PAK-AUSTRIA FACHHOCHSCHULE:
INSTITUTE OF APPLIED SCIENCES AND TECHNOLOGY

Department of IT & CS

Project:

Integrated Public Service Management System (IPSM)

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Integrated Public Service Management System (IPSM)

Detailed Tools and Technologies Report:

1. Introduction:

The Integrated Public Service Management System (IPSM) is a project designed to manage public service requests in an organized, efficient, and transparent manner. The system allows citizens to submit service-related issues while enabling administrators to monitor, update, and analyze these requests.

This report provides a **detailed explanation of the tools and technologies used** in the development of the IPSM project. It explains the **objective, purpose, procedure, usage, and output** of each tool in a structured academic format.

2. Project Objectives:

The main objectives of the IPSM project are:

- To provide an easy-to-use platform for submitting public service requests
- To store and manage service request data efficiently
- To allow administrators to track, update, and resolve requests
- To analyze service data using charts and reports
- To present and document the project professionally using standard software tools

3. Tools and Technologies Used:

The following tools were used in the IPSM project:

- Microsoft Access
- HTML
- CSS
- Microsoft Excel
- Microsoft PowerPoint
- GitHub
- Microsoft Word

Each tool is explained in detail in the following sections.

4. Microsoft Access (Database Management System):

4.1 Objective:

To store, organize, and manage all IPSM service request data securely and efficiently.

4.2 Purpose:

To act as the backend database for storing citizen details, service categories, request status, and administrative records.

4.3 Procedure / How It Was Used:

- Created database tables for:
  - Citizens
  - Service requests
  - Request status
- Assigned primary keys to uniquely identify each record
- Defined relationships between tables to maintain data integrity
- Used queries to retrieve filtered data for analysis
- Designed forms to simplify data entry and updates

4.4 Explanation / Where It Was Used:

MS Access was used during the data management phase of the project. It supported backend storage and allowed structured handling of service records.

4.5 Output:

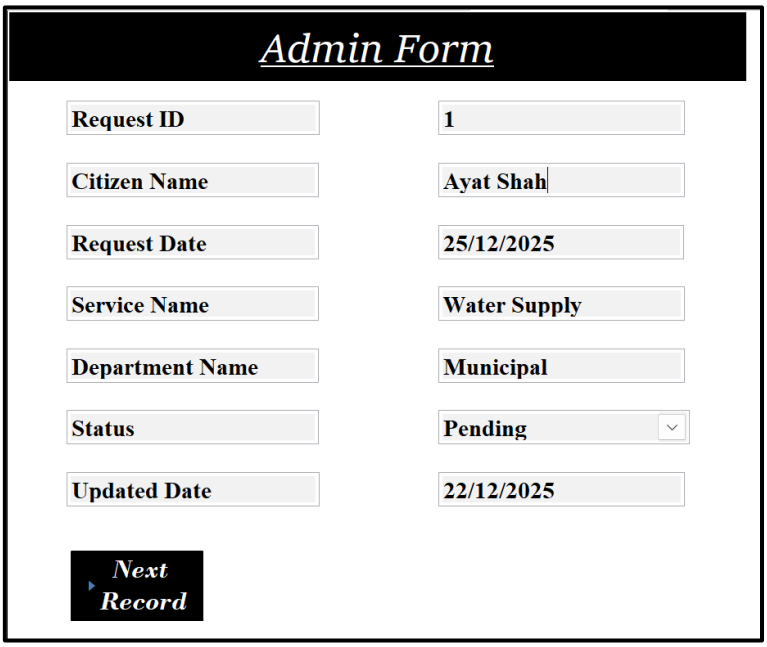
- Well-structured database
- Secure and organized service request records
- Reliable data source for analysis and reporting

Figure 4.1: IPSM Departments Table in Microsoft Access

Departments Table	
Department ID	**Department Name**
D01	Education
D02	Healthcare

