A REAL TIME PROJECT

ON

"INCOME TAX CALCULATOR"

Submitted to

GURU NANAK INSTITUTIONS TECHNICAL CAMPUS(AUTONOMUS)

In partial satisfaction of the requirements for the degree of

BACHELOR OF TECHNOLOGY

IN

INFORMATION TECHNOLOGY

BY

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SCHOOL OF ENGINEERING AND TECHNOLOGY,
IBRAHIMPATNAM, R.R DISTRICT-501506 **(2024-2025)**

CERTIFICATE

This is to certify that this ***Real Time*** **project** entitled "**INCOME TAX CALCULATOR**" being submitted by **BIRADAR GANESH (22WJ8A1210)**, in partial fulfillment for the award of the Degree of ***Bachelor of Technology in Information Technology*** of the **Guru Nanak Institution Technical Campus, Hyderabad** during the academic year **2024-2025**, is a record of bonafide work carried out under our guidance and supervision at **Guru Nanak Institutions Technical Campus (Autonomous).**

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ABSTRACT

The Indian Income-tax works on the basis of a slab system and the tax is levied accordingly on individual taxpayers. Slab implies the different tax rates charged for different income ranges. In other words, the more your income, the more tax you have to pay. These slabs of income tax are revised every year during the budget announcement. Again, These slab rates are segregated for different categories of taxpayers.

The Income Tax Calculator service enables both registered and unregistered e-Filing users to calculate tax as per the provisions of Income Tax Act, Income-tax rules, Notifications etc. by providing inputs with respect to income(s) earned and deductions claimed as per the Act. This service also provides a calculation of tax under the old or new tax regime with a comparison of tax as per the old and new regime.

An Income-tax calculator is a tool that helps to evaluate taxes based on a person's income once the Union Budget for the year is announced. Individuals falling under the taxable income bracket are liable to pay a specific portion of their net annual income as tax. Income tax can be paid either as tax deducted at source while disbursement of monthly salary, or through the income tax returns portal managed by the Central Board of Direct Taxes (CBDT). The provision for online payment of taxes is to ensure individuals pay their stipulated dues on any earnings

generated from other sources.

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CHAPTER 1

INTRODUCTION

1.1 GENERAL

Income Tax Return (ITR) Is a form which a person is supposed to submit to the Income Tax Department of India. It contains information about the person's income and the taxes to be paid on it during the year. Information filed in ITR should pertain to a particular financial year, i.e., starting on 1st April and ending on 31st March of the next year. **Income can be of various forms such as:**

- Income from salary Profits and gains from business and profession
- Income from house property
- Income from capital gains
- Income from other sources such as dividend, interest on deposits, royalty income, winning on lottery, etc.

1.2 ADVATANGES

The benefits of having income tax in India can be divided into certain categories:

Personal benefits

- **Visa applications**

If you are planning to visit countries like Canada, the USA, or the United Kingdom, it is compulsory for Indians to provide the income tax return (ITRs) of the last 3 years for easy visa approval. Payment of income tax to the home country government acts as an assurance for other countries that you are not leaving the origin country for tax evasion purposes.

- **Quick credit approval**

Regular payment of income tax to the Government of India is considered important when you have applied for big-ticket loans like home loans, business loans, or personal loans. Before approving the loan, the lender always asks the loan applicant to submit copies of ITR.

- **Income proof**

For all self-employed professionals like freelancers, firm partners, or consultants, filing income tax acts as income proof. It works in cases where professionals are not getting a fixed salary from any particular company. It plays an important role in all financial and business transactions.

Public benefits

- **Acts as the main source for augmenting country's revenue**

The primary objective of taxing the citizens of India is to raise revenue for the smooth running of government activities.

- **Helps to improve public infrastructure**

The income tax paid by the citizens of India is used by the Government of India for improving the quality of infrastructure like public places, smart cities, and government institutes. All the funding of infrastructure projects arises from the tax amount collected from the country's taxpayers.

- **Launching of various welfare schemes**

From education and health, to housing and employment, the government is launching and running various welfare schemes to provide benefits to Indian citizens. The main source of funding for all these government schemes is the cumulative income tax paid by taxpayers.

- **Use in defense and scientific research**

We are all proud of missions conducted by the Indian Space Research Organization, and all these missions require huge funding. This is provided by the Government of India. A percentage of the tax money collected is earmarked by the government to space research organizations for running space missions.

1.3 DISADVANTAGES

- **Inability to carry forward losses**

Each of the assessees is entitled to carry forward the losses if they were unable to set off any of the losses incurred against the earned income subjected to income tax rules and provisions. In case the assessee attempts a tax evasion, he or she cannot carry forward the losses.

- **Need to pay a heavy penalty**

If you delay filing an income tax return, then you are liable to pay a penalty of Rs 5000. The assessing officer has the authority to waive the levied penalty. The taxpayer gets a reasonable opportunity of being heard before the penalty is imposed. But it is always wise to adhere to the rules and regulations.

