A Project Report

On

"Web solution for Creating and Managing the User account using PHP"

Submitted for the partial fulfilment of the requirement

for the award of the Degree of

B. Tech

In

Computer Science



Compiled by:

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Under the guidance of:

Mr. D. K. Dhruw General Manager(Prog.) National Database, ONGC, Dehradun



DECLARATION

I hereby declare that the work presented in this project report entitled "Web solution for creating and managing the user account using PHP" in partial fulfilment of requirement for the Award of Degree of Bachelor of Technology, submitted in the Department of Computer Science, SRM Institute of Science and Technology is an authentic record of my work carried out during the Industrial Training from 15thJuly 2023 to 15th August 2023, under the guidance of Mr. D.K. Dhruw, General Manager (PROG.), National Database, ONGC, Dehradun.

(Arundhati Shukla)



CERTIFICATE

This is to certify that Ms. Arundhati Shukla, a student of B. Tech (C.S.E) of SRM Institute of Science and Technology has done her Industrial Training at EPINET, KDMIPE Campus, ONGC, Dehradun. The project work entitled "Web solution for creating and managing the user account using PHP" embodies the original work done by Ms. Arundhati Shukla during her one-month Industrial Training period from 15th July 2023 to 15th August 2023.

Mr. D.K. Dhruw

General Manager (PROG.)

National Database

ONGC, Dehradun

OleOmya



ACKNOWLEDGEMENT

My internship with Oil and Natural Gas Corporation Ltd. was a journey of profound learning and immense professional growth. I consider myself exceptionally fortunate to have been granted the privilege to be a part of such an extraordinary opportunity, which has undeniably left an indelible mark on my personal and professional journey.

I am deeply grateful to Mr. D. K. Dhruw, GM (Programming) at National Database, ONGC, Dehradun, who graciously undertook the role of my mentor during this transformative phase. His insightful advice and unwavering support illuminated my path throughout this immersive journey.

This internship marks a crucial step in my career journey, equipping me with invaluable skills and knowledge of immense potential. I'm wholeheartedly committed to applying these assets effectively and am determined to realize my career aspirations through continuous growth.

I eagerly anticipate ongoing collaboration with the exceptional individuals I've met, believing in our ability to achieve remarkable feats together. In conclusion, I'm profoundly grateful to my parents for their unwavering support, which has been my driving force throughout this endeavour.

Sincerely

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INTRODUCTION

ABOUT-ONGC

Oil and Natural Gas Corporation Limited (ONGC) is a major Indian multinational oil and gas company headquartered in Dehradun, Uttarakhand, India. Established in 1956, ONGC is a flagship organization under the Ministry of Petroleum and Natural Gas of the Government of India.

ONGC is engaged in the exploration, production, and refining of oil and gas, making it one of the largest publicly-traded oil and gas companies in India. The company's activities span the entire hydrocarbon value chain, from exploration to production, refining, and distribution. ONGC plays a vital role in ensuring the energy security of India by contributing significantly to the country's domestic oil and gas production.

HISTORY

Established in the late 1950s, the Oil and Natural Gas Corporation Limited (ONGC) has carved a storied history as a vital pillar of India's energy landscape. Born from the vision of post-independence self-sufficiency, ONGC was founded in 1955 to spearhead the exploration and production of indigenous oil and gas resources. Rapidly making its mark, ONGC achieved its first significant oil discovery in 1960 and extended its reach to offshore drilling, discovering the Bombay High oil field. The subsequent decades witnessed ONGC's evolution into a full-fledged corporation, marked by its forays into international ventures, adoption of advanced technologies, and integration of various oil-related entities. Amidst growing environmental awareness, ONGC embraced sustainable practices and ventured into renewable energy. Today, its journey stands as a testament to its enduring commitment to powering India's progress, innovating for a sustainable future, and maintaining a pivotal role in the nation's economic and energy security endeavors.

VISION AND MISION

VISION

To be global leader in integrated energy business through sustainable growth, knowledge excellence and exemplary governance practices.

MISSION

World Class

- Dedicated to excellence by leveraging competitive advantages in R&D and technology with involved people.
- Imbibe high standards of business ethics and organizational values.
- Abiding commitment to safety, health and environment to enrich quality of community life.

- Foster a culture of trust, openness and mutual concern to make working a stimulating and challenging experience for our people.
- Strive for customer delight through quality products and services.

Integrated In Energy Business

- Focus on domestic and international oil and gas exploration and production business opportunities.
- Provide value linkages in other sectors of energy business.
- Create growth opportunities and maximize shareholder value.

