

FINAL PROJECT DEMO

AUTOMATING MNREGA BILLING

By Pooja Jha

Problem Statement

Rural India is changing. Under the **MNREGA** scheme (Mahatma Gandhi National Rural Employment Guarantee Act) the government guarantees work to rural populations for development: building roads, community centers, sports grounds, and more.

My dad is a contractor working in **Bihar**, a state with **38 districts**, hundreds of **blocks**, and thousands of **panchayats**. These panchayats are the heart of local governance, each one managing small-scale development. The government enables contractors like my dad to carry out this work, but contractors must first **fund** the projects **themselves**. Only after completing the work and submitting **detailed invoices** can they apply for reimbursement.

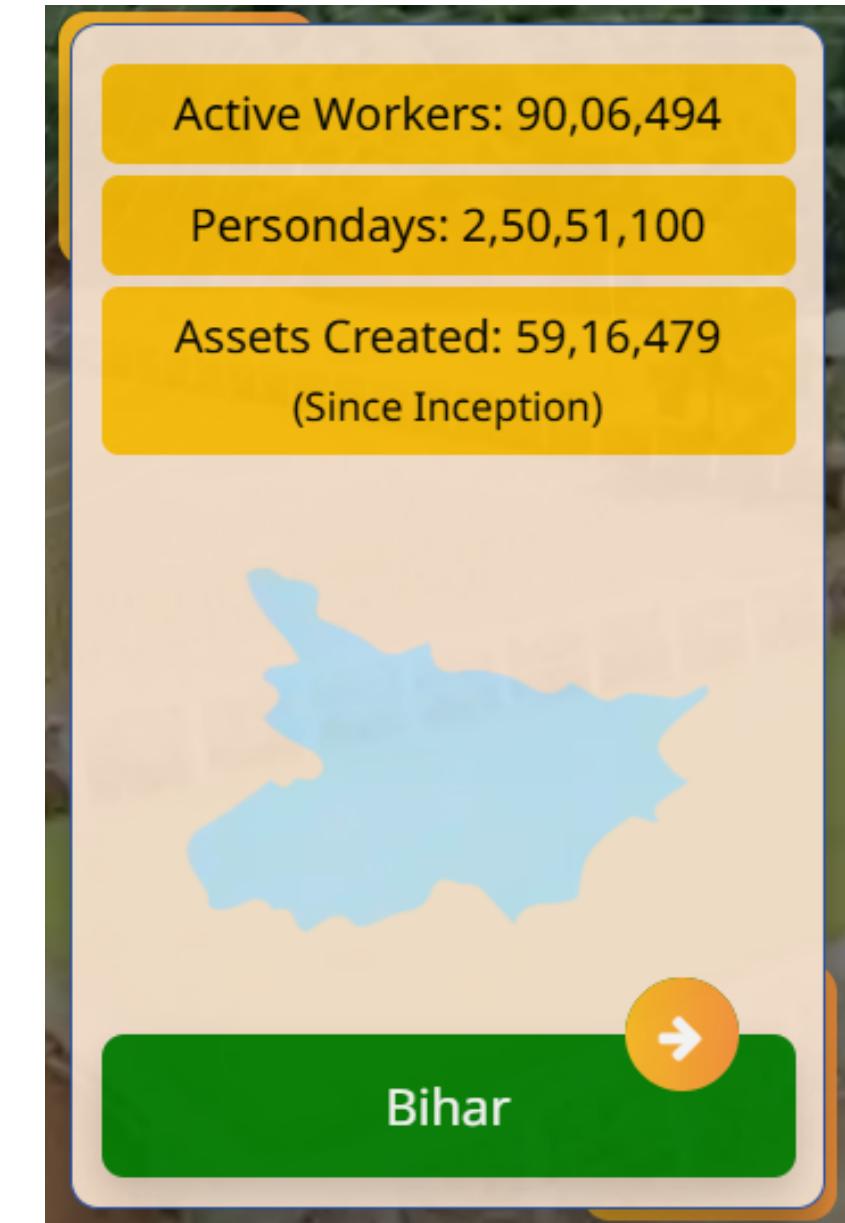
This makes it critical for vendors to carefully track every invoice, purchase, and deadline. A single **delay** or oversight can mean months of **postponed payments** or **no payment** at all.

And all of this operates in a system where the **technical infrastructure** is **barely functional**. There's no standardized database to search, filter, or compare records; **just HTML reports** buried deep in government portals.



ग्रामीण विकास मंत्रालय

Ministry of Rural Development
Government of India



The Manual Chaos

Data from the ground is collected **manually** or updated via shared Google Sheets.