- **May affect people's will to work and save**

Imposing higher rates of taxation on people may escalate discouragement to work hard and save. They will start believing that the more their earnings and savings, higher will be the taxation.

- **Inflation**

When taxation is imposed on a commodity, the cost of that commodity also increases. It will indirectly also increase the cost of production due to which one needs to pay higher wages to workers; this will, in turn, further increase the price of the commodity.

1.4 APPLICATIONS

An income tax calculator serves several practical purposes in personal finance and broader economic contexts:

1. ****Personal Financial Planning****: Individuals can use an income tax calculator to estimate their tax liability based on their income, deductions, and credits. This help

in planning finances, budgeting, and understanding how much of their earnings will go towards taxes.

2. **Tax Return Preparation**: Before filing taxes, individuals can use a tax calculator to estimate their tax refund or amount owed. This helps in ensuring they have saved enough to cover any taxes due or to adjust their withholding if necessary.

3. **Comparing Job Offers**: Job seekers can compare net incomes from different job offers by using an income tax calculator. This allows them to understand the after-tax implications of different salaries and benefits packages.

4. **Financial Decision Making**: Tax calculators can aid in making financial decisions such as investments, retirement planning, and major purchases. Understanding the tax implications can influence decisions on when to invest, how much to save for retirement accounts, and whether to make large purchases in a given tax year.

5. **Policy Analysis**: Economists, policymakers, and researchers use income tax calculators to model the effects of proposed tax changes. This helps in predicting how changes in tax rates, deductions, or credits might impact individuals, families, and the economy as a whole.

6. **Educational Tool**: Tax calculators can educate individuals on how the tax system works and how various factors like income level, filing status, and deductions affect taxes owed. This can empower people to make informed financial decisions and understand the broader implications of tax policy.

7. **Budgeting for Businesses**: Businesses use income tax calculators to estimate their tax liabilities and plan their budgets accordingly. This is crucial for financial forecasting and ensuring they have adequate cash flow to cover taxes.

Overall, income tax calculators are versatile tools that serve both individual and broader economic needs, providing clarity and aiding in financial decision-making at various levels.

CHAPTER-2
ANALYSIS

2.1 Income Tax Slabs FY 2023-24 & AY 2024-25 (New & Old Regime Tax Rates)

The income tax slabs are different under the old and the new tax regimes. Further, the slab rates under the old tax regime are divided into three categories:

- Indian Residents aged < 60 years + All the non-residents
- 60 to 80 years: Resident Senior citizens
- More than 80 years: Resident Super senior citizens

2.2 What is an Income Tax Slab?

In India, the Income Tax applies to individuals based on a slab system, where different tax rates are assigned to different income ranges. As the person's income increases, the tax rates also increase. This type of taxation allows for a fair and progressive tax system in the country. The income tax slabs are revised periodically, typically during each budget. These slab rates vary for different groups of taxpayers.

Let us take a look at all the slab rates applicable for FY 2023-24(AY 2024-25).

Income tax slab rates for FY 2023-24/ AY 2024-25			
Old Regime			
Slabs	**Individuals (Age < 60 years)**	**Resident Senior Citizens (≥60 but <80 years)**	**Resident Super Senior Citizens (80 years and above)**
Up to Rs 2,50,000	Nil	Nil	Nil
Rs 2,50,001 to Rs 3,00,000	5%	Nil	Nil
Rs 3,00,001 to Rs 5,00,000	5%	5%	Nil
Rs 5,00,001 to Rs 10,00,000	20%	20%	20%
Above Rs 10,00,000	30%	30%	30%
New Regime			
Slabs	**Income Tax Rates**		
Up to Rs 3,00,000	Nil		
Rs 3,00,001 to Rs 6,00,000	5% (Tax rebate u/s 87A)		
Rs 6,00,001 to Rs 900,000	10% (Tax rebate u/s 87A up to Rs 7 lakh)		
Rs 9,00,001 to Rs 12,00,000	15%		
Rs 12,00,001 to Rs 1500,000	20%		
Above Rs 15,00,000	30%		

For Old Regime, a tax rebate up to Rs.12,500 is applicable if the total income does not exceed Rs 5,00,000 (not applicable for NRIs)

NOTE:

Income tax exemption limit is

- up to Rs 2,50,000 for Individuals, HUF below 60 years aged and NRIs.
- up to Rs 3,00,000 for senior citizens aged above 60 years but less than 80 years.
- up to Rs 5,00,000 for super senior citizens aged above 80 years.
- Surcharge and cess will be applicable over and above the tax rates

However, under the new tax regime rebate is up to Rs.25,000 is applicable if the total income does not exceed Rs 7,00,000. (not applicable for NRIs)