Departments Table	
Department ID	**Department Name**
D03	Transport
D04	Municipal

Figure 4.2: Admin Form

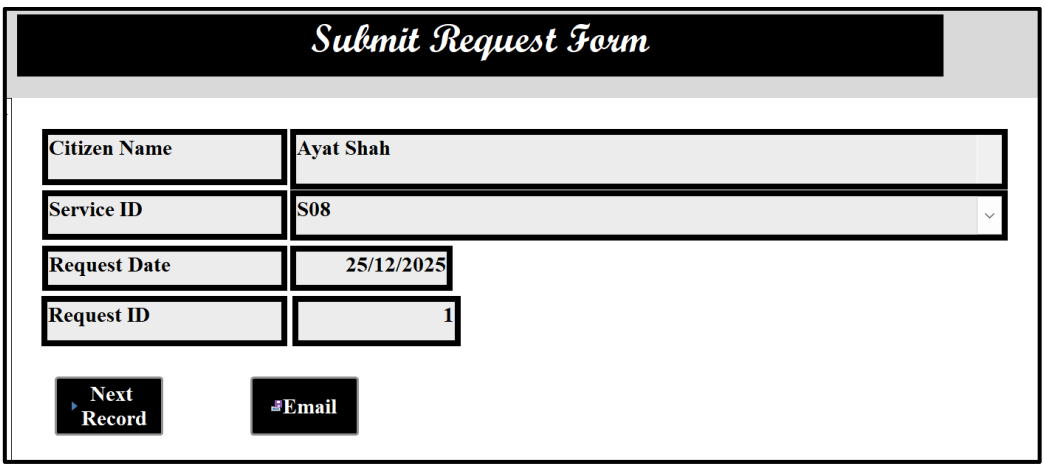


Button used:

Next Record:

When this button is pressed the updated data is stored in the status table in backend.

Figure 4.3: User Request Form



Buttons Used:

Next Record:

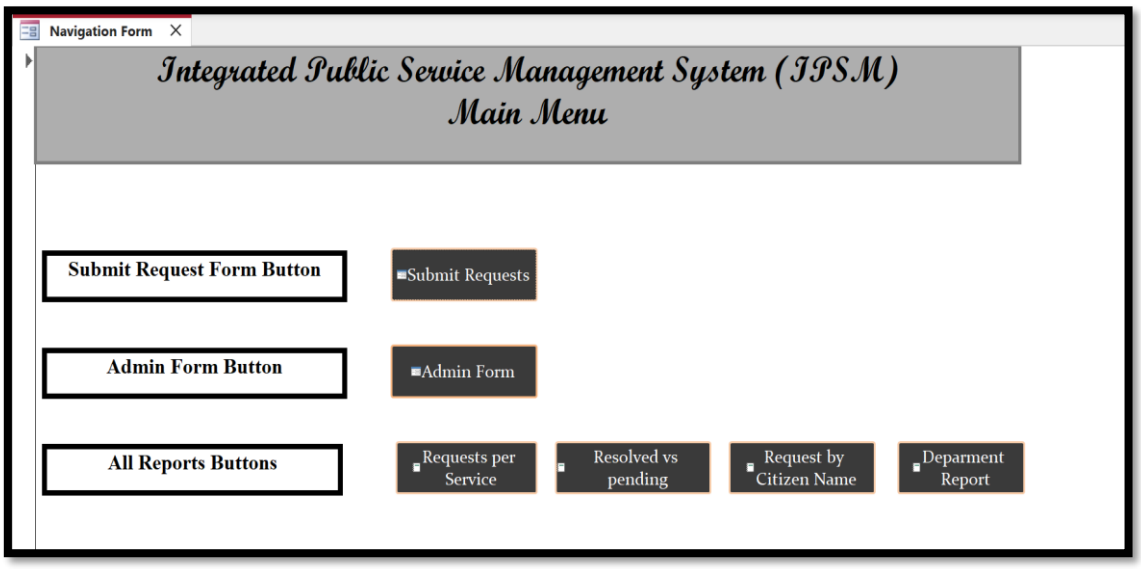
When this button is pressed the data is stored in the request table in backend.

Email:

When this button is pressed citizen request report will be sent to Admin by **Email** using **Outlook.**

Navigation Form:

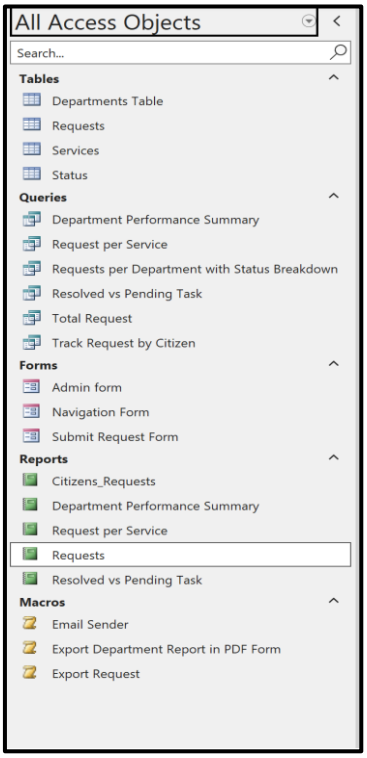
Figure 4.4:



Explanation:

In navigation form each button is used to navigate to different forms and reports.