FRONTIERS OF TECHNOLOGY

- Seismic Excellence: ONGC excels in seismic data handling, using advanced acquisition, processing, and interpretation facilities.
- **Virtual Reality Prowess:** Featuring a world-ranking Virtual Reality Interpretation setup, ONGC is committed to immersive data analysis.
- **Global Partnerships:** Collaborations with major industry players like Transocean, Schlumberger, and more, emphasize ONGC's global impact.
- **International Reach:** Alliances with Petrobras, Norsk, ENI, and Shell highlight ONGC's significance in the global energy sector.
- Efficiency Emphasis: ONGC's extensive ERP implementation showcases its dedication to operational efficiency and effective management.

GLOBAL RANKING

- **Top Energy Company in India:** Oil and Natural Gas Corporation (ONGC) ranked as the best energy company in India in the prestigious Platts Top 250 Global Energy Company Rankings 2014.
- **Global Recognition:** ONGC improved its global ranking, securing the 21st position among global energy majors, and climbed to the 5th spot in the Asia/Pacific (APAC) region, up from 7th the previous year.
- Exploration and Production Leadership: ONGC maintained its 3rd position as a global Exploration and Production company, further solidifying its industry leadership.
- Fast-Lane Initiatives: ONGC's upcoming initiatives and accelerated production plans are set to contribute to even greater milestones in the future.
- **BT 500 Ranking:** ONGC's recent rise to Number 2 among Indian corporate giants in the BT 500 ranking adds to its string of achievements.

- Asian Influence: ONGC's ranking at 5 in the APAC region reflects the growing influence of Asian companies in the global energy sector.
- Indian Companies in the List: Thirteen Indian companies, including Reliance Industries Ltd, Indian Oil Corporation, and NTPC, are featured in the Top 250 Global Energy Company list by Platts.
- **Performance Metrics:** The Platts survey evaluates companies based on key financial metrics such as asset worth, revenues, profits, and return on invested capital. All companies in the list have assets exceeding US \$5 billion.

About EPINET - An Introduction

During past five decades of extensive hydrocarbon exploration over a vast geographical area covering almost all the sedimentary basins in India, ONGC has acquired enormous volume of geological, geophysical and engineering data. In line with the global upstream oil majors, underlining the importance of computerized data archival, ONGC also initiated data management activities way back in 1976. A well information system on IBM-370 at KDMIPE was developed "in-house". The data management activities got a boost when VAX 3400 computer system along with RDBMS software was commissioned at KDMIPE in 1991. Furthermore, other isolated systems also emerged at different work centers of ONGC to cater to the data management needs. These in-house database systems were developed using different types of formats and platforms. Eventually, in-house database systems were felt inadequate and required to be replaced with system matching international standards in the industry. ONGC, in late 1990's decided to implement the recent advancements of the web based E&P information technology into its upcoming data management systems. The new implementation plan aimed to make available all information pertaining to an area, including the work previously done by archiving historical analysis, to business users.

In the aforesaid background, ONGC decided to implement Exploration and Production Information Network (EPINET) project comprising of people, processes, tools, data and a hierarchy of corporate, regional and working project database in a phased manner. The project was intended to establish an organization wide dynamic, "Virtual" database having GIS features and Web 2 capabilities, to interconnect different data stores located at geographically diversified locations. Having taken shape according to the vision, intention and need of various work-centers of ONGC, today, EPINET is ONGC's full-fledged technical data repository housing all technical data generated throughout ONGC. This includes WCRs, Log data, Seismic data, Geology Data, Lab data, Drilling Data and Production Data.

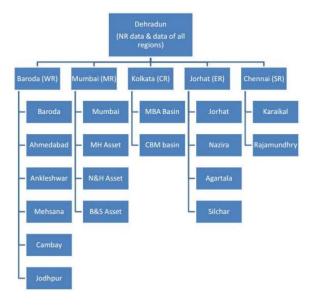
SOFTWARE: FINDER

Until 2013, EPINET housed all its data using software called "Finder". Finder is a product of Schlumberger Information Systems (SIS). Finder uses Oracle Database and is built to run on the old Sun Operating system. A Sun server is used to host the Finder software. Below is a screenshot of Finder user interface:



THREE-TIER SETUP

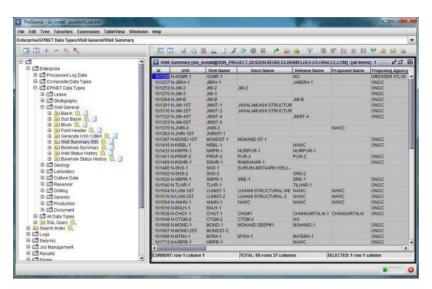
When Finder was in use, EPINET was organized in a three-tier model with secondary and tertiary level data-centers spread across each basin. The following Diagram shows the old three-tier setup:



Three-tier setup of EPINET under Finder

ProSource

After 2013, all data in EPINET was managed through a software package called ProSource". ProSource has been in full use only since December 2013. It is also a product of Schlumberger Information Systems (SIS). ProSource uses Oracle Database to manage data and is built on the seabed Data Model. The User Interface of ProSource is webbased and is built on Java. ProSource runs on Red Hat Enterprise Linux 5.5. A product of Oracle called "Golden Gate" is used to replicate data from all centers into the database at Dehradun Corporate center. Migration from Finder to the new ProSource system took places in several phases, covering one region at a time. The final phase completed in December 2013 with the migration of data at Corporate EPINET center, Dehradun. Below is a screenshot of the new ProSource interface:

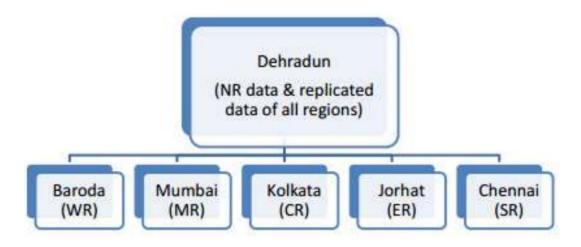


DATABASE CENTERS & DATA FLOW

Under ProSource, EPINET was organized into six data centers in a two-tier model with the corporate centre housed at KDMIPE, Dehradun. The data centers and the regions covered are as follows:

Data Center Location	Basin / Region covered	Region
Dehradun	Frontier Basin	Northern Region (NR)
Baroda	Western Onshore Basin	Western Region (WR)
Mumbai	Western Offshore	Mumbai Region (MR)
Kolkata	MBA Basin	Central Region (CR)
Jorhat	A&AA Basin	Eastern Region (ER)
Chennai	KG-PG Basin	Southern Region (SR)

Data from respective regions are populated and maintained at the respective centers. Data from all centers are centrally replicated at the Corporate EPINET Center, Dehradun via Golden Gate, a plugin of Oracle. The following diagram shows the setup:



Two-tier setup of EPINET under ProSource

DEVELOPMENT OF IN-HOUSE DATA MANAGEMENT SOFTWARE

During November 2012, it was decided that efforts would be made to maintain EPINET system using in-house talent. Eventually, in-house maintenance began in October 2014, saving ₹12 Crore annually since then. Leveraging in-house talent across all EPINET sites and collaborating over a period of 2 years, the Beta version of EPINET Portal & Loaders were ready and was rolled out exclusively for in-house testing by EPINET members, at the Annual Coordination Meeting held at EPINET Chennai. After extensive testing and improvements, in July 2017, the tested and improved version of In-house EPINET Software is rolled out across ONGC by Director (Exploration), Sh. A K Dwivedi via video-conferencing and was jointly

witnessed by various offices across ONGC joining the live video conference. This In-house software is currently in use, with new features being added consistently.



PROJECT

Web solution for creating and managing the user account using PHP

ABSTRACT:

This project, "Web solution for creating and managing the user account using PHP," embodies the digital transformation of user account creation within Oil and Natural Gas Corporation Limited (ONGC). By transitioning from manual hardcopy forms to an intuitive web application, the project simplifies the process. Users can submit account creation requests online, while automated approval streamlines the process. This innovation not only improves efficiency but also symbolizes ONGC's embrace of digital advancement, positioning it as a pioneer in user account management.

OBJECTIVE:

The project aims to transition EPINET user account creation to a digital platform, improving efficiency, user convenience, and data security. Automated approval and real-time tracking enhance transparency, positioning ONGC as an innovation leader. Sustainability is addressed by reducing paper usage. The ultimate goal is to provide employees with an efficient and user-friendly way to manage EPINET user accounts.

SCOPE:

The project scope involves creating a user-friendly web platform for EPINET user account creation requests. This encompasses automated approval workflows, real-time tracking, data security, intuitive user interface design, scalability considerations, user training, testing, implementation planning, and ongoing support. The aim is to streamline account management, enhance security, and ensure efficient user experience.

METHODOLOGY

1. Requirement Analysis:

- Understand the existing manual process of EPINET user account creation and approval.
- Identify user roles: Admin and Employee.
- Define functionalities: Login, request submission, approval/rejection, request history, status tracking, employee list, etc.

