## SAVEETHA SCHOOL OF ENGINEERING

**SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES CHENNAI-602105**

## INCOME TAX CALUCLATIONS CAPSTONE PROJECT REPORT

***Submitted in the partial fulfillment for the completion of the course***

## CSA4309 INTERNET PROGRAMMING FOR WEB SERVICES

**IN**

## COMPUTER SCIENCE AND ENGINEERING

**Submitted by**

## B.Nikhil vardhan (192211805)

**B.Dhanush**

**(192211526)**

## Under the Supervision of

## Ms.L.Reetha

**NOV 2024**

## DECLARATION

**We, Nikhilvardhan .B, Dhanush. B, students of Bachelor of Engineering in the Department of Computer Science and Engineering, Saveetha Institute of Medical and Technical Sciences, Saveetha School of Engineering, Chennai, hereby declare that the work presented in this Capstone Project Work entitled Income Tax Calculations is the outcome of our own bonafide work and is correct to the best of our knowledge and this work has been undertaken taking care of Engineering Ethics.**

## (Nikhilvardhan.B 192211805)

**(Dhanush.B 192211526)**

## Date:

**Place:**

## CERTIFICATE

**This is to certify that the project entitled “Income Tax Calculations” submitted by Shashank .Y, Karthik .Y has been carried out under my supervision. The project has been submitted as per the requirements in the current semester of**

## B.E. Computer Science and Engineering.

**Supervisor**

## Ms.L.Reetha

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## ABSTRACT

The Income Tax Calculation System is a user-friendly web application designed to simplify the process of determining tax liabilities for employees. It allows users to input financial details such as annual salary, bonuses, and deductions, and calculates the net taxable income and applicable taxes based on the latest government tax slabs. The system provides a detailed breakdown of the tax calculation, offering insights into total tax liability, net income after tax, and potential tax-saving strategies. Additionally, employees can generate and download tax reports for filing purposes, while administrators can update tax norms to ensure compliance with current regulations. This project aims to enhance accuracy, reduce effort, and improve the overall user experience in tax computation.

## INTRODUCTION

Income tax calculation is a critical aspect of financial management for employees, yet it is often a complex and time-consuming process. The intricacies involved in accounting for multiple income sources, such as salaries, bonuses, and investments, make it difficult for individuals to arrive at accurate results. Furthermore, understanding and applying deductions, exemptions, and government-prescribed tax slabs can be overwhelming without proper guidance. Manual calculations not only increase the risk of errors but also consume valuable time that could be spent more productively. These challenges underline the necessity for a streamlined, automated solution that ensures precision and ease in tax computation while reducing the burden on employees.

The Income Tax Calculation System is designed to simplify this process by providing an interactive platform for employees to input their financial details. The system calculates the net taxable income and determines the applicable tax liability based on predefined government tax slabs. It eliminates the need for manual intervention, reducing the likelihood of errors and saving significant time

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for users. The user-friendly interface ensures that both financial experts and laypersons can use the system effectively.

In addition to simplifying tax calculations for employees, the system offers robust administrative functionalities. Administrators can log in to a secure dashboard to update tax slabs, modify deduction rules, and define calculation norms according to the latest government policies. This feature ensures that the platform remains compliant with evolving tax regulations, enhancing its reliability and long-term usability. For instance, if the government revises the slab rates or increases the limits for specific deductions, the system can be swiftly updated to reflect these changes. By providing this level of flexibility and control, the platform becomes a comprehensive solution that meets the needs of both employees and administrators.

The project also emphasizes accessibility and convenience, catering to a wide range of users. Employees can log in using authenticated credentials, such as social media accounts or email IDs, ensuring a secure and seamless experience. The interface is designed to be intuitive, allowing users to navigate through the tax input and output sections effortlessly. Once the calculations are completed, users can view detailed tax breakdowns, download personalized reports, and use the insights to file their tax returns accurately. This accessibility, combined with real-time calculation capabilities and an emphasis on user-centric design, makes the Income Tax Calculation System an indispensable tool for modern tax management, providing value to both employees and administrators alike.

## PROJECT DESCRIPTION

The Income Tax Calculation System is a web-based platform developed to assist employees in managing their tax-related computations. This system is designed to automate the tax calculation process, eliminating the complexities associated with manual computations. Users can input financial details such as annual salary, bonuses, deductions, and exemptions, and the system calculates their net taxable income and applicable tax based on the latest government norms. By leveraging automation, the platform not only ensures accurate results but also significantly reduces the time and effort required for tax calculations, making it a valuable tool for individuals and organizations alike.