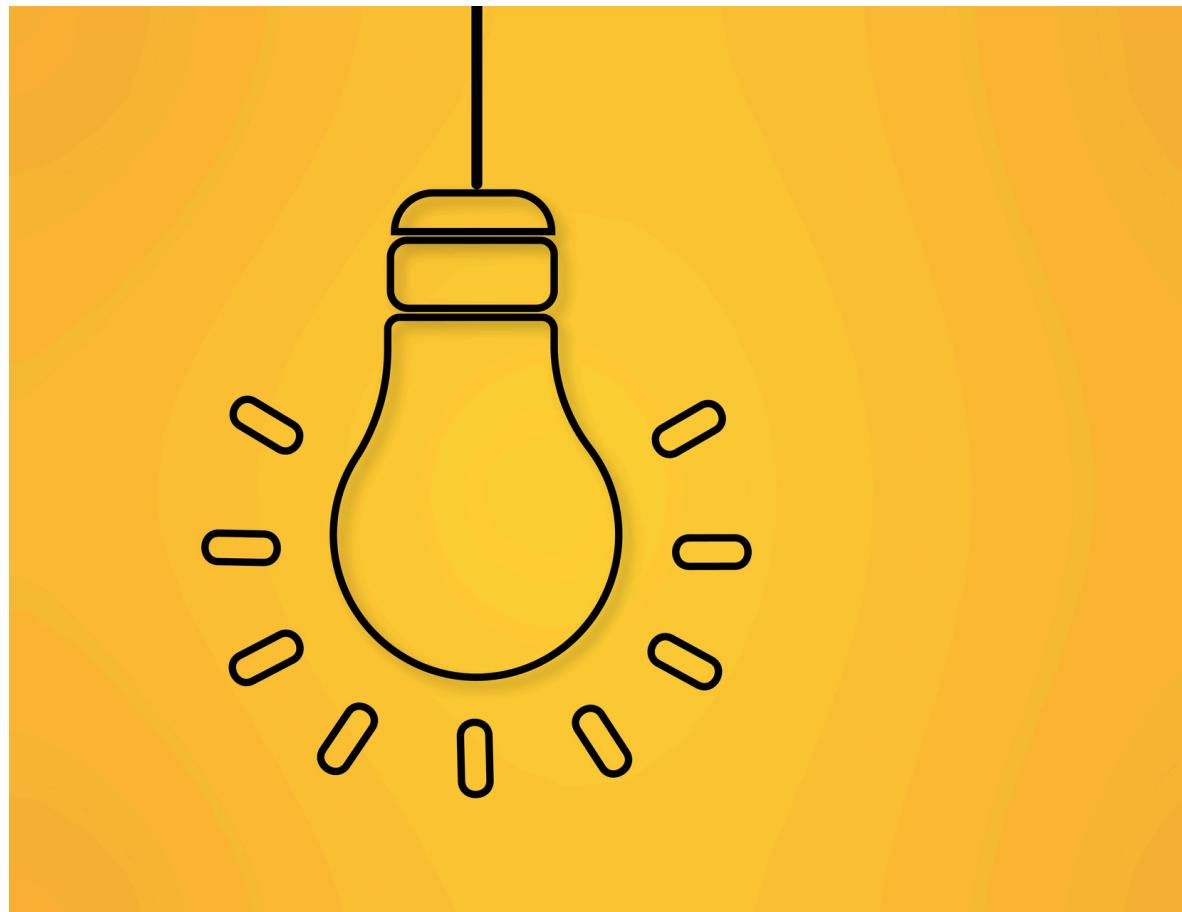
At the end of each financial year, my dad needs to generate detailed **tax invoices** based on **dozens of projects** across **multiple villages** and submit them to the government for payment clearance. A failure in submitting it on time delays the payment for that year and **leads to a loss** in time as well as money.

This year, nearly **30-40%** of the bills couldn't be submitted on time. That's **lost revenue**, and **wasted effort**.



My Solution

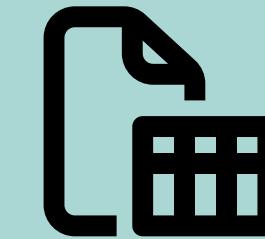
The Code automates the extraction of **vendor**, **bill**, and **material** data from **HTML** files and organizes it into a structured **Excel** sheet. This **simplifies data tracking**, reduces **human error**, and lays the groundwork for a future **inventory management** and **tax invoice** system.



Key Features



Parses messy HTML files to extract tabular data.



Outputs clean Excel spreadsheets organized by vendor, material, and bill.



Supports multiple files.

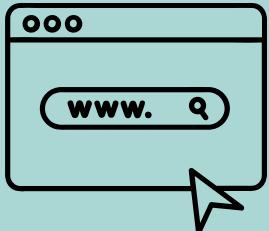


Easy to use and adaptable for other rural contracting use cases.