Figure 4.5: Microsoft Access Database Objects Used in IPSM



Tables:

- **Departments Table**: Stores information about all departments.
- **Requests** : Stores all service requests submitted by citizens.
- **Services**: Stores the list of services offered by each department.
- **Status**: Stores the status of requests (Pending, Resolved, etc.).

Queries:

- **Department Performance Summary**: Shows how each department is performing based on requests handled.
- **Request per Service**: Displays the number of requests for each service.
- **Requests per Department with Status Breakdown**: Shows requests grouped by department and their statuses.
- **Resolved vs Pending Task**: Compares the number of resolved and pending requests.
- **Total Request**: Shows the total count of all requests.
- **Track Request by Citizen**: Allows tracking of requests submitted by a specific citizen.

Forms:

- **Admin Form**: Used by the administrator to manage and monitor the system.
- **Navigation Form**: Provides easy navigation to all forms, queries, and reports.
- **Submit Request Form**: Used by users to submit new service requests.

Reports:

- **Citizens Requests:** Displays a report of requests submitted by each citizen.
- **Department Performance Summary**: Shows department-wise performance in report format.
- **Request per Service**: Shows service-wise request counts in a printable format.
- **Requests**: Displays a detailed list of all requests.
- **Resolved vs Pending Task**: Shows a report comparing resolved and pending requests.

Macros:

- **Email Sender**: Sends automated emails from the system.
- **Export Department Report in PDF Form**: Exports department performance report as a PDF file.
- **Export Request**: Exports request data to an external file.

5. HTML (HyperText Markup Language):

5.1 Objective:

To create the structure and layout of the IPSM system interface.

5.2 Purpose:

To define content elements such as forms, tables, headings, and sections of the IPSM system.

5.3 Procedure / How It Was Used:

- Created pages for:
    - Home
    - Submit Request
    - Admin Panel
    - Reports

- Designed service request forms
- Displayed data in tables and dashboards

5.4 Explanation / Where It Was Used:

HTML was used in the front-end development stage to build the IPSM interface.

5.5 Output:

- Structured web pages
- Functional forms for data input
- Organized dashboards for users and administrators

6. CSS (Cascading Style Sheets):

6.1 Objective:

To enhance the visual appearance and usability of the IPSM system.

6.2 Purpose:

To improve user experience through attractive design and responsive layout.

6.3 Procedure / How It Was Used:

- Applied gradients, colors, and fonts
- Used margins, padding, borders, and alignment
- Designed responsive layouts for mobile and desktop
- Styled navigation bars, buttons, and tables
- Added hover effects and transitions

6.4 Explanation / Where It Was Used:

CSS was applied throughout the IPSM web interface to style all components.