2. User Interface Development:

- Design and develop a login/sign-up page for users.
- Create separate interfaces for Admin and Employee with appropriate functionalities.

3. Authentication and Authorization:

- Implement user authentication for secure access.
- Set up role-based authorization to restrict functionalities based on user roles.

4. Employee Functionality:

- Develop a form for employees to submit account creation requests.
- Design a page displaying request history and status tracking for employees.

5. Admin Functionality:

- Create a dashboard for Admin with options to view employee list, pending requests, and history.
- Implement functionality for Admin to review, accept, or reject requests.

6. Automated Workflow:

• Design an automated workflow for request approval, triggering notifications to Admin and employees.

7. Real-time Tracking:

• Integrate a real-time tracking mechanism to display request status updates as they progress.

8. Data Security and Storage:

- Implement encryption and secure data handling during account creation and storage.
- Set up a database to store user accounts, requests, and approval history.

9. User Training and Documentation:

- Create user guides and instructions for both Admin and Employee users.
- Provide clear guidelines on how to use the platform effectively.

10. Testing and Quality Assurance:

• Conduct comprehensive testing of all functionalities to ensure smooth operation and eliminate bugs.

11. Scalability and Future Enhancements:

- Develop the application architecture considering scalability for potential future enhancements.
- Plan for incorporating additional features if needed in the future.

12. Implementation and Deployment:

• Roll out the web application within the ONGC network, ensuring seamless integration.

SOFTWARE REQUIREMENT

Project Name:	Web solution for creating and managing the user account using PHP
Language	PHP
Used:	
PHP version	5.6 or Newer
Database:	MySQL, VSCODE
Type:	Web Application

TECHNOLOGIES USED:

Front-end Design: HTML, CSS

HTML, the standard markup language, is essential for crafting web pages and applications. Together with CSS and JavaScript, it forms a vital trio of web technologies. Web browsers receive HTML documents and convert them into multimedia web pages, while CSS defines their presentation, encompassing layout, colors, and fonts. This separation of presentation and content, including structure and appearance cues, epitomizes the cornerstone technologies underpinning the dynamic World Wide Web.

Business logic: PHP

PHP, short for Hypertext Preprocessor, is a server-side scripting language widely used for web development and general-purpose programming. Initially "Personal Home Page," it now stands for "PHP: Hypertext Preprocessor." Created by Rasmus Lerdorf in 1994, PHP's interpreter processes code within web servers or as CGI executables. It seamlessly integrates code outcomes, including images and data, into web pages. Additionally, it extends beyond the web environment, allowing command-line interface (CLI) use for standalone applications.

Database: MySQL

MySQL is an open source relational database management system. For proprietary use, several paid editions are available, and offer additional functionality. In this project MySQL has been used to store, update, retrieve and delete related to user's data and other additional data about projects.

Web Server: Apache

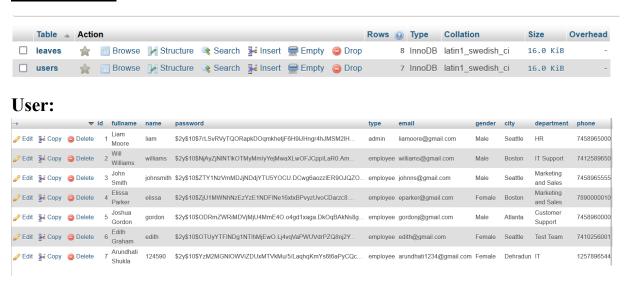
Apache HTTP Server, commonly known as Apache, is a free and open-source web server compatible with various platforms. Governed by the Apache Software Foundation, it operates under Apache License 2.0. With a community of developers, Apache is versatile, working across platforms including Linux (92% usage), and has enhanced compatibility with Windows, OS/2, OpenVMS, and NetWare systems.

USER: admin and employee

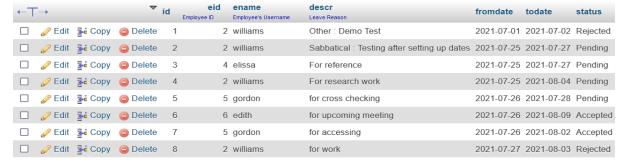
FUNCTIONALITIES: These functionalities collectively form the foundation of the web application, addressing the specific needs of both Admin and Employee users within the context of EPINET user account creation and management:

- Login and Authentication
- Request Submission
- Approval/Rejection Process
- Request History
- Status Tracking
- Employee List

DATABASE:



Requests:



SOURCE CODE:

DBconnect.php (Creating Database Connection):

