**Workflow Document:**

1. Admin user logs in to the system using their registered credentials.
2. Admin navigates to the respective section for managing clients, issuers, fees, products, mappings, or interchange fees using the navigation menu.
3. Admin performs the necessary CRUD operations on the entities:
   * For clients, the admin can add new clients, edit existing client details, or delete clients.
   * For issuers, the admin can add new issuers, edit existing issuer details, or delete issuers.
   * For fees, the admin can add new fees, edit existing fee details, or delete fees.
   * For products, the admin can add new products, edit existing product details, or delete products.
4. Admin maps clients to products and fees using the client-product-fee mapping functionality:
   * The admin navigates to the client-product-fee mapping page.
   * The admin selects a client, product, fee, unit price, start date, and end date for the mapping.
   * The admin submits the form to create the mapping.
5. Admin specifies interchange fees for clients, if applicable:
   * The admin navigates to the interchange fee management page.
   * The admin selects a client, enters the start date, end date, interchange amount, and minimum interchange amount.
   * The admin submits the form to save the interchange fee.
6. User (admin or regular user) accesses the invoice generation page.
7. User selects a client from the dropdown menu and specifies the start and end dates for the invoice.
8. If the client has dynamic fees, the user enters the units for each dynamic fee in the provided input fields.
9. User clicks on the "Generate Invoice" button to submit the form.
10. The system retrieves the applicable fees for the selected client based on the client-product-fee mapping.
11. The system calculates the fee amounts based on the fee type and frequency:
    * For static fees, the system uses the predefined unit price.
    * For dynamic fees, the system multiplies the unit price by the entered units.
12. If applicable, the system calculates the interchange fee based on the provided interchange amount, minimum interchange amount, and interchange share percentage.
13. The system generates the invoice with line items, tax calculations, and total amounts.
14. The generated invoice data, including invoice details, line items, and amounts, is stored in the database.
15. The user is redirected to a page displaying the generated invoice.
16. The user can view the invoice in the browser or download it as a PDF using the provided options.
17. Regular users can access their invoice history page to view and download previously generated invoices specific to their associated client:
    * The user navigates to the invoice history page.
    * The page displays a list of generated invoices specific to the user's associated client.
    * The user can click on an invoice to view its details or download it as a PDF.

**Instructions on How to Use the Invoice Generator:**

1. Register an account or log in using your existing credentials.
2. If you are an admin user:
   * Navigate to the respective sections for managing clients, issuers, fees, products, mappings, and interchange fees using the navigation menu.
   * Perform the necessary CRUD operations on the entities as required:
     + Add new clients, issuers, fees, or products by filling in the required information in the respective forms.
     + Edit existing client, issuer, fee, or product details by clicking on the "Edit" button and updating the information in the respective forms.
     + Delete clients, issuers, fees, or products by clicking on the "Delete" button next to the respective entity.
   * Map clients to products and fees using the client-product-fee mapping functionality:
     + Navigate to the client-product-fee mapping page.
     + Select a client, product, fee, unit price, start date, and end date from the respective dropdown menus and input fields.
     + Click on the "Submit" button to create the mapping.
   * Specify interchange fees for clients, if applicable:
     + Navigate to the interchange fee management page.
     + Select a client, enter the start date, end date, interchange amount, and minimum interchange amount in the respective input fields.
     + Click on the "Submit" button to save the interchange fee.
3. To generate an invoice:
   * Access the invoice generation page.
   * Select a client from the dropdown menu.
   * Specify the start and end dates for the invoice using the date input fields.
   * If the client has dynamic fees, enter the units for each dynamic fee in the respective input fields.
   * Click on the "Generate Invoice" button to submit the form.
   * The system will generate the invoice based on the selected client, date range, and applicable fees.
   * You will be redirected to a page displaying the generated invoice.
   * You can view the invoice in the browser or download it as a PDF using the provided options.
4. To view your invoice history (for regular users):
   * Access the invoice history page using the navigation menu.
   * The page will display a list of previously generated invoices specific to your associated client.
   * Click on an invoice from the list to view its details or download it as a PDF.