The project integrates a robust backend logic that adheres to government- prescribed tax slabs and deduction norms. For instance, the system considers

parameters like house rent allowance (HRA), standard deductions, pension contributions, and health insurance premiums when calculating the taxable income. Each parameter is processed according to predefined rules, ensuring compliance with the latest tax laws. The system also adapts to dynamic updates, allowing administrators to modify norms in real-time to reflect changes in tax policies. This adaptability ensures that users always receive accurate calculations based on current regulations.

The Income Tax Calculation System consists of two main modules: the **Admin Module** and the **Employee Module**. The Admin Module enables administrators to log in and manage the tax-related parameters, such as slab rates, deductions, and exemptions. They can also update input fields required from employees, ensuring that the system remains aligned with the latest guidelines. The Employee Module, on the other hand, provides employees with a user-friendly interface to input their financial details, view detailed tax calculations, and download personalized tax reports. By segregating functionalities into these modules, the system ensures streamlined and secure operations for both user groups.

## PROBLEM DESCRIPTION

The objective of this project is to design a simple software system for **Income Tax Calculation**, aimed at automating the computation process for both employees and administrators. Tax calculation is a critical yet complex task that involves multiple factors such as gross income, deductions, exemptions, and varying tax slabs. Manually performing these computations can lead to errors, inefficiencies, and inconsistencies. This software addresses these challenges by offering a streamlined, user-friendly solution that ensures accurate results while saving time and effort.

The software allows users to input key financial details such as annual salary, bonuses, House Rent Allowance (HRA), pension contributions, and health insurance premiums. Based on these inputs, the system calculates the net taxable income using predefined formulas and deductibles as per government norms. The program then computes the tax liability using updated slab rates, ensuring compliance with the latest regulations. Additionally, employees can access detailed tax breakdowns, net income after tax, and personalized tax- saving insights, enhancing their financial planning capabilities.

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For administrators, the software offers a dynamic interface to update tax slabs, deduction limits, and input fields as per changes in tax laws. This ensures the software remains compliant with evolving regulations. The program also generates downloadable reports for users, simplifying the filing process. By integrating modular functionalities, this system not only makes tax calculation accurate and efficient but also caters to future scalability and flexibility, making it a robust solution for tax management needs.

## TOOL DESCRIPTION USER INTERFACE

The Income Tax Calculation System is designed with a clean, intuitive, and user- friendly interface to ensure ease of use for all users. The layout is structured to guide employees and administrators step-by-step through the tax calculation process. Key interface elements include:

* **Login Page:** A secure authentication system allowing employees to log in using email credentials or social media accounts and admins to access privileged features.
* **Input Forms:** Simple and clearly labeled fields for entering details such as gross salary, bonuses, deductions, and exemptions.
* **Calculation Results:** A dashboard displaying detailed tax calculations, including taxable income, deductions applied, and final tax liability.
* **Downloadable Reports:** A section where users can download a summary of their tax calculations for record-keeping or filing purposes.
* **Admin Panel:** An interface exclusively for administrators to modify calculation norms, update tax slabs, and manage system inputs efficiently.

## FEATURES

**The features of income tax calculation are**

* **Automated Tax Calculation:** The system processes financial data to compute net taxable income and applicable tax using the latest government slab rates and deductions.
* **Real-Time Updates:** Administrators can dynamically update tax slabs, deductions, and exemptions to reflect current regulations, ensuring the system stays compliant.
* **Secure Login:** Employees can log in using social media or email accounts, while administrators have a separate secure authentication for managing the platform.
* **Detailed Tax Breakdown:** Users receive a comprehensive analysis of their tax liabilities, including deductions, exemptions, and final payable tax.
* **Tax-Saving Tips:** The system provides insights and suggestions to optimize deductions and minimize tax liability.
* **Dynamic Input Management:** The system supports various input fields, including gross pay, HRA, pension contributions, and health insurance, tailored to user needs.
* **Accessibility and Usability:** Designed to be intuitive and responsive, the platform caters to both tech-savvy users and those with limited technical expertise.
* **Scalable Design:** The system can be scaled for use by individuals, small businesses, or large organizations, accommodating a wide range of user requirements.