Index.php

signup.php

```
function signup($fullname,$name,$email,$password,$phone,$repassword,$gender,$city,$dept,$type,$conn){
    $hashedPassword = encryption($password);

    $query = mysqli_query($conn,"INSERT INTO users(fullname, name, email, phone, password, gender, city, department, type) VALUES('$fr.
    $query1 = mysqli_query($conn,"SELECT id from users WHERE name='".$name."'");
    $eid = mysqli_fetch_assoc($query1);

if($query){

    echo 'Registration successfull!';

    $_$ESSION['sess_user'] = $name;
    $_$ESSION['sess_eid'] = $eid['id'];

    header("Location:leaveAplicationForm.php");
    exit;
}

else{
    echo "Query Error : " ."INSERT INTO users(fullname, name, email, phone, password, gender, city, department, type) VALUES('$fr.
    echo "Corn";
    echo "Query Error : " ."SELECT id from users WHERE name='".$name."" . "<br/>
    population of the property of the password of the pass
```

login function

Updateacceptedstatus.php

```
mupdateStatusAccept.php

veptine = conce("DBConnection.php");
    session_start();

if(lisset($_SESSION["sess_user"])){
    header("Location: index.php");
    }
    else{

    $_eid = $_GET['eid'];
    $_descr = $_GET['descr'];

    $add_to_db = mysqli_query($conn,"UPDATE leaves SET status='Accepted' WHERE eid='".$eid."' AND descr=''

    $_if($add_to_db){
        echo 'saved!!';
        header("Location: admin.php");
    }
    else{
        echo "Query Error : "."UPDATE leaves SET status='Accepted' WHERE eid='".$eid."' AND

        ini_set('display_errors', true);
    error_reporting(E_ALL);
}
```

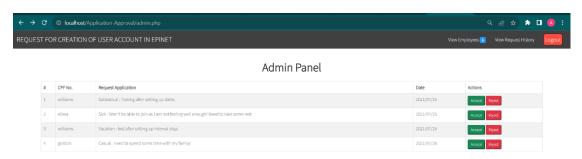
Updaterejectedstatus.php

OUTPUT (SCREENSHOT OF APPLICATION)

ADMIN LOGIN

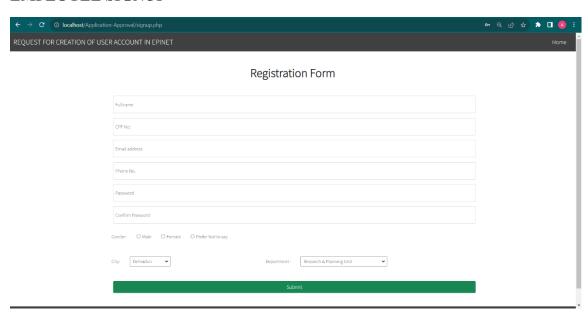


ADMIN PANEL

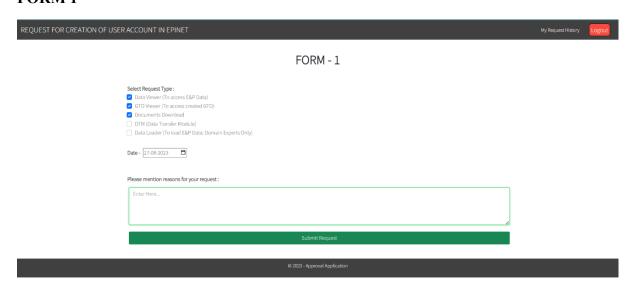


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EMPLOYEE SIGNUP



FORM 1



REQUEST HISTORY



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Rejected

EMPLOYEE LIST

8 williams

Casual: going on a vacation



Admin Panel - Registered Employees



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CONCLUSION

In conclusion, the project "Web solution for creating and managing the user account using PHP" represents a significant step forward in enhancing user access and administrative efficiency within Oil and Natural Gas Corporation Limited (ONGC). By seamlessly transitioning from traditional paper-based processes to a dynamic web application, the project has successfully streamlined the initiation, approval, and management of EPINET user accounts. The implementation of automated workflows, real-time tracking, and secure data handling underscores our commitment to modernizing administrative practices while prioritizing user convenience and information security. Through rigorous testing, meticulous design, and ongoing user support, the project aligns with ONGC's vision of embracing digital innovation for optimized operations. The collaborative efforts of the project team and the enthusiasm of ONGC employees have contributed to the successful realization of this endeavour. As we move forward, this project sets a precedent for embracing technology-driven transformations, positioning ONGC at the forefront of organizational efficiency and innovation.

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