How MNREGA billing works

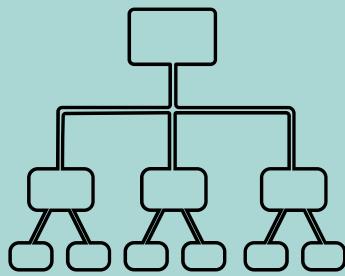
The Website

All bill-related reports are published on the MNREGA official website:
[MNREGA](http://www.mnrega.nic.in)



The Structure

Each bill report can be found under material procured section



What a bill report looks like

Contains multiple bills within tables.



The Mahatma Gandhi National Rural Employment Guarantee Act
Gram Panchayat Module

Govt. of India
Ministry of Rural Development
Department of Rural Development
10-May-2025 08:15:59 PM [home](#)

REPORTS

State* : BIHAR
Financial Year :

District* :
Block* :
Panchayat* :

Designed & Developed By NIC-DRD Informatics Centre, Krishi Bhawan, New Delhi

Feedback:::mailto:nicdrd[at]nic[dot]in

1. Job Card Related Reports
1. Registration State Wise
2. Job Card Not In Use
3. Job card/Employment Register
4. Registration Application Register
5. Pending JobCards to be Verified

R2.Demand, Allocation & Musterroll
1. Demand for Work
2. Employment Offered
3. 100 Days Employment Exhausted
4. Unemployment Allowances
5. Alert On Attendance
6. Work Status
7. Material Procured Report
8. Muster Roll

R3.Work
1. Work Expenditure
2. Employment Exhausted For Work

1. Wage Material Ratio Analysis
2. Fortnight Muster Wise Labour Engaged

R5.IPPE
1. Application Register
2. List of work

R6.Registers
1. Register No. 1 Part-A
2. Register No. 1 Part-B
3. Register No. 1 Part-C
4. Register No. 1 Part-D
5. Work Register
6. Material Register
7. Complaint Register

MGNREGA

The Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA)

Sunday, May 11, 2025

Back

State:BIHAR	District:MADRUBANI	Block:BIJSFI	Panchayat:BIJSFI
<small>Work Code : यांत्रिक सेवाएँ में विद्युतित +2 उच्च विद्युतित स्थल पर महात्मा गांधी नरेगा क्षेत्र परसर का निर्माण कार्य (0520005004/AV/20451558)</small>			
Bill No. : 247	Bill Amount : 162711.96	Bill Date : 31/03/2025	Date of Payment : 2024-2025
Vendor name : YADDU COMMERCIAL	Unit Price (In Rupees)	Quantity	Amount (In Rupees)
Material	0	0	1140.6
TDS on CGST	Bill Amount : 162711.96	Bill Date : 31/03/2025	Date of Payment : 2024-2025
Bill No. : 247	0	0	1140.6
Vendor name : YADDU COMMERCIAL	Unit Price (In Rupees)	Quantity	Amount (In Rupees)
Material	0	0	1140.6
Bill No. : 247	Bill Amount : 162711.96	Bill Date : 31/03/2025	Date of Payment : 2024-2025
Vendor name : YADDU COMMERCIAL	Unit Price (In Rupees)	Quantity	Amount (In Rupees)
Material	100.8	34.61	3488.69
Bill No. : 247	Bill Amount : 162711.96	Bill Date : 31/03/2025	Date of Payment : 2024-2025
Vendor name : YADDU COMMERCIAL	Unit Price (In Rupees)	Quantity	Amount (In Rupees)
Material	0	0	4813
Bill No. : 247	Bill Amount : 162711.96	Bill Date : 31/03/2025	Date of Payment : 2024-2025
Vendor name : YADDU COMMERCIAL	Unit Price (In Rupees)	Quantity	Amount (In Rupees)
Material	507.91	14.79	7511.99
Bill No. : 247	Bill Amount : 162711.96	Bill Date : 31/03/2025	Date of Payment :

How I processed the reports

Libraries Used

BeautifulSoup4: To parse HTML content and extract data.

Glob: To find all .html files in the content folder.

openpyxl: To write data into Excel workbook.

Custom Library

billclass: Contains all classes and related functions for bill, vendor and materials.

Class Design

class BillData: Stores information related to bills
The bill number, bill amount, bill date and date of payment.

class MaterialData: Stores information related to materials used for the bill related work
The material, unit price, quantity and the amount.

class VendorData(BillData, MaterialData): Inherits from BillData and MaterialData to store all information about the vendor.

Extraction Logic

Parsed the HTML file using BeautifulSoup4

Located **Block** and **Panchayat** from Table 3

Starting from Table 5, found:

- **Bill Info**: bill_row
- **Vendor info**: vendor_row
- **Material heading**: material_row
- **Material Info**: material_value_row

Only included **vendors associated with the business**.

Stored data in **dictionaries**.