This combination of user-focused design and advanced features ensures the Income Tax Calculation System delivers both efficiency and accuracy.

## OPERATIONS

* 1. The system securely stores basic employee information necessary for tax calculations. This includes:
     + First Name and Last Name: To uniquely identify employees.
     + Employee ID: A unique identifier for each employee to avoid duplication.

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The stored details ensure the system can generate personalized tax reports and maintain accurate records for each employee.

* 1. Employees can input the following financial details into the system for precise tax calculations:
     + Gross Annual Salary: The total income earned before deductions.
     + Bonuses and Other Income: Any additional taxable income.
     + House Rent Allowance (HRA): Used for calculating deductions based on rent payments.
     + Pension Contributions: Included as part of eligible deductions (up to government-prescribed limits).
     + Health Insurance Premiums: Deductions applied for insurance contributions.

These fields ensure that all relevant components of the employee’s income and deductions are considered.

* 1. The system computes the net taxable income and applicable tax using the formula:

Formula to calculate Net Taxable Income

netTaxableIncome = (grossPay \* 12) - (hra \* 12) - 50000 - pensionDeductions - (healthInsurance \* 12);

Tax calculation based on slabs

if (netTaxableIncome <= 250000) { tax = 0;

}

else if (netTaxableIncome <= 500000) {

tax = 0.05 \* (netTaxableIncome - 250000);

}

else if (netTaxableIncome <= 1000000) {

tax = 12500 + 0.20 \* (netTaxableIncome - 500000);

}

else {

tax = 112500 + 0.30 \* (netTaxableIncome - 1000000);

}

## APPROACH

The Income Tax Calculation System is developed using a modular approach to ensure scalability, maintainability, and clarity. Each operation is implemented as a standalone function, with all functions integrated seamlessly to form a cohesive software solution. This modular structure enables independent development, testing, and updating of individual components without affecting the entire system. Below is a detailed description of the modules and functionalities:

1. Input Management Module

This module is responsible for collecting and validating user input.

* + Employee Input Function: Gathers employee details, including first name, last name, and unique ID.
  + Financial Input Function: Allows employees to enter their financial details, such as gross salary, HRA, pension contributions, and health insurance premiums.
  + Validation Function:

Ensures all inputs meet the required format and constraints, such as non- negative values and valid ranges.

1. Tax Calculation Module

This module performs the core task of computing the taxable income and tax. if (netTaxableIncome <= 250000) {

tax = 0;

} else if (netTaxableIncome <= 500000) {

tax = 0.05 \* (netTaxableIncome - 250000);

} else if (netTaxableIncome <= 1000000) {

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tax = 12500 + 0.20 \* (netTaxableIncome - 500000);

} else {

tax = 112500 + 0.30 \* (netTaxableIncome - 1000000);

1. Admin Management Module

This module handles administrator operations, ensuring the system stays up-to- date.

* + Enables administrators to modify tax slabs, deductions, and exemptions based on government norms.
  + Allows customization of employee input fields, ensuring compliance with current tax regulations.
  + Ensures the platform operates smoothly by managing data and handling updates.

1. Report Generation Module

This module generates detailed tax reports for employees.

* + Creates a downloadable report summarizing gross income, deductions, taxable income, and tax liability.
  + Provides tips to employees for optimizing their deductions and reducing their tax liability.
  + Allows reports to be saved in standard formats, such as PDF, for filing purposes.

All individual functions are brought together into the main software to create an integrated and seamless experience. The modular approach ensures that each component can be updated or replaced independently, providing flexibility and adaptability to future changes in tax regulations or system requirements.

## IMPLEMENTATION:

* **Index.html**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Login Page</title>

<link rel="stylesheet" href="styles.css">

</head>

<body>

<div class="login-container">

<h1>Login</h1>

<form action="login.php" method="POST">

<input type="text" name="username" placeholder="Username"

required>

<input type="password" name="password" placeholder="Password" required>

<button type="submit">Login</button>

</form>

<p>Don't have an account? <a href="register.php">Register here</a></p>

</div>

</body>

</html>

## Login.php

<?php

$host = "localhost";

$dbUser = "root";

$dbPassword = "";

$dbName = "user\_management";

// Create connection

$conn = new mysqli($host, $dbUser, $dbPassword, $dbName);

