



Inspection Analysis Automation

AUTOMATED ETL-BASED REPORTING SYSTEM

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Objective


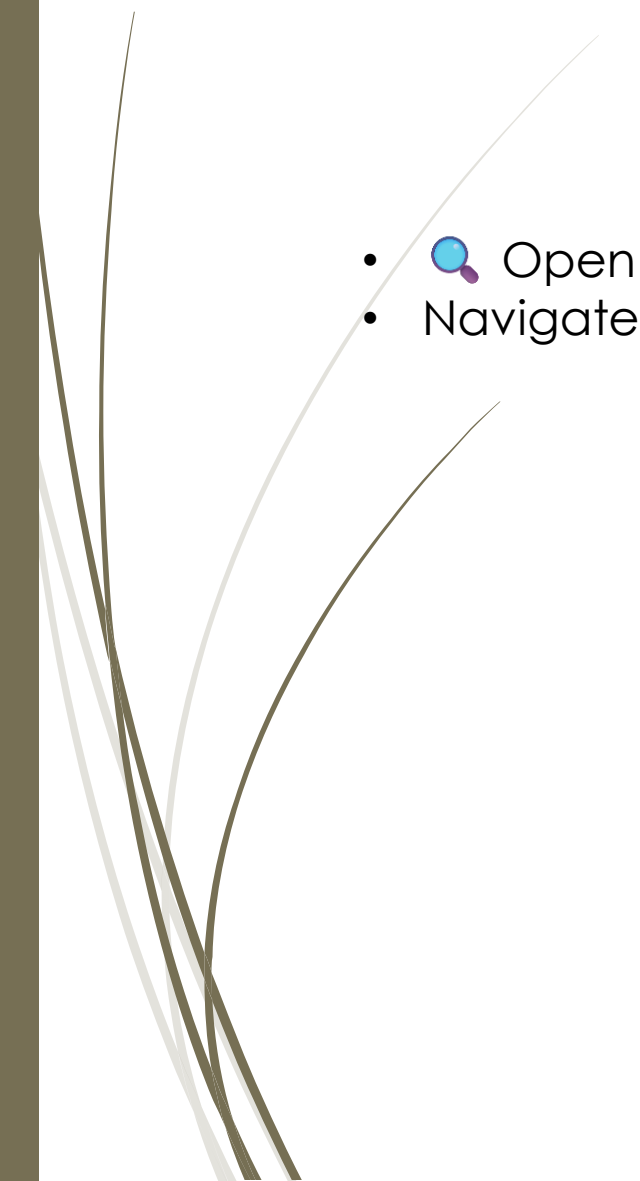
Goal:

To automate the weekly/monthly inspection report generation across all officer types using browser automation and analysis.



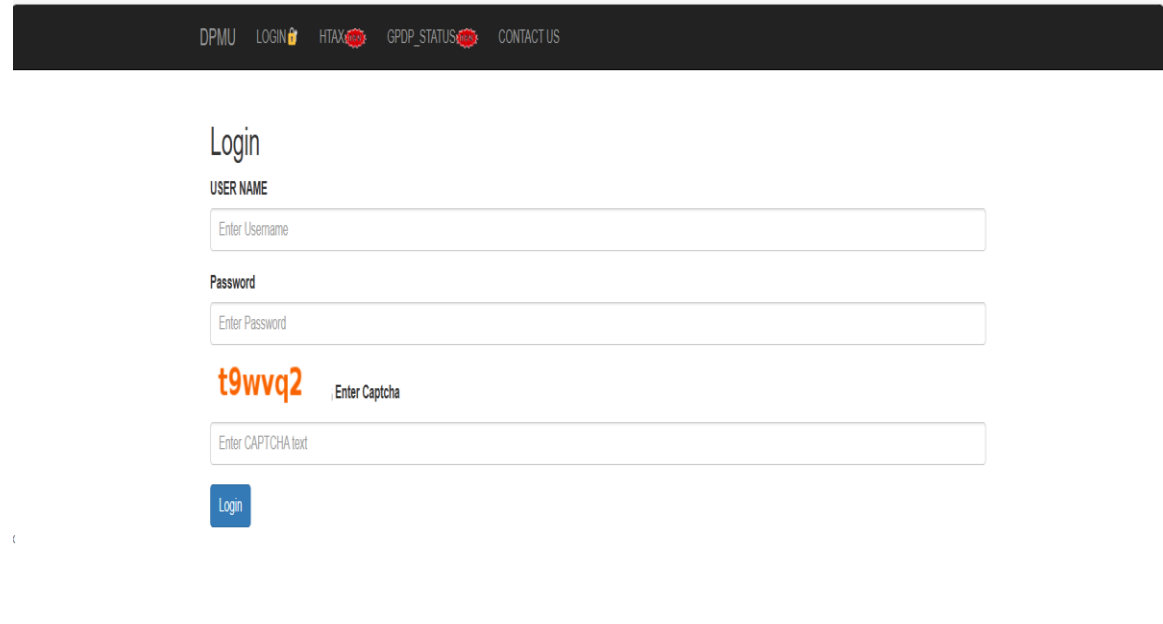





Step 1 – Browser Initialization

-  Open headless browser using Selenium
 - Navigate to the portal
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Step 2 – Login Process

