The username's datatype can be alphanumeric.

- Password: User enters the password here. Passwords are to alphanumeric, should be at least 8 characters in length and can contain special characters.

- The login modal can implement social media link integration wherein users have the opportunity to login with their twitter, facebook or gmail account. In case if users forget their passwords, there is a provision to reset the password.

2) Admin page:

- The admin page holds sensitive and important data such as the expiry dates of the domain, the status of a current user and the ownership details.

- The admin will hold access to all the details of the customers.

- The entire Email log and email alert system for domain renewal will also be placed within the admin page.

- Only admin has the complete access to delete an owner or even edit the current status of the domain.

3) Landing page (Home page):

- The home page will contain the company logo, a few icons such as About, Contact. There'll be text related to web hosting and a few images for aesthetic appeal.

- A search bar will be provided in order to search for domain names.

- Additional information regarding the company/domain searching/web hosting can be provided.

- Home hyperlink will redirect the user to the home page, itself.

- The "About" hyperlink, which sits in the navigation bar, can direct the user to an informative page.

- The "Contact us" hyperlink, which sits in the navigation bar, will redirect the user to a page which contains appropriate contact details.

4) Search page:

- The search page will redirect the user to a page which contains the search results.

- A filter option can be given here, wherein, allows the user to either view all TLD (Top Level Domain) extensions to a domain or just a particular one eg: '.com', '.org' etc.
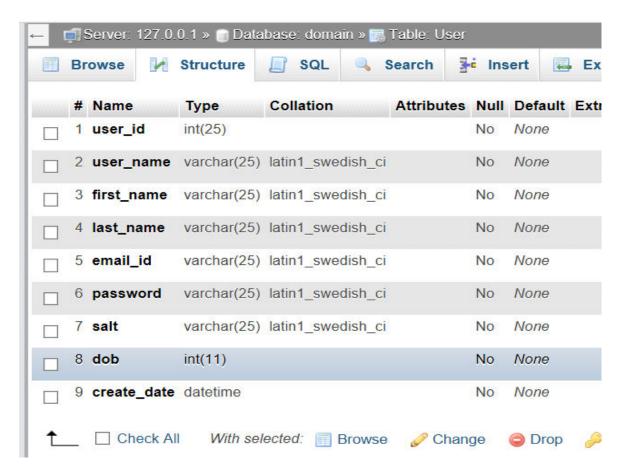
5) About page:

- This page will provide information related to the web application and its services. (In this case, it's only searching for domains and checking its availability.)
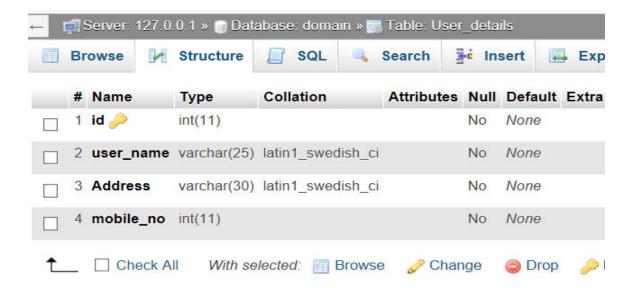
6) Contact page:

- This page will contain important contact details of the site owner in order to get in touch and inquire more on the details of the service being provided. Contact details can include: phone number, email-address, fax number etc.
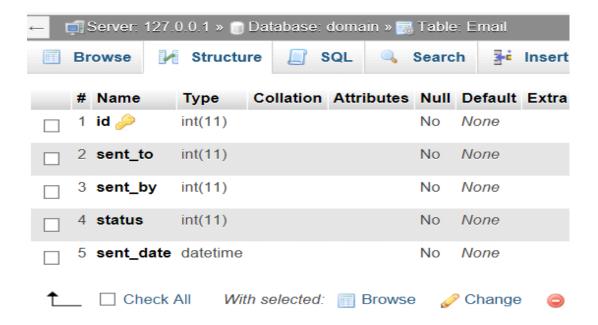
Database Design

User

User Details

Domain

Email

Server: 127.0.0.1 » Database: domain » Table: Email

		#	Name	Type	Collation	Attributes	Null	Default	Extra
	☐	1	id 🔑	int(11)			No	None	
	☐	2	sent_to	int(11)			No	None	
	☐	3	sent_by	int(11)			No	None	
	☐	4	status	int(11)			No	None	
	☐	5	sent_date	datetime			No	None	

☐ Check All   With selected: 📋 Browse   🖊 Change   ⊖

SMS

Server: 127.0.0.1 » Database: domain » Table: sms

		#	Name	Type	Collation	Attributes	Null	Default	Extra	Ac
	☐	1	id 🔑	int(11)			No	None		🖊
	☐	2	sent_to	int(11)			No	None		🖊
	☐	3	sent_by	int(11)			No	None		🖊
	☐	4	status	int(11)			No	None		🖊
	☐	5	sent_date	datetime			No	None		🖊

☐ Check All   With selected: 📋 Browse   🖊 Change   ⊖ Drop

1. User

Field Name	Data Type	Constraints
User_id	INT	Primary Key
User_name	Varchar(25)	
First_name	Varchar(25)	
Last_name	Varchar(25)	
E-mail	Varchar(25)	
Password	Varchar(25)	
Salt	Varchar(25)	
Status	Varchar(25)	

2. User_Detials

Field Name	Data type	Constraints
Id	INT	Primary
User_name	Varchar(25)	
Address	Varchar(25)	
Phone no.	INT	
Dob	Date	

3. Domain_Detials

Field Name	Data type	Constraints
Domin_id	INT	Primary
Domin_name	Varchar(25)	
Begin_date	DateTime	
End_date	DateTime	
Reg_date	DatTime	

4. Email

Field Name	Data type	Constraints
User_id	INT	Primary
Sent_to	INT	
Sent_by	INT	
Sent_date	DateTime	
Status	DateTime	

5. Curent_Domain

Field Name	Data type	Constraints
Id	INT	Primary
Domain_name	Varchar(25)	
Domain_id	Varchar(25)	

6. Expired Domain

Field Name	Data type	Constraints
Id	INT	Primary
Domain_name	Varchar(25)	
Domain_id	Varchar(25)	