Code Walkthrough

Reading data from HTML file

Using [Beautiful Soup](#), I read the HTML file and filtered out all the tables within the file into a variable.

The `find_all` function from the BeautifulSoup4 is used for filtering all elements of a specific type.

This variable is later used to read individual table data for parsing.



```
with open(html_file, 'r') as f:  
    soup = BeautifulSoup(f, 'html.parser')  
    tables = soup.find_all('table')
```

Contents of the table

Bill No. : 111	Bill Amount : 58303.37	Bill Date : 20/05/2024	Date of Payment :
Vendor name : MITHILA TOOL KITS HARDWARE AND NURSERY		Financial Year : 2024-2025	
Material	Unit Price (In Rupees)	Quantity	Amount (In Rupees)
7329-Single clip	59	0.53	31.27

`bill_row`

`= rows[i-1]`

`vendor_row`

`= rows[i]`

`material_row`

`= rows[i+1]`

`material_value_row = rows[i+2]`

class BillData:

Contains attributes and methods related to a Bill.

This class helps read the bill data part of the HTML file and parse the data.

bill_no	bill_amt	bill_date	bill_dop
Bill No. : 111	Bill Amount : 58303.37	Bill Date : 20/05/2024	Date of Payment :
Vendor name : MITHILA TOOL KITS HARDWARE AND NURSERY		Financial Year : 2024-2025	
Material	Unit Price (In Rupees)	Quantity	Amount (In Rupees)
7329-Single clip	59	0.53	31.27

```
class BillData:  
    bill_no = None # the bill number  
    bill_amt = None # the bill amount  
    bill_date = None # the date on which the bill was generated  
    bill_dop = None # the date of payment  
  
    def __init__(self, bill_row):  
        """  
        calls the set_bill_data function with bill_row  
        """  
  
    def set_bill_data(self, bill_row):  
        """  
        reads the columns in the bill row  
        calls the set_bill_no, set_bill_amt, set_bill_date, and set_bill_dop  
        """  
  
    def get_bill_data_dict(self):  
        """  
        return a dict containing the bill data  
        """  
  
    def set_bill_no(self, bill_no):  
        """  
        set bill_no attribute using the "Bill No." column  
        """  
  
    def set_bill_amt(self, bill_amt):  
        """  
        set bill_amt attribute using the "Bill Amount" column  
        """  
    def set_bill_date(self, bill_date):  
        """  
        set bill_date attribute using the "Bill Date" column  
        """  
    def set_bill_dop(self, bill_dop):  
        """  
        set bill_no attribute using the "Date of Payment" column  
        """
```

class MaterialData:

Contains attributes and methods related to a Material.

This class helps read the material data part of the HTML file and parse the data.

Bill No. : 111	Bill Amount : 58303.37	Bill Date : 20/05/2024	Date of Payment :
Vendor name : MITHILA TOOL KITS HARDWARE AND NURSERY		Financial Year : 2024-2025	
Material	Unit Price (In Rupees)	Quantity	Amount (In Rupees)
7329-Single clip	59	0.53	31.27

material unit_price quantity amount

```
class MaterialData:  
    material = None # the material that was purchased  
    unit_price = None # the unit price of the material  
    quantity = None # the quantity of material purchased  
    amount = None # unit_price * quantity  
  
    def __init__(self, material_value_row):  
        """  
            calls the set_material_data function with material_value_row  
        """  
  
    def set_material_data(self, material_value_row):  
        """  
            reads columns in the material_value_row  
            sets the attributes defined above  
        """  
  
    def get_material_data_dict(self):  
        """  
            return a dict containing the material data  
        """
```

class VendorData:

Contains attributes and methods related to a Vendor.

Inherits from BillData and MaterialData

This class helps read the vendor data part of the HTML file and parse the data.

Bill No. : 111	Bill Amount : 58303.37	Bill Date : 20/05/2024	Date of Payment :
Vendor name : MITHILA TOOL KITS HARDWARE AND NURSERY		Financial Year : 2024-2025	
Material	Unit Price (In Rupees)	Quantity	Amount (In Rupees)
7329-Single clip	59	0.53	31.27

fin_year

vendor_name

```
class VendorData(BillData, MaterialData): # inherits from MaterialData and BillData

    vendor_name = None # the name of the vendor
    fin_year = None # the financial year

    def __init__(self, vname, vendor_row, bill_row, material_value_row):
        """
            calls the set_vendor_data function with vendor name, vendor row, bill row,
            and material value row
        """

    def set_fin_year(self, vendor_row):
        """
            reads the financial year from the vendor row
        """

    def set_vendor_data(self, vname, vendor_row, bill_row, material_value_row):
        """
            sets the vendor name and financial year
            calls the set function in bill and material classes
        """

    def get_data_dict(self):
        """
            returns a dict containing the data for the vendor, bill, and material
        """
```