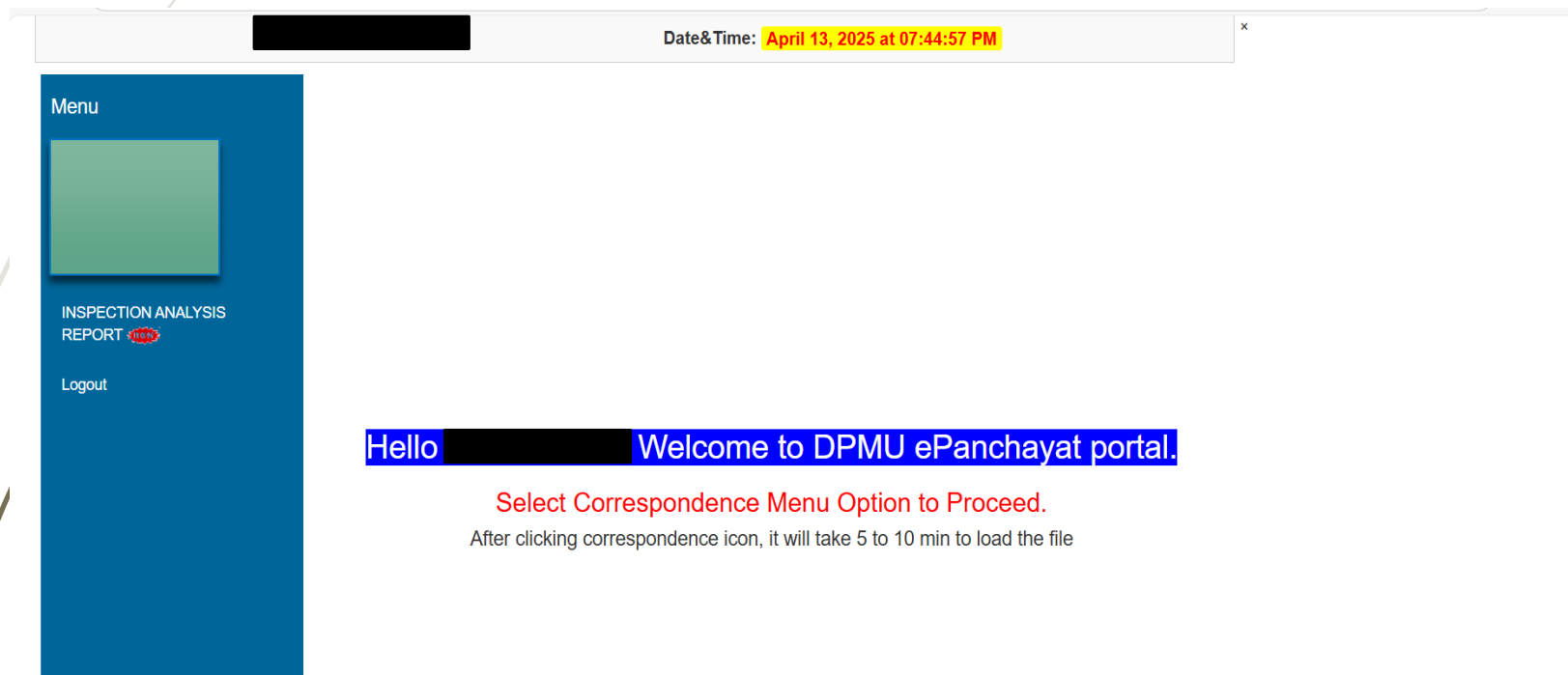
-  Click on **Login Button**
-  Enter **User Credentials**




The screenshot shows a web application interface with a dark navigation bar at the top containing links: DPMU, LOGIN , HTAX , GDP_STATUS , and CONTACT US. Below the navigation bar is a 'Login' section. It includes a 'USER NAME' label and a text input field with placeholder text 'Enter Username'. Below that is a 'Password' label and a text input field with placeholder text 'Enter Password'. A CAPTCHA challenge is displayed with the text 't9wvq2' and a label 'Enter Captcha'. Below the CAPTCHA is a text input field with placeholder text 'Enter CAPTCHA text'. At the bottom of the login section is a blue 'Login' button.

Step 3 – Select Report Type

- Click on "**Inspection Analysis Report**" option in the dashboard




Step 4 – Input Dates

-  Select **Start Date** and **End Date**
- Can choose:
 - Weekly Period
 - Monthly Period

:: INSPECTION ANALYSIS REPORT ::