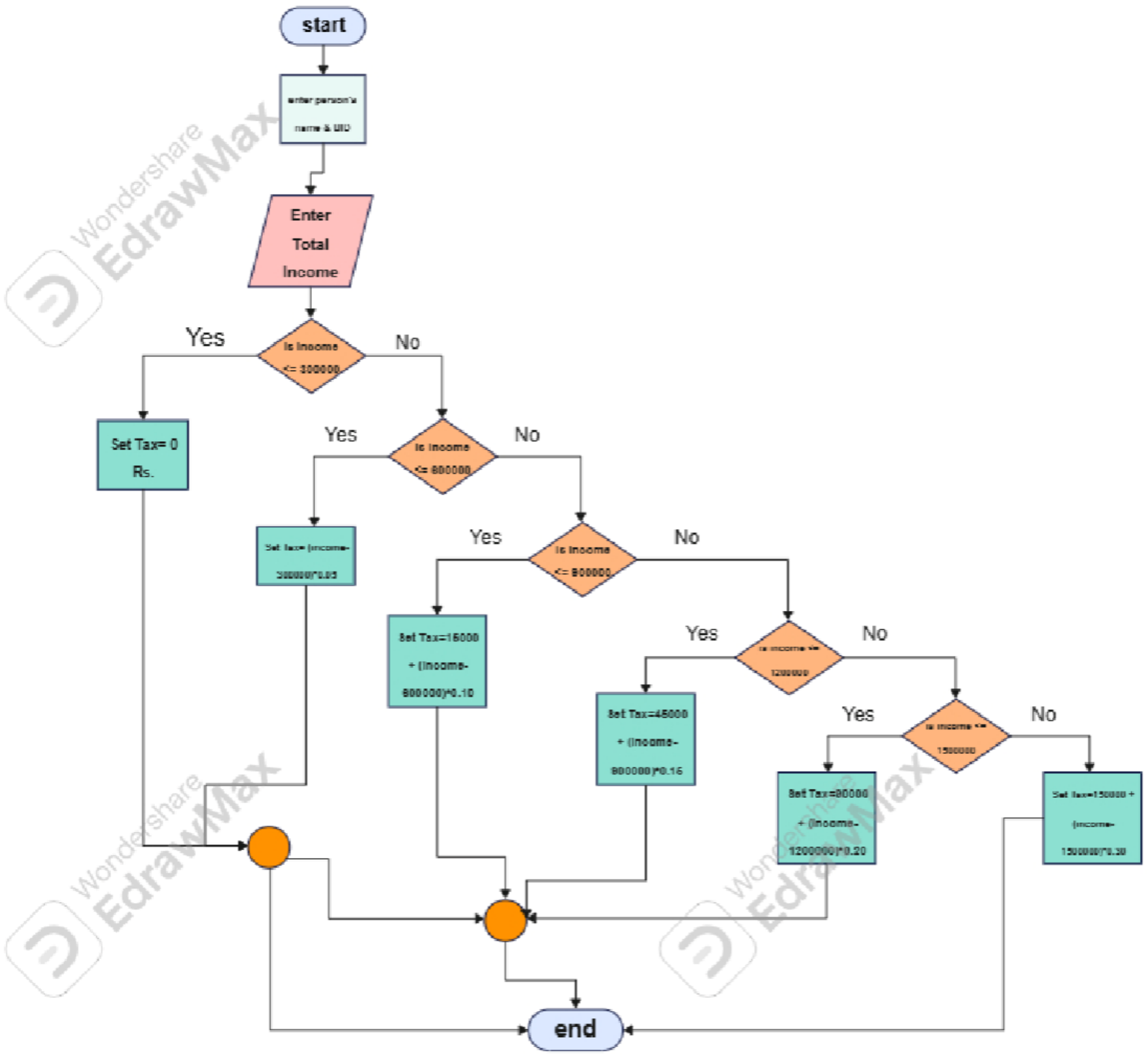
- Tax rebate equivalent to an amount, tax payable is when the total income exceeds Rs 7,00,000. (not applicable for NRIs)

NOTE:

- Income tax exemption limit is up to Rs 3,00,000 for Individuals, HUF opting for the new regime.
- Surcharge and cess will be applicable over and above the tax rates