String Functions

String functions like `replace` and `strip` were useful for getting the relevant content from the HTML file.



```
def set_bill_no(self, bill_no):
    self.bill_no = bill_no.replace("Bill No.", "").replace("\n", "").replace(":", "").strip()
```

Putting it all together

```
data = []  
data_tables = tables[5:] # in all html files, the actual data starts from the 5th table  
  
for table in data_tables:  
    rows = table.find_all('tr')  
    i = 0  
    while( i < len(rows) ):  
        if any(vendor_name in rows[i].get_text().lower() for vendor_name in vendor_names):  
            vendor_name = next(vendor_name for vendor_name in vendor_names if vendor_name in rows[i].get_text().lower())  
            bill_row      = rows[i-1]  
            vendor_row    = rows[i]  
            material_row  = rows[i+1]  
            material_value_row = rows[i+2]  
  
            ven_data = VendorData(vendor_name, vendor_row, bill_row, material_value_row)  
            vendor_data = ven_data.get_data_dict()  
            data.append(vendor_data)  
  
            i = i + 3  
            continue  
        else:  
            i = i + 1
```

data list to store all vendor data

filter all tables

check if the row contains one of the desired vendors

filter all tables

increase i by 3 if the vendor data was added otherwise, increase by 1

get data dict for vendor (contains vendor, bill, and material info)

create vendor class with all row data

Writing to Excel

This part of the code writes the vendor data to the Excel file.

The Excel is loaded as a workbook (created if it does not exist).

For a given block, all vendor data is added to the Excel file.

This was achieved using the [openpyxl](#) library.

```
try:  
    wb = load_workbook(excel_file)  
    ws = wb.active  
except FileNotFoundError:  
    wb = Workbook()  
    ws = wb.active  
    ws.append(["Block", "Panchayat", "Vendor Name",  
              "Bill No", "Bill Amount",  
              "Bill Date", "Bill DOP", "Financial Year",  
              "Material", "Unit Price",  
              "Quantity", "Amount"]) # Add header row  
  
for vendor_data in data:  
    ws.append([block, panchayat,  
              vendor_data["vendor_name"],  
              vendor_data["bill_no"],  
              vendor_data["bill_amt"], vendor_data["bill_date"],  
              vendor_data["bill_dop"], vendor_data["fin_year"],  
              vendor_data["material"], vendor_data["unit_price"],  
              vendor_data["quantity"], vendor_data["amount"]])  
  
wb.save(excel_file)
```

**Contents of the folder
submitted as part of the
assignment**

Folder Structure

Content Folder: contains all the HTML files

Before running the code

Pooja - Personal > Desktop > Python Files > FinalProject >				
Name	Status	Date modified	Type	Size
main	✓	10-05-2025 18:20	Python File	4 KB
billclass	✓	09-05-2025 16:16	Python File	4 KB
content	✓	10-05-2025 12:39	File folder	



Pooja - Personal > Desktop > Python Files > FinalProject > content				
Name	Status	Date modified	Type	Size
AndharathiGangdwar	✓	10-05-2025 11:14	HTML File	1,000 KB
BenipattiArerSouth	✓	10-05-2025 10:56	HTML File	592 KB
BisfiBisfi	✓	10-05-2025 11:02	HTML File	1,536 KB
JainagarBaira	✓	09-05-2025 18:06	HTML File	781 KB
JainagarBelhiSouth	✓	09-05-2025 18:04	HTML File	940 KB
JainagarBelhiWest	✓	09-05-2025 17:57	HTML File	531 KB
JainagarDeodhaNorth	✓	09-05-2025 17:33	HTML File	2,368 KB
JainagarDeodhaSima	✓	09-05-2025 17:41	HTML File	1,595 KB
JainagarDorwara	✓	09-05-2025 18:03	HTML File	806 KB
JainagarJainagarBasti	✓	09-05-2025 17:43	HTML File	518 KB
JainagarKordhiya	✓	09-05-2025 18:01	HTML File	1,188 KB
JainagarRajauli	✓	09-05-2025 17:46	HTML File	2,166 KB
KaluahiNararWest	✓	10-05-2025 11:11	HTML File	1,128 KB
RahikaJagatpur	✓	10-05-2025 11:07	HTML File	969 KB

After running the code

Pooja - Personal > Desktop > Python Files > FinalProject >				
Name	Status	Date modified	Type	Size
main	✓	10-05-2025 14:03	Python File	4 KB
vendor_bill_data	✓	10-05-2025 13:49	Microsoft Excel W...	549 KB
billclass	✓	09-05-2025 16:16	Python File	4 KB
content	✓	10-05-2025 12:39	File folder	
pycache	✓	09-05-2025 18:59	File folder	