// Check connection

if ($conn->connect\_error) {

die("Connection failed: " . $conn->connect\_error);

}

// Process form data

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

$username = $\_POST['username'];

$password = $\_POST['password'];

// Prepare and execute SQL query

$sql = "SELECT \* FROM users WHERE username = ?";

$stmt = $conn->prepare($sql);

$stmt->bind\_param("s", $username);

$stmt->execute();

$result = $stmt->get\_result();

if ($result->num\_rows === 1) {

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$user = $result->fetch\_assoc();

// Verify password

if (password\_verify($password, $user['password'])) {

// Redirect to the tax calculation page after successful login header("Location: index\_1.php");

exit(); // Stop further script execution

} else {

echo "<h1>Invalid password. Please try again.</h1>";

}

} else {

echo "<h1>Username does not exist.</h1>";

}

$stmt->close();

}

$conn->close();

?>

Registration.php

<?php

// Database connection

$host = "localhost";

$dbUser = "root";

$dbPassword = "";

$dbName = "user\_management";

// Create connection

$conn = new mysqli($host, $dbUser, $dbPassword, $dbName);

// Check connection

if ($conn->connect\_error) {

die("Connection failed: " . $conn->connect\_error);

}

// Process registration form data

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

$username = $\_POST['username'];

$password = $\_POST['password'];

// Hash the password

$hashedPassword = password\_hash($password, PASSWORD\_DEFAULT);

// Prepare and execute SQL query to insert new user

$sql = "INSERT INTO users (username, password) VALUES (?, ?)";

$stmt = $conn->prepare($sql);

$stmt->bind\_param("ss", $username, $hashedPassword);

if ($stmt->execute()) {

echo "<h1>Registration Successful! You can now <a href='index.html'>login</a>.</h1>";

} else {

echo "<h1>Registration failed. Please try again.</h1>";

}

$stmt->close();

}

$conn->close();

?>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Register Page</title>

<link rel="stylesheet" href="styles.css">

</head>

<body>

<div class="login-container">

<h1>Register</h1>

<form action="register.php" method="POST">

<input type="text" name="username" placeholder="Username"

required>

<input type="password" name="password" placeholder="Password" required>

<button type="submit">Register</button>

</form>

<p>Already have an account? <a href="index.html">Login here</a></p>

</div>

</body>

</html>

## Styles.css

body {

margin: 0;

padding: 0;

box-sizing: border-box;

font-family: 'Poppins', Arial, sans-serif; background: #202123;

/\* Subtle dark background \*/ display: flex;

justify-content: center; align-items: center;

height: 100vh; color: #d1d5db;

/\* Neutral light gray text \*/

}

/\* Container Styling \*/

.container {

background: #2d2f31; border-radius: 12px;

box-shadow: 0 4px 10px rgba(0, 0, 0, 0.5);

/\* Softer shadow for a clean look \*/ width: 100%;

max-width: 400px; padding: 30px; text-align: center;

animation: fadeIn 0.5s ease-in-out;

}

/\* Smooth fade-in animation \*/

@keyframes fadeIn { from {

opacity: 0;

transform: translateY(20px);

}

to {

opacity: 1;

transform: translateY(0);

}

}

/\* Title Styling \*/

.container h1 { font-size: 1.8em;

margin-bottom: 20px;

color: #10a37f;

/\* Vibrant green accent color \*/

}

/\* Form Inputs \*/

input {

width: 100%; padding: 12px; margin: 10px 0;

border: 1px solid #3a3b3c; border-radius: 6px;

font-size: 14px;

background-color: #3a3b3c; color: #d1d5db;

transition: all 0.3s;

}

input:focus {

border-color: #10a37f; outline: none;

box-shadow: 0 0 8px rgba(16, 163, 127, 0.4);

}

/\* Button Styling \*/

button {

background-color: #10a37f; color: #ffffff;

border: none; border-radius: 8px; padding: 12px; font-size: 16px; cursor: pointer;

width: 100%;

transition: background-color 0.3s ease, transform 0.2s ease;

}

button:hover {

background-color: #0e8c6c; transform: scale(1.02);

}

button:active {

background-color: #09654b;

}

/\* Links \*/

.container a { color: #10a37f;

text-decoration: none;

font-weight: 600;

transition: color 0.3s;

