Geolocation Data Management ServiceNow

Project Documentation

1. Introduction

- **Project Name:** Geolocation Data Management

2. Project Overview

- **Objective:**
  To demonstrate proficiency in **ServiceNow full-stack development** by creating an application that integrates a Service Portal UI with a custom table and an external REST API, automating a key business process.
- **Description:**
  Developed an end-to-end ServiceNow application for **Geolocation Data Management**. The solution features a modern Service Portal widget that captures user input and, through a robust **server-side script**, initiates a secure **REST API call** to ipgeolocation.io. The application dynamically parses the complex JSON response and persists the data in a custom table using Glide Record, showcasing expertise in **data modelling and external system integration**.

3. Project Ideation Phase

- **Project Title:** Geolocation Data Management
- **Problem Statement:** To automate the process of retrieving, storing, and displaying geolocation information for any given IP address, eliminating the need for manual lookups and providing a centralized data repository for analysis and reporting.

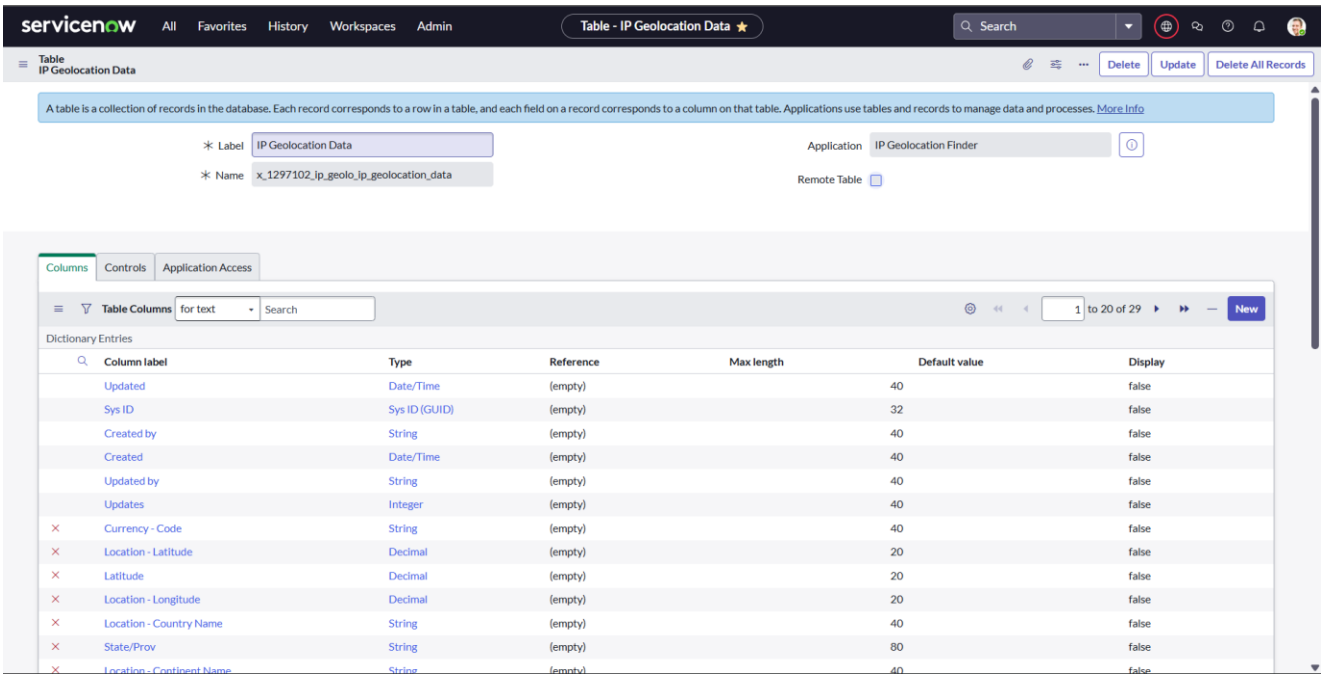
4. Requirement Analysis Phase

- **Tables:** Define a custom table (x_1297102_ip_geolo_ip_geolocation_data) to store comprehensive geolocation data.
- **API Integration:** Make an outbound REST API call to ipgeolocation.io to retrieve data.
- **Scripting:** Create a Server Script to handle the API call, parse the nested JSON response, and map the data to the correct table fields.
- **UI:** Design and implement a Service Portal widget with an input field, a button, and a dynamic table to display the results.
- **Results:** Test the outcome by verifying that the UI populates with data and a new record is created in the table after each lookup.
- **Conclusion:** Evaluate the success of the application's functionality and its readiness for deployment.

