TELEPHONE DIRECTORY
(Technical Guide)

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Features

Our application has been designed to meet all the expectations of the user-

- Searchable databases - user, admin and plans database that can be searched by the admin.
- Browse and Manage Plans - users can browse and admin can manage
- Login Services - for both admin and users
- Manage users and Pending Approval for admin - to edit or delete entries or approve the recently added users.
- Account summary - shows the user their previous plans

- Wallet - shows the user current wallet balance from which recharge can be done.

Architectural Layout

Login Form

Connected to the user_data database using Mysql connection string. As soon as the application is loaded, user is prompted for a username, password and captcha. There is a circle in the top right that indicates that attempting to connect to database has failed or succeeded by its color.

Buttons:

- Test : attempts to connect to the database and if successful, changes the circle to green color.
- Login : matches the username and password to a possible UID and invokes the user homepage form
- Signup : Used to create a new account.

Signup Forms (3)

Following Fields are to be entered in creating a new account: Name, Email, Phone, ISP, Gender, Address, Occupation, Other info, Username, Password, Confirm password. The only unique field of the user is the username. Thus, we check if the current username is available for the taking whenever text change is detected. This adds the user to user_data database and takes the user back to the login page.

Buttons:

- The previous buttons and the next buttons serve to invoke the login form and the next signup forms.
- Another button is shown when password and confirm match.

History Form

Following are the contents of this form:
- **History** : This is a windows form used to show history.

- **Button1** : The user can go back to his home page by clicking this.

- **Label2** : The number of transactions are written in this. A query is made to the database on form load and the required number of transactions are displayed in this label

- **Datagridview1** : The datagridview contains the data about the transactions. On form load , a query is made to draw the data from the history table under user_data.

Browse plan

Following are the contents of this form:
- **Button1** : This takes the user to his homepage

- **Button2 and button4** : This initiates the transaction for the dataplan or talktime and opens a transaction page.

- **Button3** : This clears all the data from the textboxes.

- **Timer1** : The timer tick is used to constantly change the backcolor of the two buy buttons.

- **Datagridview** : The datagridview is used to draw data from the plan database and is used to display it in the grid.

- **Textboxes** : They are used to capture the data ISP (Internet Service Provider), talktime ISP and their respective prices on rowenter event of the data grid view.

- **Hidden labels** : The form contains three hidden labels to carry some user related information into transaction forms so that number of queries to database are minimized.

Confirmation form

This contains three buttons:

- **Yes** : On this button click the price of the plan is deducted from the user balance and the transaction is initiated only if sufficient balance is present. Otherwise, an error message pops up. User balance is updated by an update query to the database. The user is logged out after successful transaction by application-restart function.

- **No** : No database query is performed and the user is redirected to homepage by appropriate show and hide functions

- **View current plan** : This button click event closes the confirmation page and redirects user to his homepage by appropriate call to show and hide functions.

Recharge form

The recharge button takes the users to the recharge form, where there are the following :

- **Button2** : On clicking this button the user balance is incremented and updated into the database while updating the appropriate labels on the forms .
- **Button1** : This button takes the user to the user homepage
- **Combobox1** : This read only combobox contains a list of amounts that a user can recharge his account with. The amount is added to the user balance field in the database.
- **Current Balance** : This label shows the available balance in the user wallet. It is updated by using the previous values incremented by the new balance on recharge button.

Admin Dashboard form

Once the admin logs into the application, he will be redirected to the admin dashboard as shown below.

- **Search** : The admin dashboard has a table of approved users, the admin can simply search any user by its name and only the suitable users will be shown in the table.
- **Pending Approvals** : This feature helps the admin to approve the pending users, as the name suggests. Further features are elaborated below.
- **Manage Users** : This feature helps the admin to edit and delete the users from the database. Further features are elaborated below.
- **Manage Plans** : The admin is responsible for maintaining the plans available for the user, and this feature helps for the same. Further features are elaborated below.
- **Logout** : It will redirect the admin back to the login page.

- **Load** : As the name suggests, it refreshes the form, so that you can check the latest changes in the users database (made by another admin/user).

Pending Approval form

Once the admin clicks on pending approvals button on admin dashboard, he will be redirected to the pending approval form as shown below. On selecting any of the user from the table, all the details of the user will be displayed on the left side of the form as shown below. Admin can approve, delete and clear (the user will still remain in the database) the selected user using approve, delete and clear button respectively. Logout button will redirect the admin back to the login page.

Manage Users form:

- Once the admin clicks on manage users button on admin dashboard, he will be redirected to the manage user form as shown below.
- Admin can select the user from the dropdown menu and the details of the selected user will be shown in respective fields.
- Admin can then change any of the user's fields.
- Admin can update, delete and clear (the user will still remain in the database) the selected user using update, delete and clear button respectively.
- Logout button will redirect the user back to the login page.

Manage Plans form:

- Once the admin clicks on manage plans button on admin dashboard, he will be redirected to the manage plan form as shown below.

- The admin can fill in all the details of the new plan and click on add plan button to add it to the plan's table.
- On selecting any of the plan from the table, all the details of the plan will be displayed on the left side of the form as shown below.
- Admin can update, delete and clear (the plan will still remain in the database) the selected plan using update, delete and clear button respectively.
- Logout button will redirect the admin back to the login page.

Databases

We have used mysql database in the whole program.We used a database called user_data with four tables

1) **User Table** - We are storing all kind of user information in this table.

- It has column named as UID, Name, Email, Phone, Service Provider, Gender, Occupation, UserName, Password and Plan Ids.
- Each column stores the respective information as its name suggests.
- The data and talktime information are taken from the browse plan form, when the user purchases a plan.
- Once the user does signup, all the column are filled as per the values entered by the user, but user can update it anytime.
- Also, any of the admin can edit user table and delete any row (means a user) from a user table.

2) **History table -** This database contains user plan purchase history of all time.

- It has columns named as UID, Amount, Date and Time
- We have used foreign key in the ID column so that we can directly enter the purchase information of a user when he or purchase a plan.
  - We are saving date in the table using various queries

3) **Plan Table -** This table contain all the data and talktime plan information.

- It has columns Plan ID, Service Provider, Type, Price, Plan Details and Validity.
- Each column stores the respective information as its name suggests.
- User can purchase these plan in the browse plan from data grid view.
- Any admin can create a new data/talktime plan and can also delete an unused plan. But in case of used plan, admin can't delete it and will get a warning message.

4) **Admin Table** - This table stores the details of all admins.

- It has columns named
- Each column stores the respective information as its name suggests.

Common Server

We are using a common server-facility in our database, in which one of the admin's PC serves as a host (i.e. has all the database information). This common server allows to login and sign up a user and admin from any system on the same network. The common network is maintain by using host's IP address as database server IP in all the computers including the host.

Contact Us

We have tried to explain all the technicalities of our 'Telephone Directory' to best of our capabilities. But if you still have some queries regarding the same, feel free to contact anyone of us at:

- Sparsh Sinha : spars170103066@iitg.ac.in
- Umang : umang170101074@iitg.ac.in
- Partha Pratim Malakar : parth170101043@iitg.ac.in
- Devaishi Tiwari : devai170101021@iitg.ac.in

- Sayak Dutta : sayak170101061@iitg.ac.in
- Ajinkya Shivashankar : ajink170101004@iitg.ac.in

HOPE YOU FIND IT USEFUL!