}

.container a:hover { color: #0e8c6c;

}

/\* Results Section \*/

.result {

margin-top: 20px; padding: 20px;

background-color: #3a3b3c; border: 1px solid #444; border-radius: 8px;

text-align: left; color: #d1d5db;

}

.result h2 {

color: #10a37f; font-size: 1.6em;

margin-bottom: 10px;

}

.result p {

font-size: 14px; line-height: 1.5;

margin: 5px 0;

}

Tax calculator.php

<?php

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

// Get form input

$salary = $\_POST['salary'];

$bonus = $\_POST['bonus'];

$other\_income = $\_POST['other\_income'];

$hra = $\_POST['hra'];

$pension = $\_POST['pension'];

$health\_insurance = $\_POST['health\_insurance'];

// Calculate Net Taxable Income

$net\_taxable\_income = ($salary \* 12) - ($hra \* 12) - 50000 - ($pension \* 12) - ($health\_insurance \* 12);

// Calculate Tax

$tax = 0;

$tax\_breakdown = "";

if ($net\_taxable\_income <= 500000) {

$tax = 0; // No tax if income is below or equal to 500,000

$tax\_breakdown = "No Tax due as Net Taxable Income is below ₹500,000.";

} else {

// Tax calculation based on slabs

if ($net\_taxable\_income > 500000 && $net\_taxable\_income <= 1000000) {

$tax = 12500 + 0.20 \* ($net\_taxable\_income - 500000);

$tax\_breakdown = "Tax calculated as ₹12,500 + 20% of (Net Taxable Income - ₹500,000).";

} elseif ($net\_taxable\_income > 1000000) {

$tax = 112500 + 0.30 \* ($net\_taxable\_income - 1000000);

$tax\_breakdown = "Tax calculated as ₹112,500 + 30% of (Net Taxable Income - ₹1,000,000).";

}

}

// Calculate Net Income after Tax

$net\_income\_after\_tax = $net\_taxable\_income - $tax;

// Display the results

echo "<h1>Tax Calculation Summary</h1>";

echo "<p><strong>Net Taxable Income:</strong> ₹" . number\_format($net\_taxable\_income) . "</p>";

echo "<p><strong>Total Tax Liability:</strong> ₹" . number\_format($tax) . "</p>";

echo "<p><strong>Net Income After Tax:</strong> ₹" . number\_format($net\_income\_after\_tax) . "</p>";

echo "<p><strong>Tax Calculation Breakdown:</strong> " . $tax\_breakdown . "</p>";

} else {

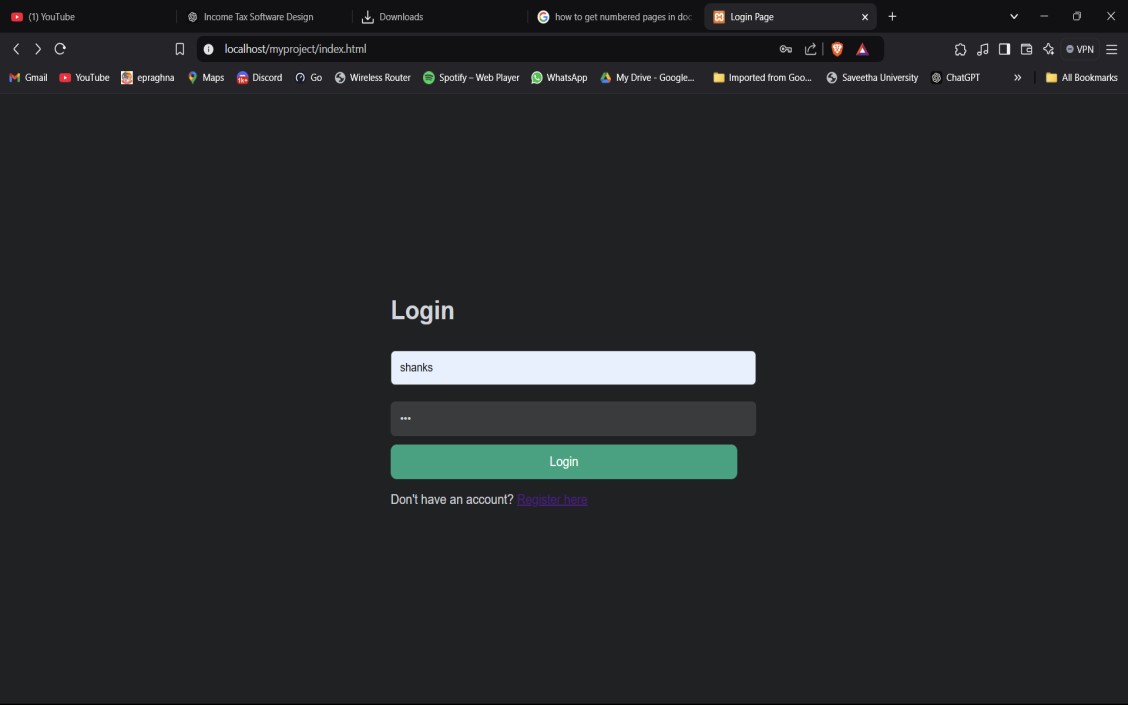
echo "<p>Please submit the form.</p>";