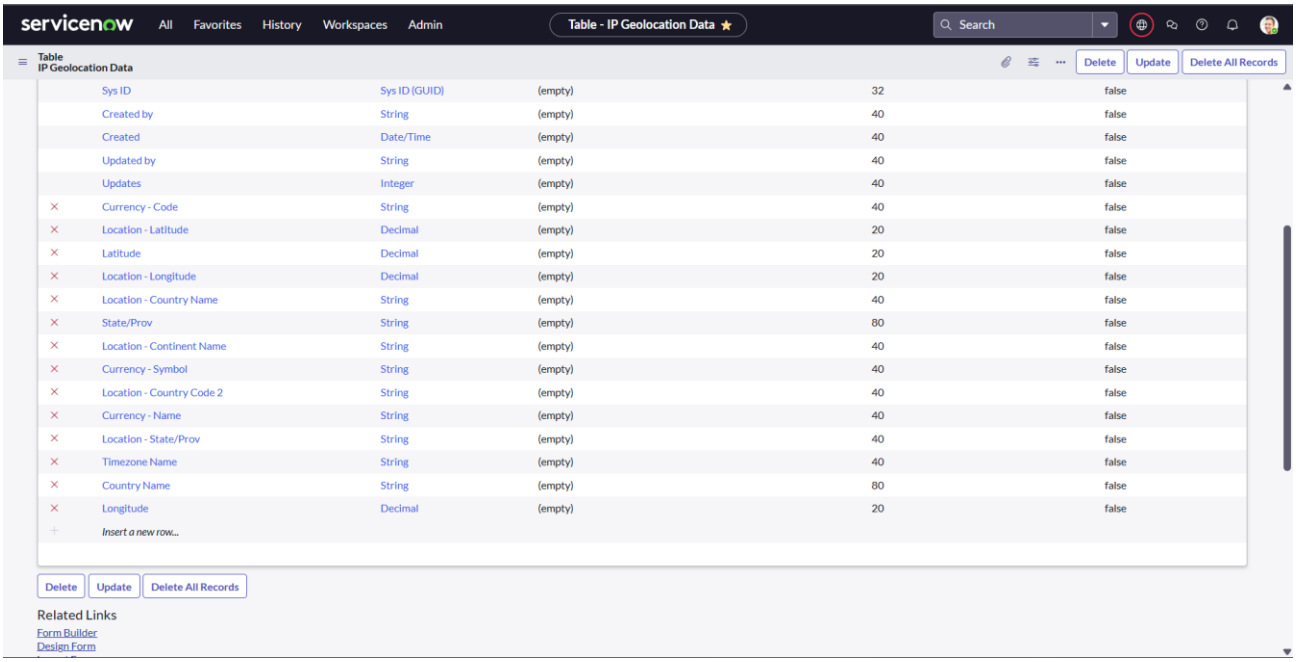
5. Project Design Phase

1. Create Table

- Open service now.
- Click on **All** >>System Definition >> search for **Tables**
- Click on **New**