CHAPTER-3

DESIGN



CHAPTER-4

IMPLEMENTATION

```
import javax.swing.*;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class IncomeTaxCalculator extends JFrame {

    private JTextField incomeField;
    private String customerName;
    private String customerUID;

    public IncomeTaxCalculator(String customerName, String customerUID) {
        this.customerName = customerName;
        this.customerUID = customerUID;

        // Set up the frame
        setTitle("Income Tax Calculator FY 2023-24");
        setSize(400, 450);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setLocationRelativeTo(null);

        // Create panel
        JPanel panel = new JPanel();
        panel.setLayout(null);
        panel.setBackground(new Color(210, 230, 255));

        // Create income label and text field
```

```
JLabel incomeLabel = new JLabel("Enter Income:");
incomeLabel.setBounds(50, 30, 100, 25);
incomeLabel.setForeground(Color.BLUE);
panel.add(incomeLabel);

incomeField = new JTextField(20);
incomeField.setBounds(150, 30, 150, 25);
panel.add(incomeField);

// Create calculate button
JButton calculateButton = new JButton("Calculate Tax");
calculateButton.setBounds(50, 70, 250, 35);
calculateButton.setBackground(new Color(100, 200, 100));
calculateButton.setForeground(Color.WHITE);
panel.add(calculateButton);

// Create simple calculator buttons
createCalculatorButtons(panel);

// Add action listener to the button
calculateButton.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        calculateTax();
    }
});

// Add panel to the frame
add(panel);
}
```

```
private void createCalculatorButtons(JPanel panel) {
    String[] buttonLabels = {
        "7", "8", "9",
        "4", "5", "6",
        "1", "2", "3",
        "0", ".", "Clear"
    };

    Color[] buttonColors = {
        new Color(173, 216, 230), new Color(173, 216, 230), new Color(173, 216, 230),
        new Color(144, 238, 144), new Color(144, 238, 144), new Color(144, 238, 144),
        new Color(255, 182, 193), new Color(255, 182, 193), new Color(255, 182, 193),
        new Color(255, 228, 196), new Color(255, 228, 196), new Color(240, 128, 128)
    };

    int x = 50, y = 150, width = 70, height = 50;

    for (int i = 0; i < buttonLabels.length; i++) {
        String label = buttonLabels[i];
        JButton button = new JButton(label);
        button.setBounds(x, y, width, height);
        button.setBackground(buttonColors[i]);
        panel.add(button);

        button.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
```

```
            handleCalculatorInput(label);
        }
    });

    x += width;
    if (x >= 260) {
        x = 50;
        y += height;
    }
  }
}

private void handleCalculatorInput(String label) {
    if (label.equals("Clear")) {
        incomeField.setText("");
    } else {
        incomeField.setText(incomeField.getText() + label);
    }
}

private void calculateTax() {
    try {
        double income = Double.parseDouble(incomeField.getText());
        double tax = calculateNewRegimeTax(income);
        displayTaxInNewWindow(tax);
    } catch (NumberFormatException ex) {
        displayErrorInNewWindow("Please enter a valid number");
    }
}

private void displayTaxInNewWindow(double tax) {
```

```
JFrame taxFrame = new JFrame("Tax Amount");
taxFrame.setSize(300, 200);
taxFrame.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
taxFrame.setLocationRelativeTo(null);

JPanel taxPanel = new JPanel();
taxPanel.setBackground(new Color(255, 228, 196));
taxPanel.setLayout(new GridLayout(4, 1));
taxFrame.add(taxPanel);

JLabel nameLabel = new JLabel("Customer: " + customerName);
nameLabel.setFont(new Font("Arial", Font.BOLD, 16));
nameLabel.setForeground(Color.BLUE);
nameLabel.setHorizontalAlignment(SwingConstants.CENTER);
taxPanel.add(nameLabel);

JLabel uidLabel = new JLabel("UID: " + customerUID);
uidLabel.setFont(new Font("Arial", Font.BOLD, 16));
uidLabel.setForeground(Color.BLUE);
uidLabel.setHorizontalAlignment(SwingConstants.CENTER);
taxPanel.add(uidLabel);

JLabel taxLabel = new JLabel("Tax to be paid: ₹" + tax);
taxLabel.setFont(new Font("Arial", Font.BOLD, 16));
taxLabel.setForeground(Color.BLUE);
taxLabel.setHorizontalAlignment(SwingConstants.CENTER);
taxPanel.add(taxLabel);

JLabel thankYouLabel = new JLabel("Thank You!");
thankYouLabel.setFont(new Font("Arial", Font.BOLD, 16));
thankYouLabel.setForeground(Color.BLUE);
```

```
        thankYouLabel.setHorizontalAlignment(SwingConstants.CENTER);
        taxPanel.add(thankYouLabel);

        taxFrame.setVisible(true);
    }

    private void displayErrorInNewWindow(String message) {
        JFrame errorFrame = new JFrame("Error");
        errorFrame.setSize(300, 150);
        errorFrame.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
        errorFrame.setLocationRelativeTo(null);

        JPanel errorPanel = new JPanel();
        errorPanel.setBackground(new Color(255, 228, 196));
        errorFrame.add(errorPanel);

        JLabel errorLabel = new JLabel(message);
        errorLabel.setFont(new Font("Arial", Font.BOLD, 16));
        errorLabel.setForeground(Color.RED);
        errorLabel.setHorizontalAlignment(SwingConstants.CENTER);
        errorPanel.add(errorLabel);

        errorFrame.setVisible(true);
    }

    private double calculateNewRegimeTax(double income) {
        double tax = 0;

        if (income <= 300000) {
            tax = 0;
        } else if (income <= 600000) {
```

```
        tax = (income - 300000) * 0.05;
    } else if (income <= 900000) {
        tax = 15000 + (income - 600000) * 0.10;
    } else if (income <= 1200000) {
        tax = 45000 + (income - 900000) * 0.15;
    } else if (income <= 1500000) {
        tax = 90000 + (income - 1200000) * 0.20;
    } else {
        tax = 150000 + (income - 1500000) * 0.30;
    }

    return tax;
}

public static void main(String[] args) {
    SwingUtilities.invokeLater(new Runnable() {
        @Override
        public void run() {
            new StartWindow();
        }
    });
  }
}

class StartWindow extends JFrame {
    private JTextField nameField;
    private JTextField uidField;

    public StartWindow() {
        // Set up the frame
        setTitle("Welcome");
```