}

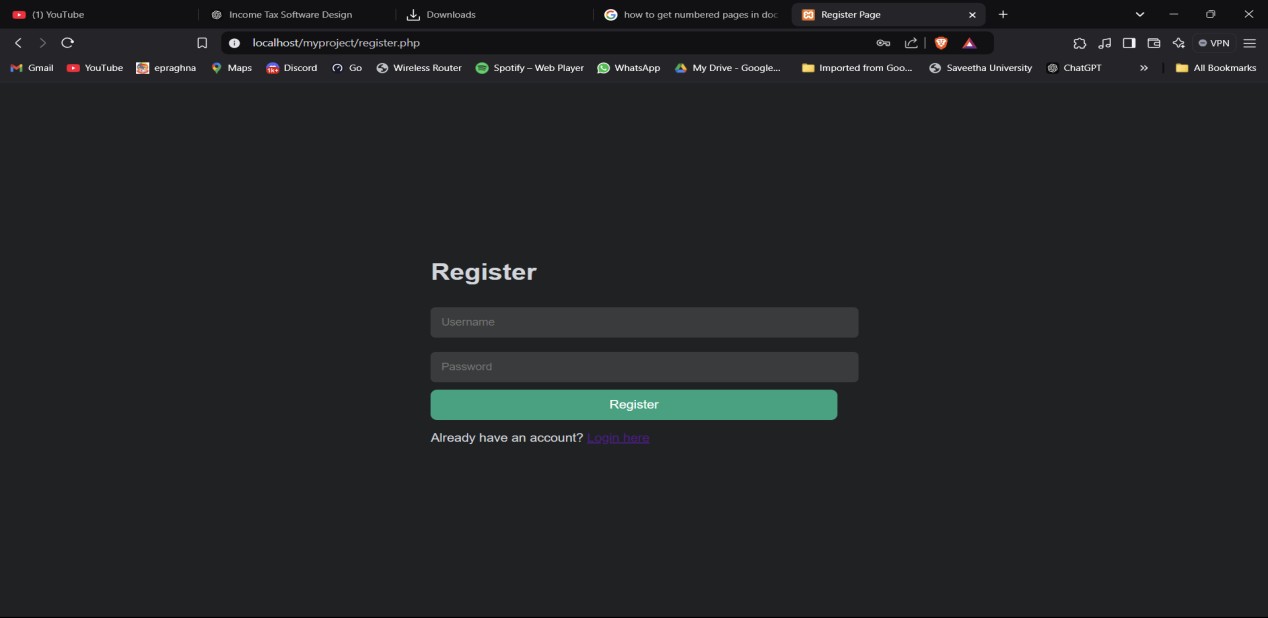
?>

## RESULT:

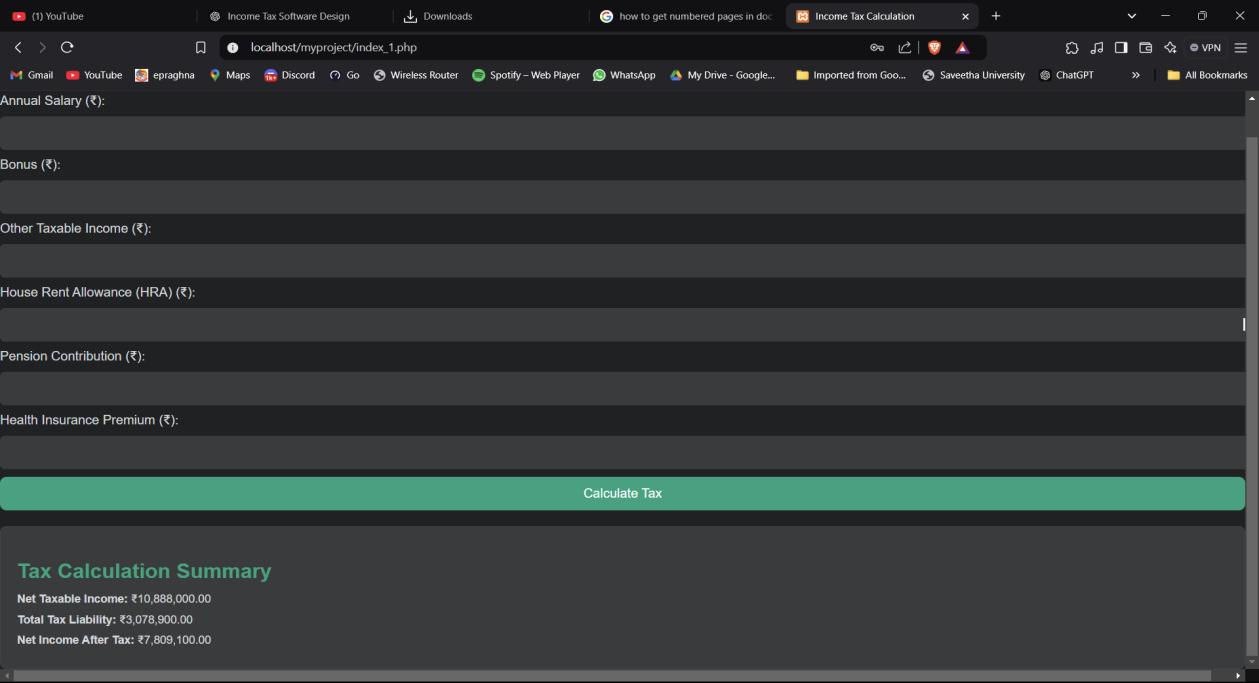
**Login page**



## Registration page



**Tax calculation**



## CONCLUSION

The Income Tax Calculation System effectively streamlines the process of tax computation, ensuring both accuracy and efficiency for employees and administrators. By adopting a modular approach, the system simplifies the implementation of individual functions such as data input, tax calculation, and report generation. This structure allows for easy updates and scalability, ensuring the system can adapt to changes in tax regulations. Administrators can easily modify tax slabs and input fields, ensuring the system remains compliant with government norms. Overall, the system offers a comprehensive solution for tax management, ensuring convenience, accuracy, and compliance for both employees and organizations. Future enhancements could include mobile app development for greater accessibility, integration with financial institutions, and advanced AI-based optimization suggestions to further improve the tax calculation process.

## FUTURE ENHANCEMENTS

The software can be enhanced by developing a mobile application for better accessibility and integrating it with financial institutions for automated data