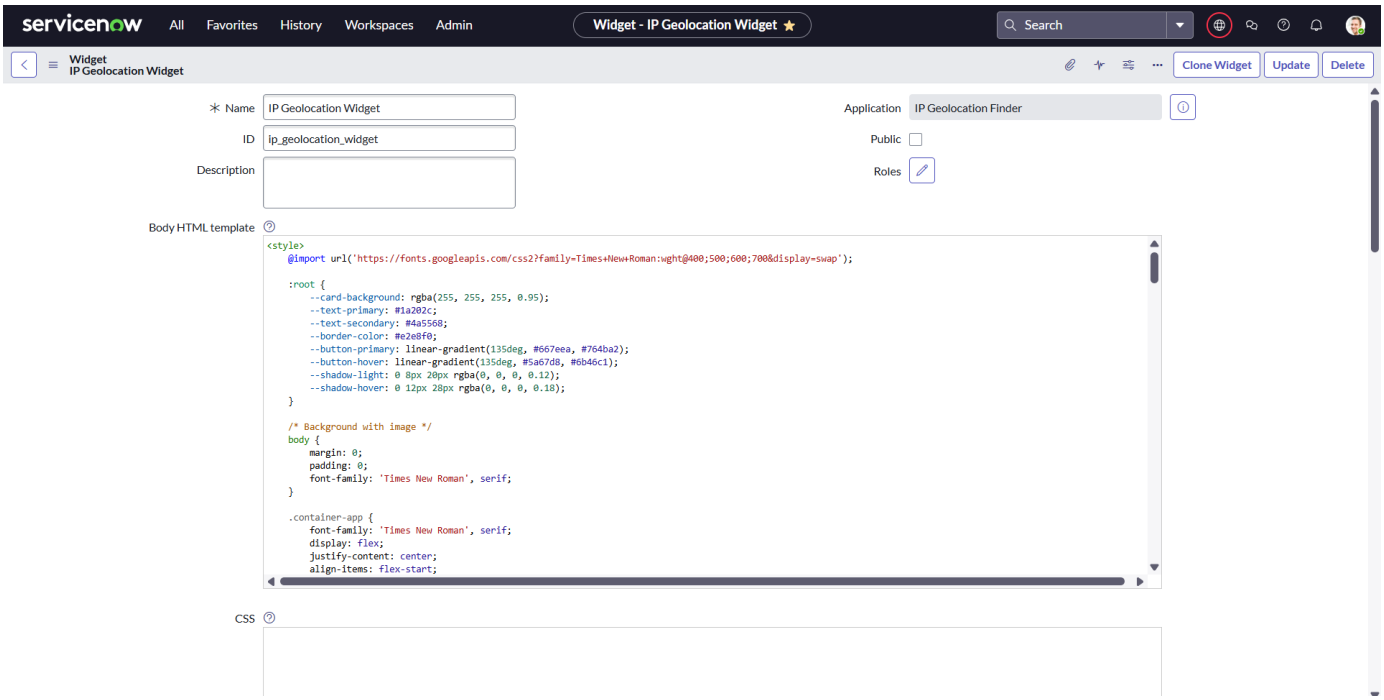
- Fill the following details to create a new Table



- Click on **submit**

2. Widget

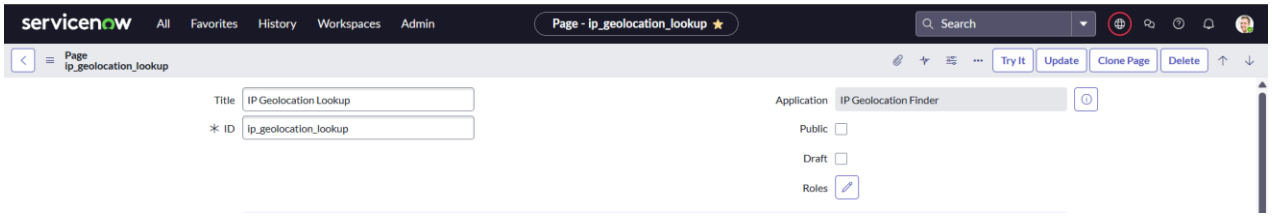
- Click on **All** >> **System UI** >>Widgets
- Click on **New**, the form will open