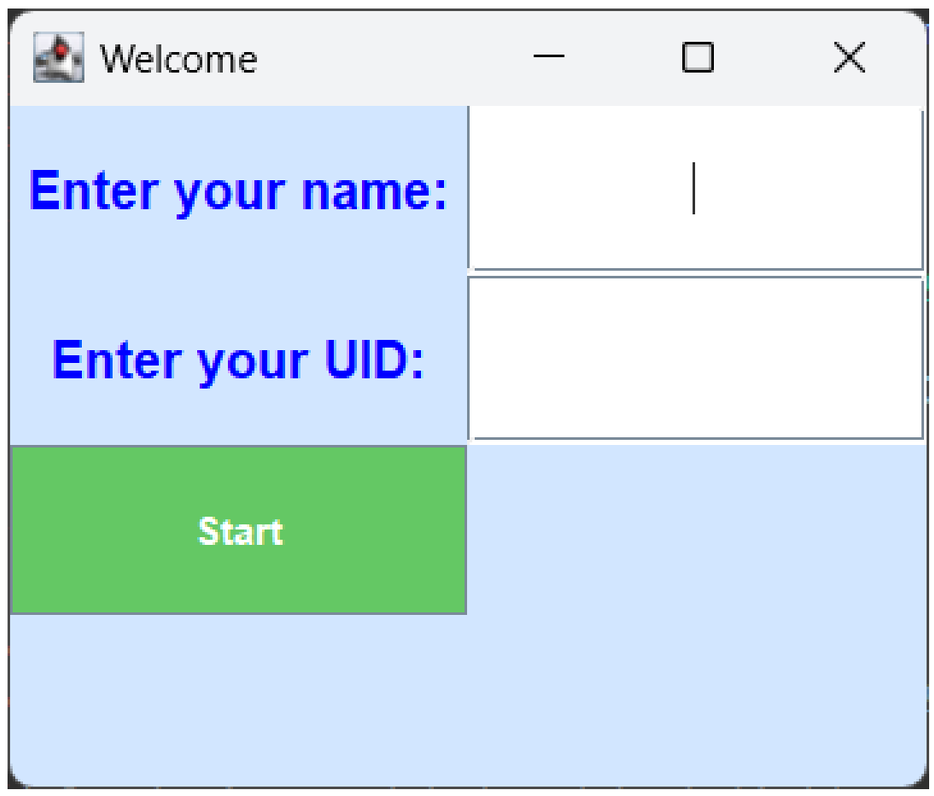
```
setSize(300, 250);
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setLocationRelativeTo(null);

// Create panel
JPanel panel = new JPanel();
panel.setLayout(new GridLayout(4, 1));
panel.setBackground(new Color(210, 230, 255));
add(panel);

// Create name label and text field
JLabel nameLabel = new JLabel("Enter your name:");
nameLabel.setFont(new Font("Arial", Font.BOLD, 16));
nameLabel.setForeground(Color.BLUE);
nameLabel.setHorizontalAlignment(SwingConstants.CENTER);
panel.add(nameLabel);

nameField = new JTextField(20);
nameField.setHorizontalAlignment(SwingConstants.CENTER);
panel.add(nameField);

// Create UID label and text field
JLabel uidLabel = new JLabel("Enter your UID:");
uidLabel.setFont(new Font("Arial", Font.BOLD, 16));
uidLabel.setForeground(Color.BLUE);
uidLabel.setHorizontalAlignment(SwingConstants.CENTER);
panel.add(uidLabel);

uidField = new JTextField(20);
uidField.setHorizontalAlignment(SwingConstants.CENTER);
panel.add(uidField);
```