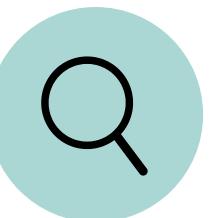
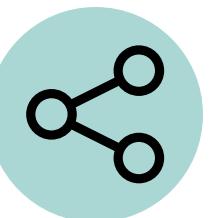
Output Excel Workbook

Sheet													
A	B	C	D	E	F	G	H	I	J	K	L	M	
1	Block	Panchayat	Vendor Name	Bill No	Bill Amount	Bill Date	Bill Due	Financial Year	Material	Unit Price	Quantity		
2	ANDHARATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	TDS on CGS 0	0	✓	779.73				
3	ANDHARATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	TDS on CGS 0	0	✓	779.73				
4	ANDHARATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	MR2421-Co 30	100	✓	3000				
5	ANDHARATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	MR2421-PL 35	100	✓	3500				
6	ANDHARATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	Centre GST 0	0	✓	5919.83				
7	ANDHARATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	State GST 0	0	✓	5919.83				
8	ANDHARATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	MR2424-ha 10600	5	✓	10600				
9	ANDHARATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	10-Miscella 67372.88	1	✓	67372.88				
10	ANDHARATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	TDS on CGS 0	0	✓	779.73				
11	ANDHARATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	TDS on CGS 0	0	✓	779.73				
12	ANDHARATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	MR2430-Cg 30	100	✓	3000				
13	ANDHARATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	MR2421-PL 35	100	✓	3500				
14	ANDHARATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	Centre GST 0	0	✓	5919.83				
15	ANDHARATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	State GST 0	0	✓	5919.83				
16	ANDHARATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	MR2424-ha 10600	5	✓	10600				
17	ANDHARATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	10-Miscella 67372.88	1	✓	67372.88				
18	ANDHARATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	TDS on CGS 0	0	✓	779.73				
19	ANDHARATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	TDS on CGS 0	0	✓	779.73				
20	ANDHARATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	MR2430-Co 30	100	✓	3000				
21	ANDHARATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	MR2421-PL 35	100	✓	3500				
22	ANDHARATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	Centre GST 0	0	✓	5919.83				
23	ANDHARATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	State GST 0	0	✓	5919.83				
24	ANDHARATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	MR2424-ha 10600	5	✓	10600				
25	ANDHARATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	10-Miscella 67372.88	1	✓	67372.88				
26	ANDHARATI GANGDWAR	mithila tool kits h 679	84472.88	05/08/2024	2024-2025	TDS on CGS 0	0	✓	779.73				
27	ANDHARATI GANGDWAR	mithila tool kits h 679	84472.88	05/08/2024	2024-2025	TDS on CGS 0	0	✓	779.73				
28	ANDHARATI GANGDWAR	mithila tool kits h 679	84472.88	05/08/2024	2024-2025	MR2430-Cg 30	100	✓	3000				
29	ANDHARATI GANGDWAR	mithila tool kits h 720	84472.88	05/08/2024	2024-2025	MR2421-PL 35	100	✓	3500				

The Output

The code generates:

- A single Excel file “vendor_bill_data.xlsx”
- Each row contains:
 - Block & Panchayat
 - Vendor name
 - Bill No, Bill Amount, Bill date, Bill DOP, Fin Year
 - Material, Unit price, Quantity, Amount
- Can be easily filtered, shared and reviewed



A screenshot of a Microsoft Excel application window titled "vendor_bill_data - Excel". The window shows a grid of data starting with row 1, which includes columns for Block, Panchayat, Vendor Name, Bill No, Bill Amount, Bill Date, Bill DOP, Financial Year, Material, Unit Price, Quantity, and Amount. The data consists of approximately 30 rows of bills from ANDHRATI GANGDWAR, detailing various tool kits and their financial details. The Excel interface includes a ribbon bar with tabs like Home, Insert, Page Layout, Formulas, Data, Review, View, Developer, Help, and Acrobat, along with standard toolbar icons for file operations and cell styling.