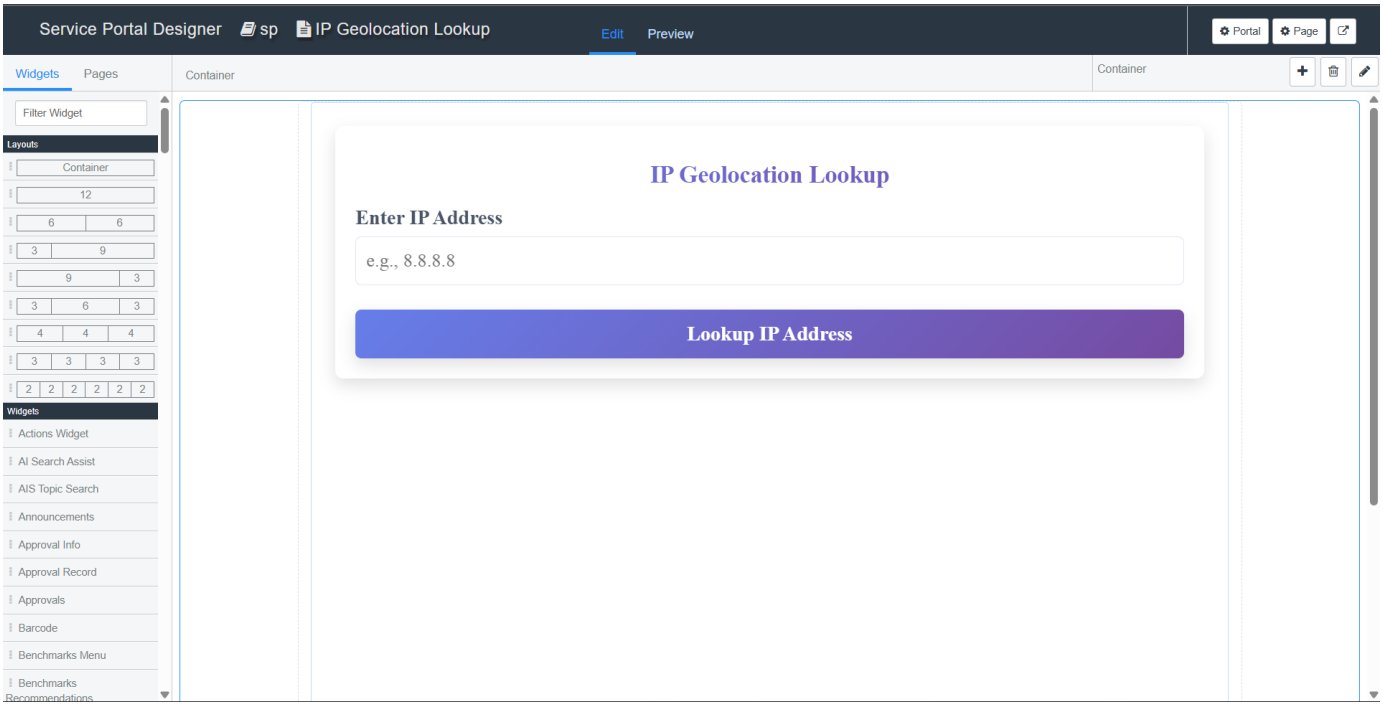
- Fill the details
- Click Save or Submit
- Add your HTML code in the Body HTML Template section
- Add the Server-Side Scripting to call the ip geolocation api
- Enter the Client Script to call the server script when Look Ip Address button is clicked
- Click on Submit

3. Pages

- Click on **All** >>**Service Portal** >>Pages
- Click on **New**, the form will open
- Enter the following details



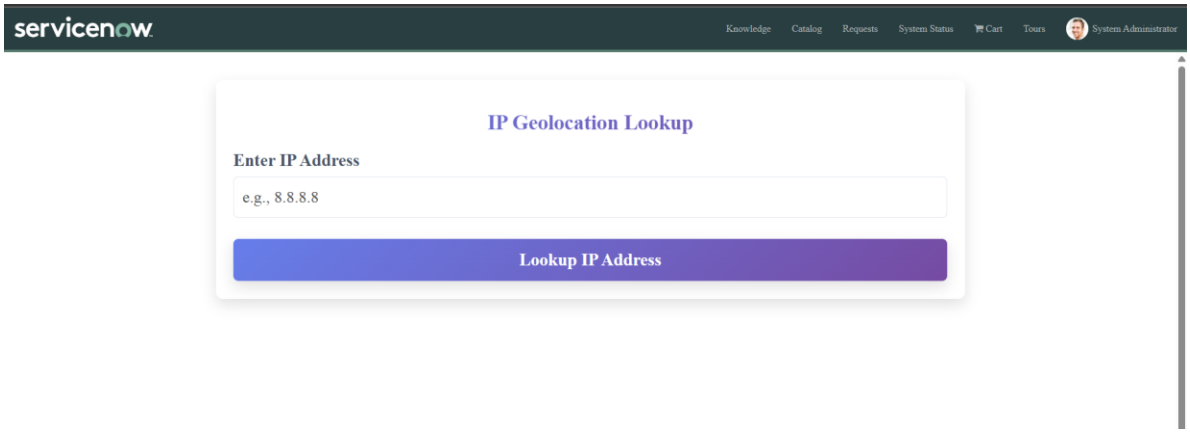
- Click Save or Submit
- Few Links will be activated at bottom
- Click on Open in Designer Link