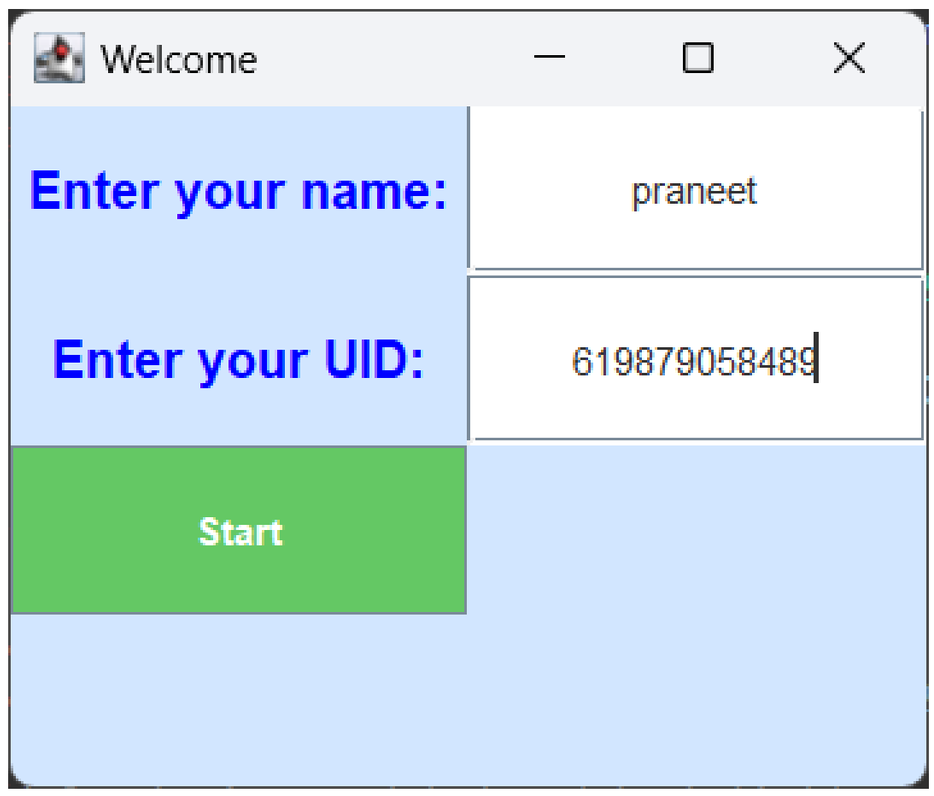
```
// Create start button
JButton startButton = new JButton("Start");
startButton.setBackground(new Color(100, 200, 100));
startButton.setForeground(Color.WHITE);
startButton.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        String customerName = nameField.getText();
        String customerUID = uidField.getText();
        if (!customerName.isEmpty() && !customerUID.isEmpty()) {
            JOptionPane.showMessageDialog(StartWindow.this,
                    "This Income Tax Calculator is according to the new tax
regime FY 2023-24",
                    "Information", JOptionPane.INFORMATION_MESSAGE);
            new IncomeTaxCalculator(customerName,
customerUID).setVisible(true);
            dispose();
        } else {
            JOptionPane.showMessageDialog(StartWindow.this, "Please enter
your name and UID", "Error", JOptionPane.ERROR_MESSAGE);
        }
    }
});
    panel.add(startButton);

    setVisible(true);
  }
}
```

CHAPTER-5

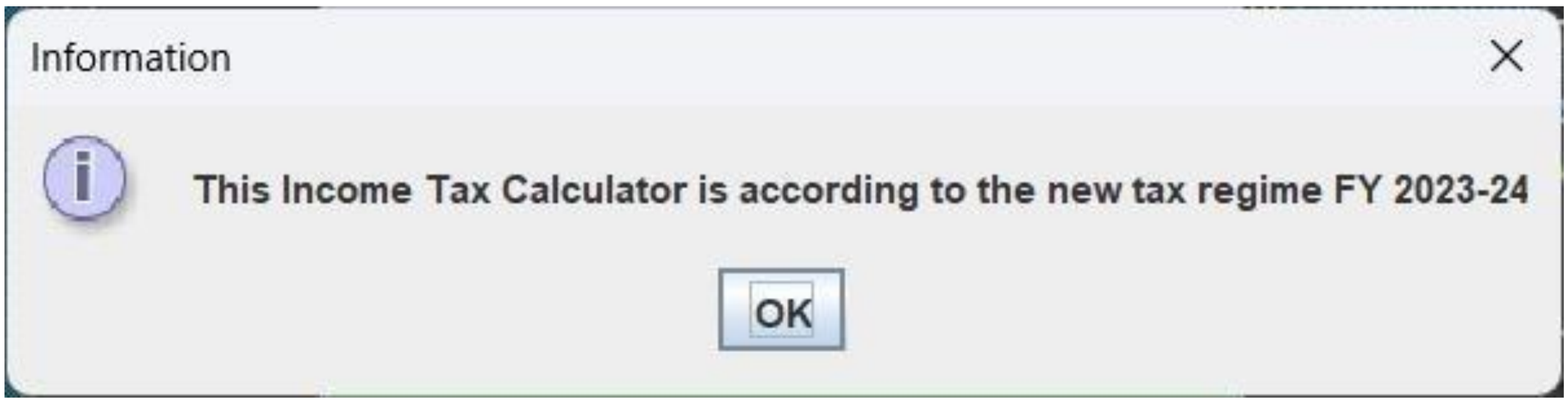
OUTPUT/RESULTS

ENTERING USER DETAILS:

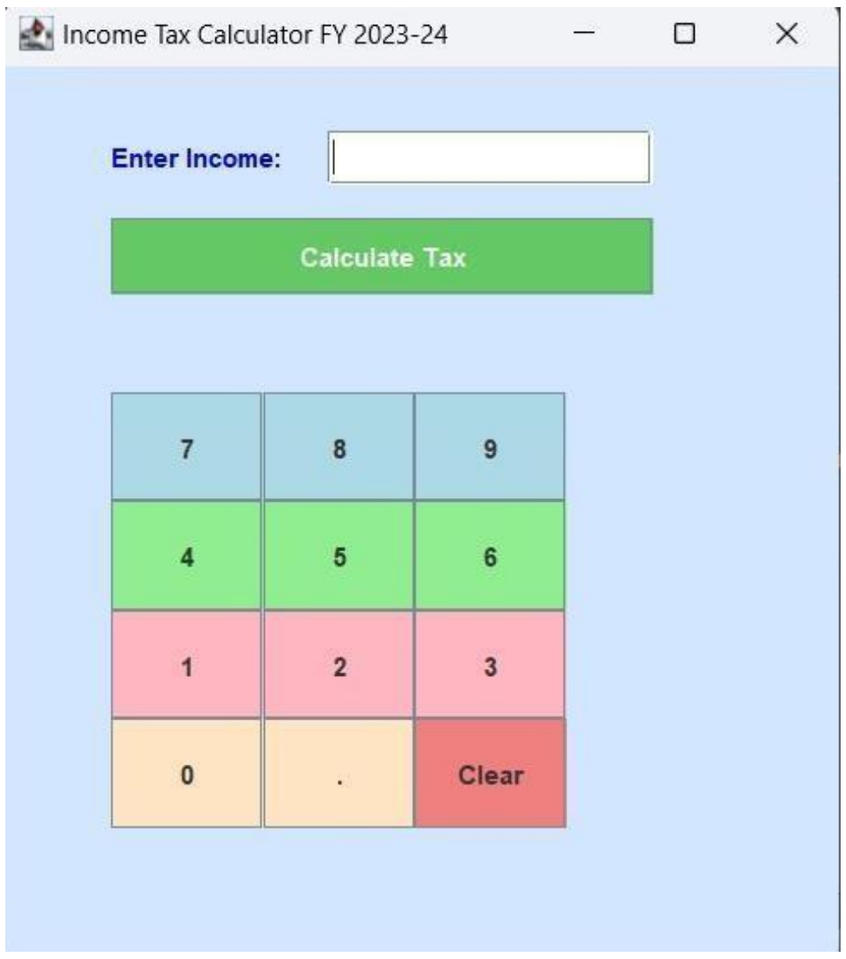


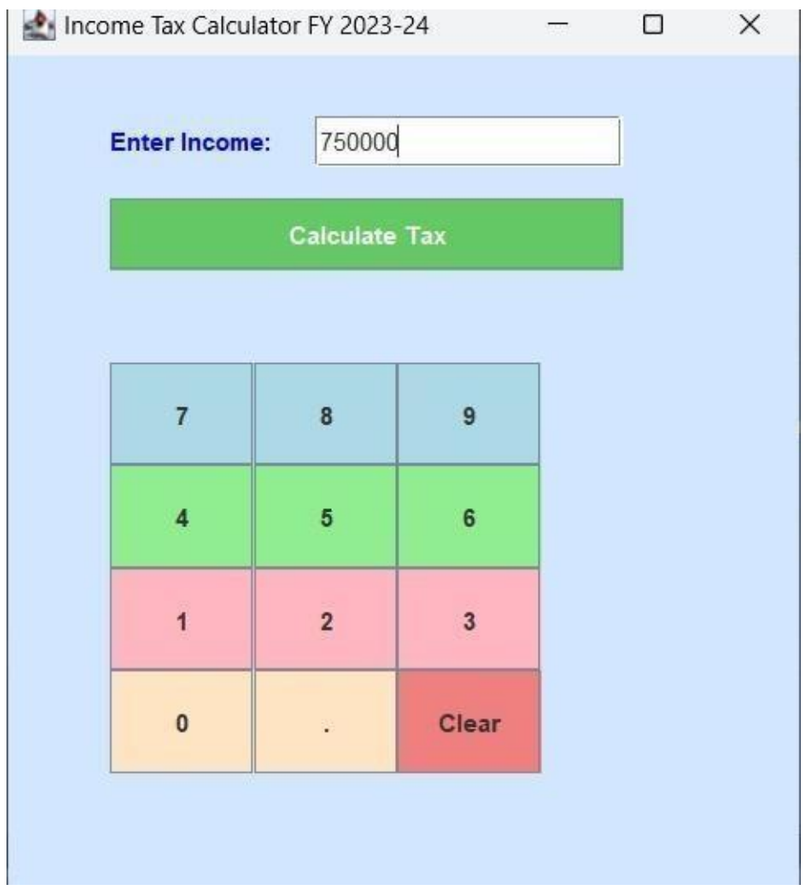


DISPLAYING DETAILS:

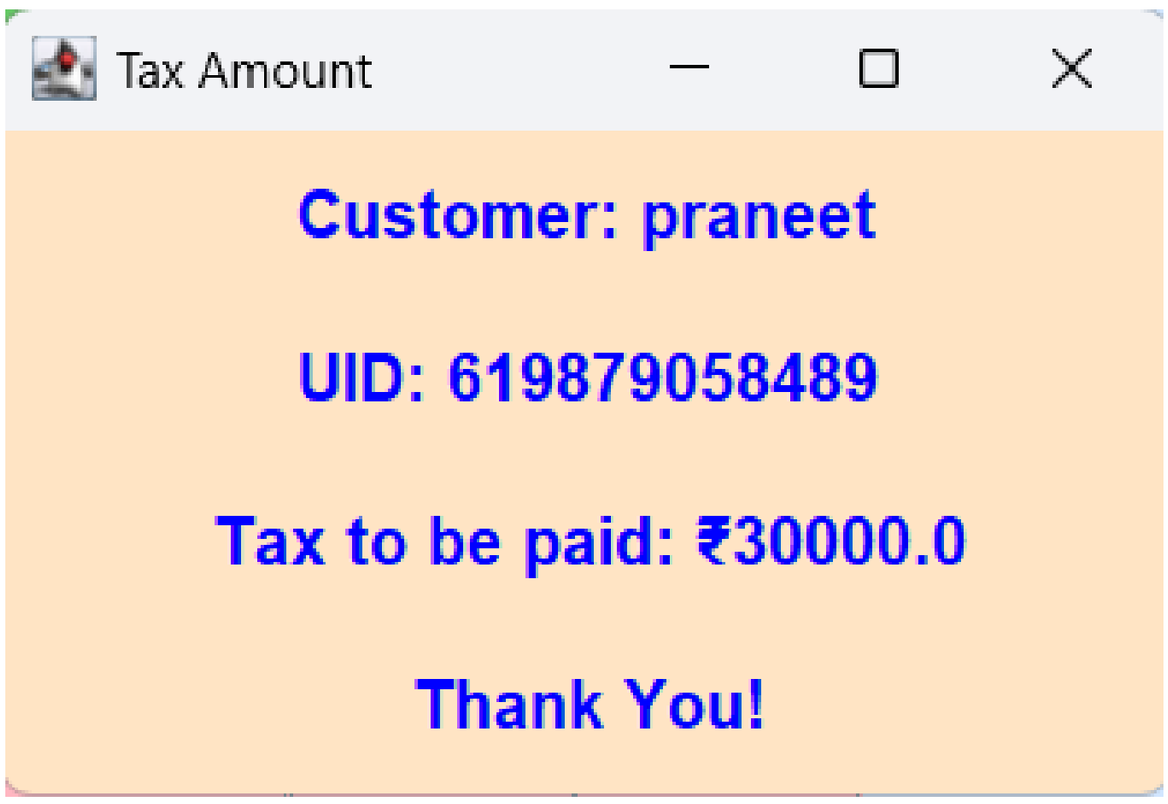


ENTERING INCOME DETAILS:





DISPLAYING OUTPUT :



CHAPTER-7

POST IMPLEMENTATION

This project taught us several key concepts and skills in Java programming, especially in building graphical user interfaces (GUIs) using Swing. Here are the main lessons:

- **Basic Swing Components and Layouts**:

  How to create and set up a JFrame as the main application window.

  Using JPanel to organize other components.

  Creating and using basic Swing components such as JLabel, JTextField, JButton.

  Using layout managers like GridLayout and setting component bounds manually with setBounds.

- **Event Handling**:

  Adding action listeners to buttons to handle user interactions.

  Implementing ActionListener to define the actions performed when a button is clicked.

- **Input Validation**:

  Validating user input to ensure that only valid data (e.g., numeric values for income) is processed.

  Handling invalid input using exception handling (try-catch blocks) and displaying error messages.

- **Basic Tax Calculation Logic**:

  Implementing tax calculation logic based on predefined rules.

  Understanding how to use conditional statements to perform calculations based on different income ranges.

CHAPTER-8

CONCLUSION

Through this project, we learned how to build a user-friendly application using Java Swing. We covered the essentials of GUI programming, event handling, input validation, modular code organization, and basic tax calculation logic. This foundation can be extended to more complex applications, improving user interfaces, and adding more sophisticated functionalities. The income tax paid by the citizens of India is used by the Government of India for improving the quality of infrastructure like public places, smart cities, and government institutes. All the funding of infrastructure projects arises from the tax amount collected from the country's taxpayers. We are all proud of missions conducted by the Indian Space Research Organization, and all these missions require huge funding. This is provided by the Government of India. A percentage of the tax money collected is earmarked by the government to space research organizations for running space missions. Regular payment of income tax to the Government of India is considered important when you have applied for big-ticket loans like home loans, business loans, or personal loans. Before approving the loan, the lender always asks the loan applicant to submit copies of ITR.