fetching, such as salary credits and deductions. Future updates could include support for multiple currencies and tax systems to cater to international users, along with AI-based tax planning tools to provide personalized investment and tax-saving suggestions. Real-time updates on tax regulations from government databases will ensure the system remains compliant with the latest norms. Additionally, integrating the software with tax filing portals for direct submissions and generating pre-filled forms will offer a seamless end-to-end solution. Visual dashboards with graphical insights and analytics can further improve user experience by providing an interactive overview of income, tax breakdowns, and savings opportunities.

## REFERENCES:

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2. [State of Michigan | Michigan.gov](https://www.michigan.gov/taxes/iit/taxtools)
3. [Kansas Department of Revenue](https://www.ksrevenue.gov/taxcalc.html)
4. [IRS Tax Withholding Estimator](https://www.irs.gov/individuals/tax-withholding-estimator)
5. [Michigan Tax Tools](https://www.michigan.gov/taxes/tax-tools)
6. [California Franchise Tax Board](https://www.ftb.ca.gov/file/personal/income-tax-return/2023-tax-calculator.html)
7. [H&R Block Tax Calculator](https://www.hrblock.com/tax-calculator/)
8. [TurboTax Income Tax Calculator](https://turbotax.intuit.com/tax-tools/calculators/taxcaster)