Block	Panchayat	Vendor Name	Bill No	Bill Amount	Bill Date	Bill DOP	Financial Year	Material	Unit Price	Quantity	Amount
1	Block	ANDHRATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	TDS on CGS 0	0	779.73		
2	ANDHRATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	TDS on SGS 0	0	779.73			
3	ANDHRATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	MR2430-Ce30	100	3000			
4	ANDHRATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	MR2421-PL35	100	3500			
5	ANDHRATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	Centre GST 0	0	5919.83			
6	ANDHRATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	State GST 0	0	5919.83			
7	ANDHRATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	MR2424-ha10600	1	10600			
8	ANDHRATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	10-Miscella 67372.88	1	67372.88			
9	ANDHRATI GANGDWAR	mithila tool kits h 678	84472.88	05/08/2024	2024-2025	TDS on CGS 0	0	779.73			
10	ANDHRATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	TDS on SGS 0	0	779.73			
11	ANDHRATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	MR2430-Ce30	100	3000			
12	ANDHRATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	MR2421-PL35	100	3500			
13	ANDHRATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	Centre GST 0	0	5919.83			
14	ANDHRATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	State GST 0	0	5919.83			
15	ANDHRATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	MR2424-ha10600	1	10600			
16	ANDHRATI GANGDWAR	mithila tool kits h 520	84472.88	25/07/2024	2024-2025	10-Miscella 67372.88	1	67372.88			
17	ANDHRATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	TDS on CGS 0	0	779.73			
18	ANDHRATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	TDS on SGS 0	0	779.73			
19	ANDHRATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	MR2430-Ce30	100	3000			
20	ANDHRATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	MR2421-PL35	100	3500			
21	ANDHRATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	Centre GST 0	0	5919.83			
22	ANDHRATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	State GST 0	0	5919.83			
23	ANDHRATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	MR2424-ha10600	1	10600			
24	ANDHRATI GANGDWAR	mithila tool kits h 687	84472.88	06/08/2024	2024-2025	10-Miscella 67372.88	1	67372.88			
25	ANDHRATI GANGDWAR	mithila tool kits h 679	84472.88	05/08/2024	2024-2025	TDS on CGS 0	0	779.73			
26	ANDHRATI GANGDWAR	mithila tool kits h 679	84472.88	05/08/2024	2024-2025	TDS on SGS 0	0	779.73			
27	ANDHRATI GANGDWAR	mithila tool kits h 679	84472.88	05/08/2024	2024-2025	MR2430-Ce30	100	3000			
28	ANDHRATI GANGDWAR	mithila tool kits h 679	84472.88	05/08/2024	2024-2025	MR2421-PL35	100	3500			
29	ANDHRATI GANGDWAR	mithila tool kits h 679	84472.88	05/08/2024	2024-2025	Centre GST 0	0	5919.83			

What's next?

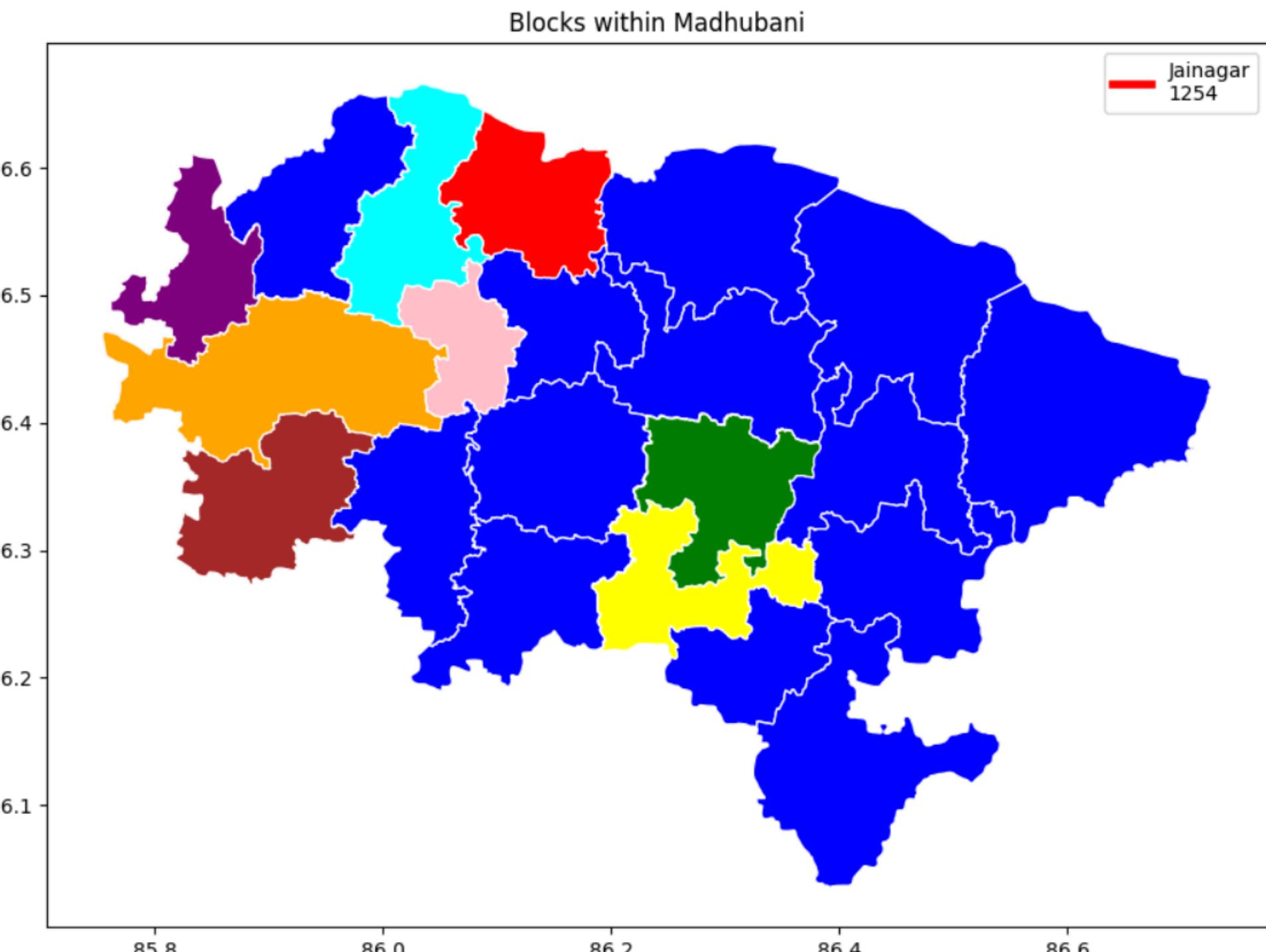
District map visualization:

While this is not a part of the working code yet, I began experimenting with visualizing the billing activity using shapefiles for Madhubani. This will help visualize data for every financial year within each block.

It's still in its early stages, but I've attached a preview of what I've developed so far.

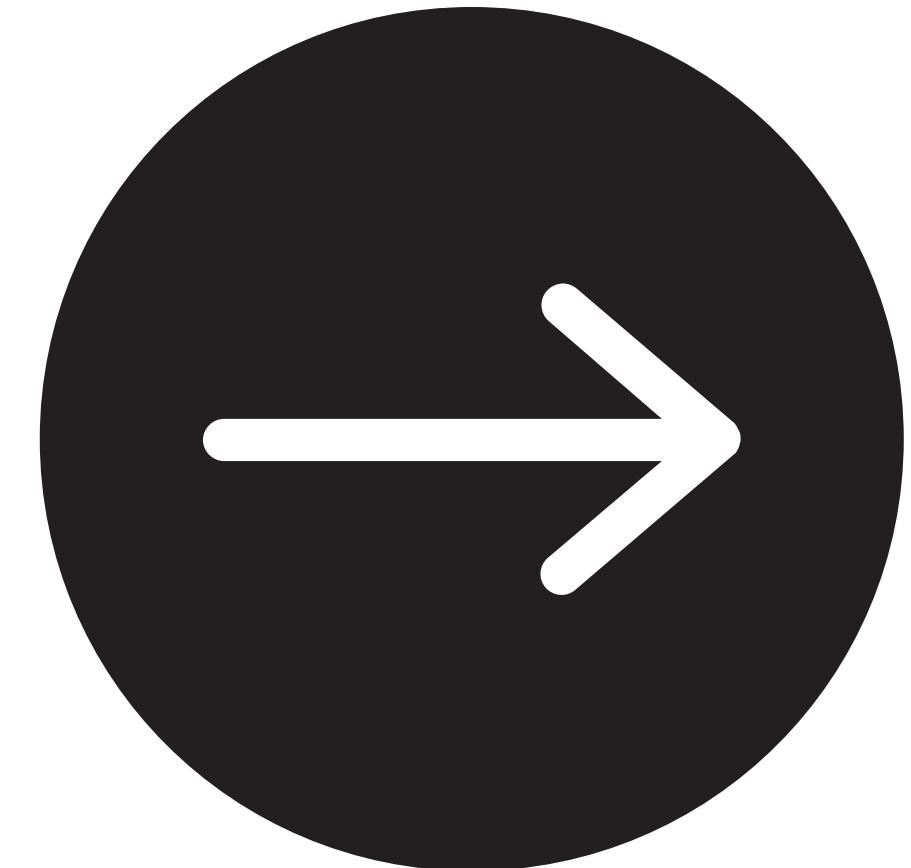
Files in use to create the visualization:

 Madhubani_Shapefile.shp	30-04-2025 16:06	SHP File
 Madhubani_Shapefile.shx	30-04-2025 16:06	SHX File
 Madhubani_Shapefile.qmd	30-04-2025 16:06	QMD File
 Madhubani_Shapefile.dbf	30-04-2025 16:06	DBF File
 Madhubani_Shapefile.prj	30-04-2025 16:06	PRJ File
 Madhubani_Shapefile.cpg	30-04-2025 16:06	CPG File
 Madhubani_Shapefile.qix	30-04-2025 16:05	QIX File



Stage 2

- Integrate visual maps for panchayat activities
- Migrating data to a database
- Creation of an inventory tracker





**Let's automate
progress, one block at
a time.**

Thank you!