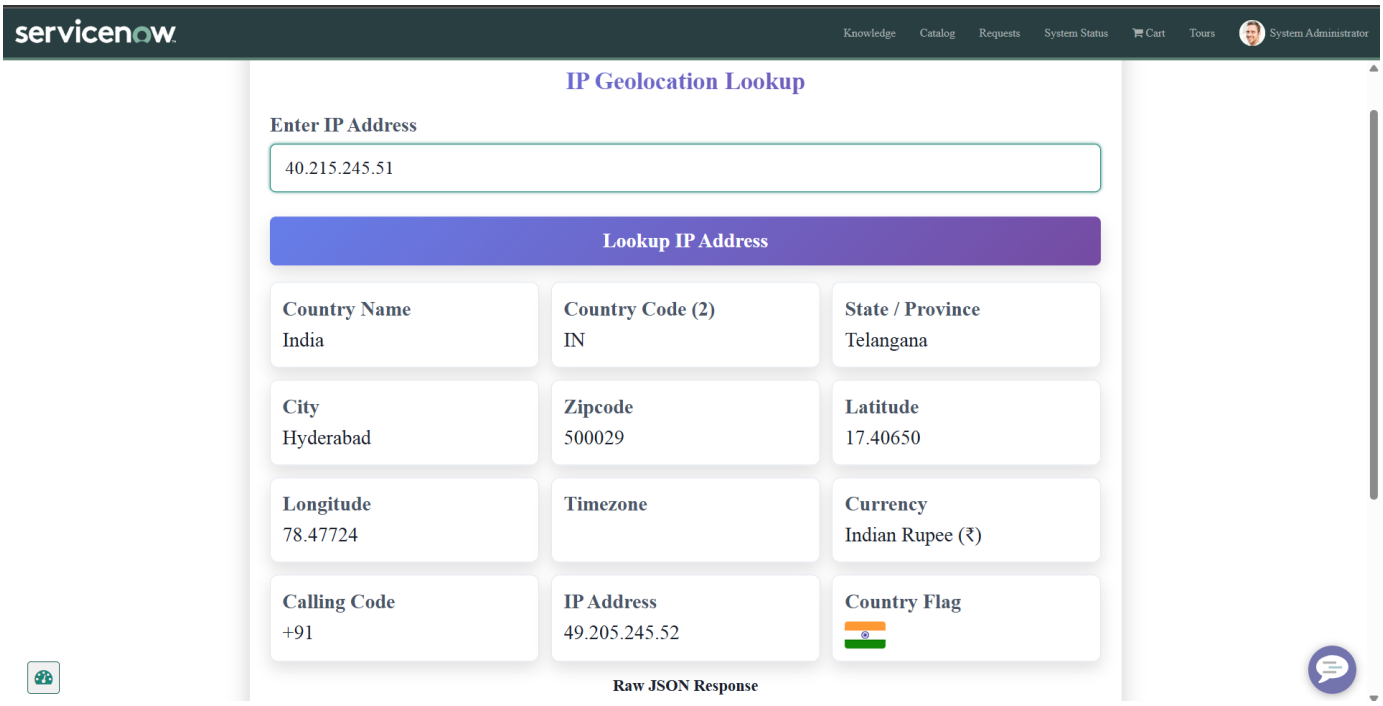
- Choose a container from layout
- Select the Grid
- Add the Widget to the container by dragging and dropping

6. Performance & Functional Testing Phase

- Navigate to the application by appending this snippet to the URL (sp?id=ip_geolocation_lookup)



- Enter any valid Ip address and Click on Lookup IP Address button



- All the Geolocation Information is retrieved and displayed in the UI

7. Final Conclusion

The Geolocation Data Management Application demonstrates ServiceNow development skills in UI design, API integration, backend logic, and database management. It provides a practical, efficient, and user-friendly solution for IP-based geolocation lookups.