From Date

04/07/2025



To Date

04/12/2025



Submit



Step 5 – Submit Request

- Click **Submit**
 - Request sent to backend with selected dates
- 



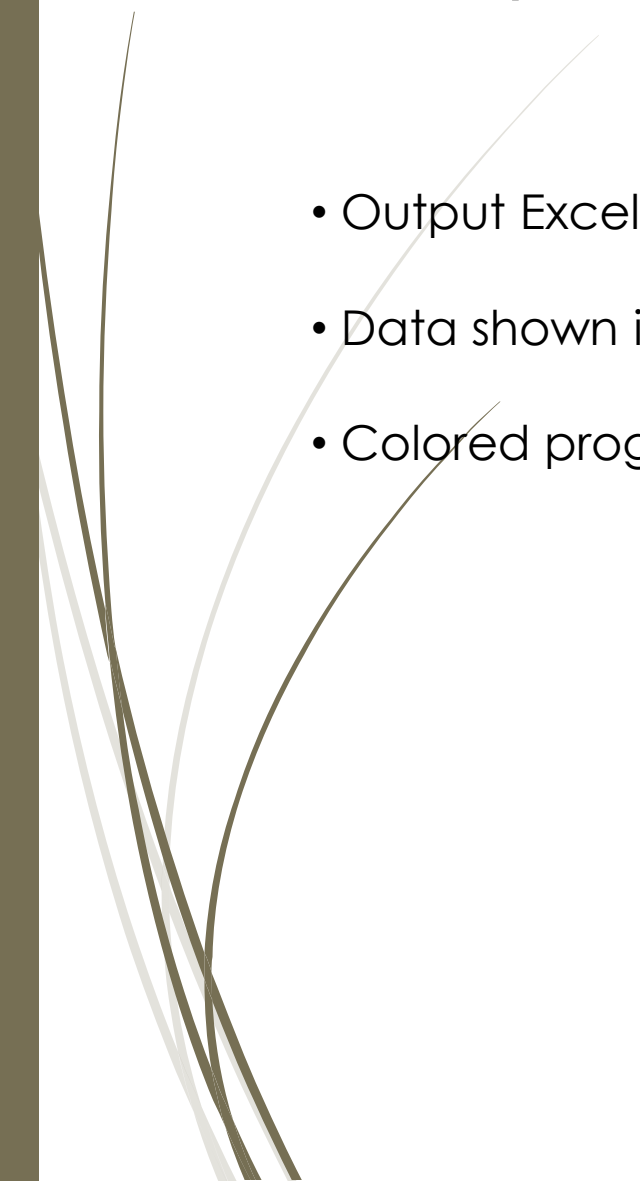
Step 6 – Backend ETL Process

ETL Breakdown:

- **Extract:** Pull inspection data from all Officer types (MPO, DLPO, DPO etc)
- **Transform:**
 - Group by Mandal
 - Compare against targets
 - Add percentage accomplishment
- **Load:** Save processed data into Excel file



Step 7 – Display Result

- Output Excel file is read and shown on web UI
 - Data shown in **descending order of performance**
 - Colored progress bars to show % achievement
- 

Step 7 – Display Result

MPO Inspections

From Date

03/03/2025

To Date

03/31/2025

Submit

Statement showing the Inspections report of Mandal Panchayat Officers of Peddapalli District as on 13-04-25

Sl.No	Mandal Name	Week Target	Total Target	2025-03-03	2025-03-10	2025-03-17	2025-03-24	2025-03-31	Completed	Balance	% Completed
1	Mutharam (Manthani)	4	16	6	5	4	5	3	23	-7	143.75%
2	Odela	4	16	5	4	5	4	3	21	-5	131.25%
3	Sulthanabad	4	16	5	5	3	4	3	20	-4	125.0%
4	Kamanpur	4	16	4	5	4	4	2	19	-3	118.75%
5	Dharmaram	4	16	4	4	5	4	2	19	-3	118.75%
6	Julapalli	4	16	6	6	5	0	2	19	-3	118.75%
7	Manthani	4	16	5	3	4	4	3	19	-3	118.75%
8	Palakurthy	4	16	4	4	5	2	3	18	-2	112.5%
9	Peddapalli	4	16	3	4	4	4	3	18	-2	112.5%
10	Ramagiri	4	16	0	5	6	6	1	18	-2	112.5%
11	Srirampur	4	16	4	4	4	6	0	18	-2	112.5%
12	Anthergaon	4	16	4	3	3	3	4	17	-1	106.25%
13	Eligaid	4	16	4	4	4	4	0	16	0	100.0%
14	Total	52	208	54	56	56	50	29	245	-37	117.79%

DLPO & DPO Inspection







Statement showing the Inspections report of Divisional Level Panchayat Officers of Peddapalli District as on 13-04-25					
Sl.No	Division Name	Target	Completed	Balance	% Completed
1	MANTHANI	10	14	-4	140%
2	PEDDAPALLI	10	18	-8	180%
3	Total	20	32	-12	160%

Statement showing the Inspections report of District Panchayat Officer of Peddapalli District as on 13-04-25					
Sl.No	District Name	Target	Completed	Balance	% Completed
1	Peddapalli	5	12	-7	240%

Download Raw Data

Download Analysis Report

Technologies Used

-  Python
-  Flask (Web Framework)
-  Selenium (Web Scraping)
-  Pandas + Excel for analysis
- HTML & CSS
-  Docker
-  Render.com for cloud deployment



Benefits



- Saves time and manual effort
- Accurate inspection analysis
- Auto-updated Excel reports



Thank You 🙏