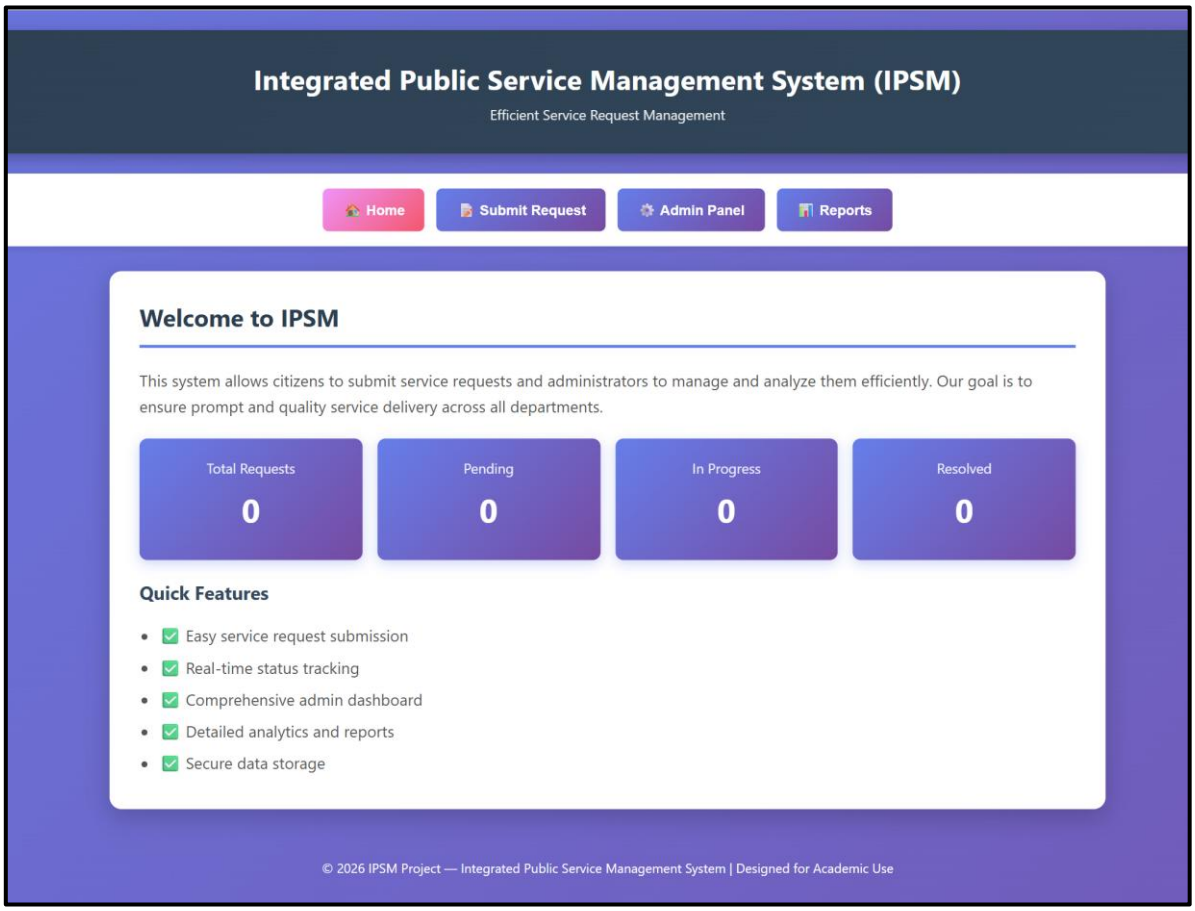
6.5 Output:

- Professional and modern user interface
- Improved readability and usability
- Responsive and visually appealing system

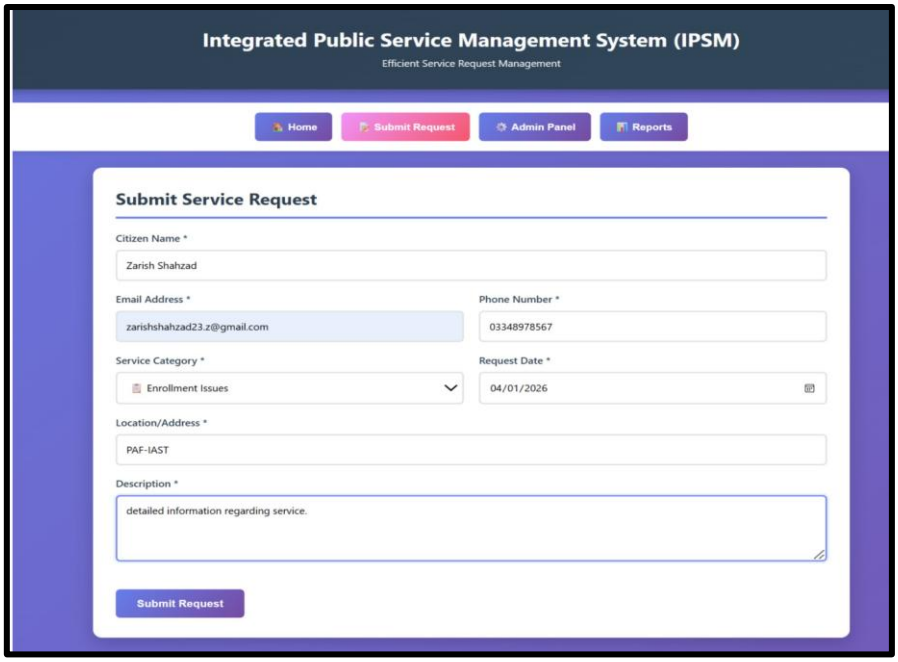
6.6 HTML + CSS Combined Outputs:

Screenshots of outputs are as under:

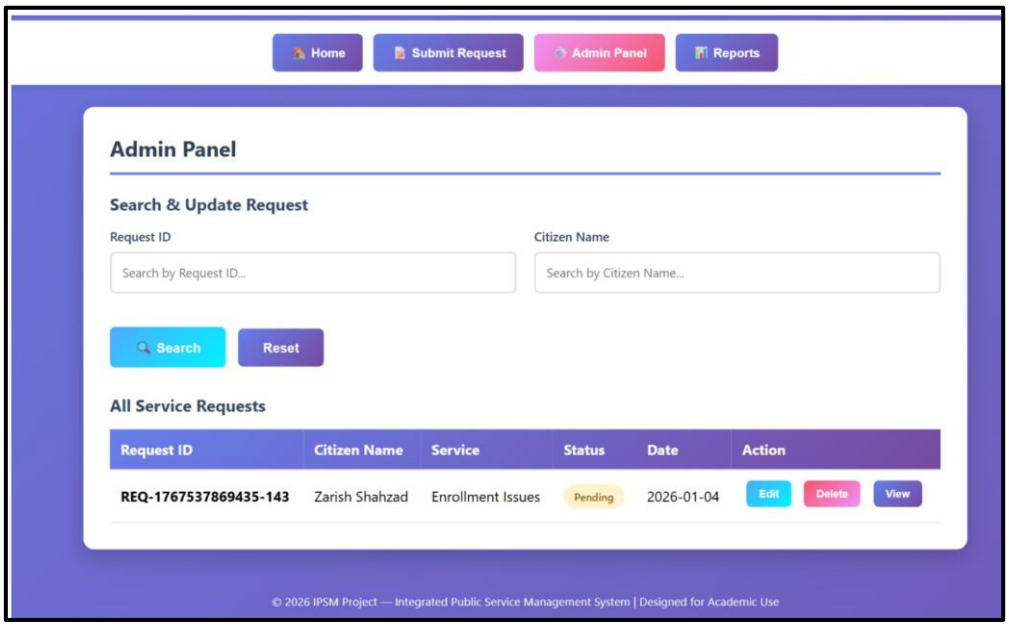
6.6.1: IPSM Home Page Interface



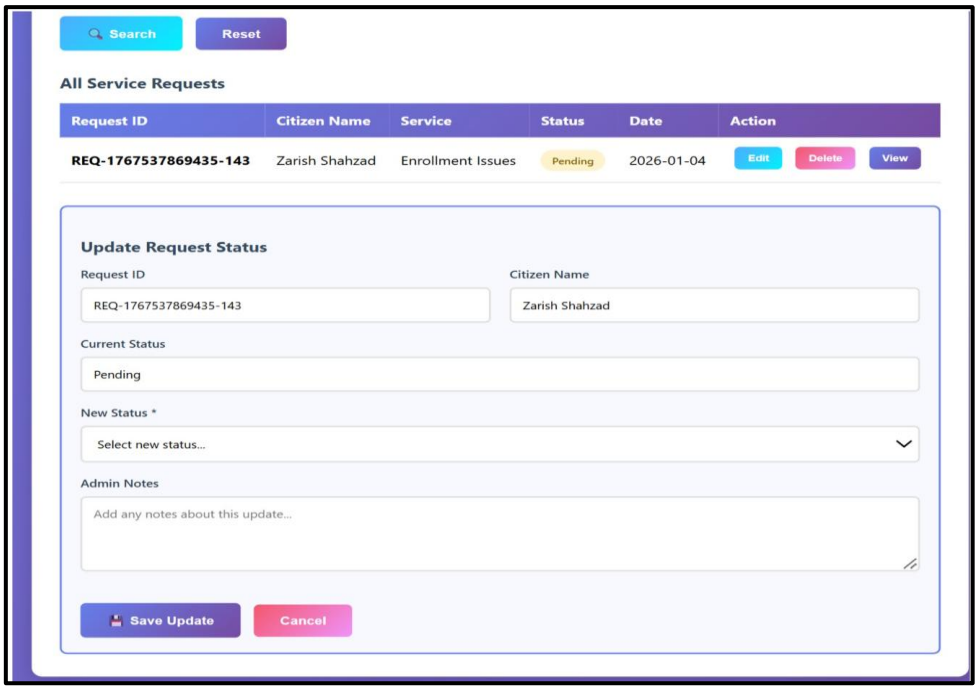
6.6.2: Service Request Submission Form



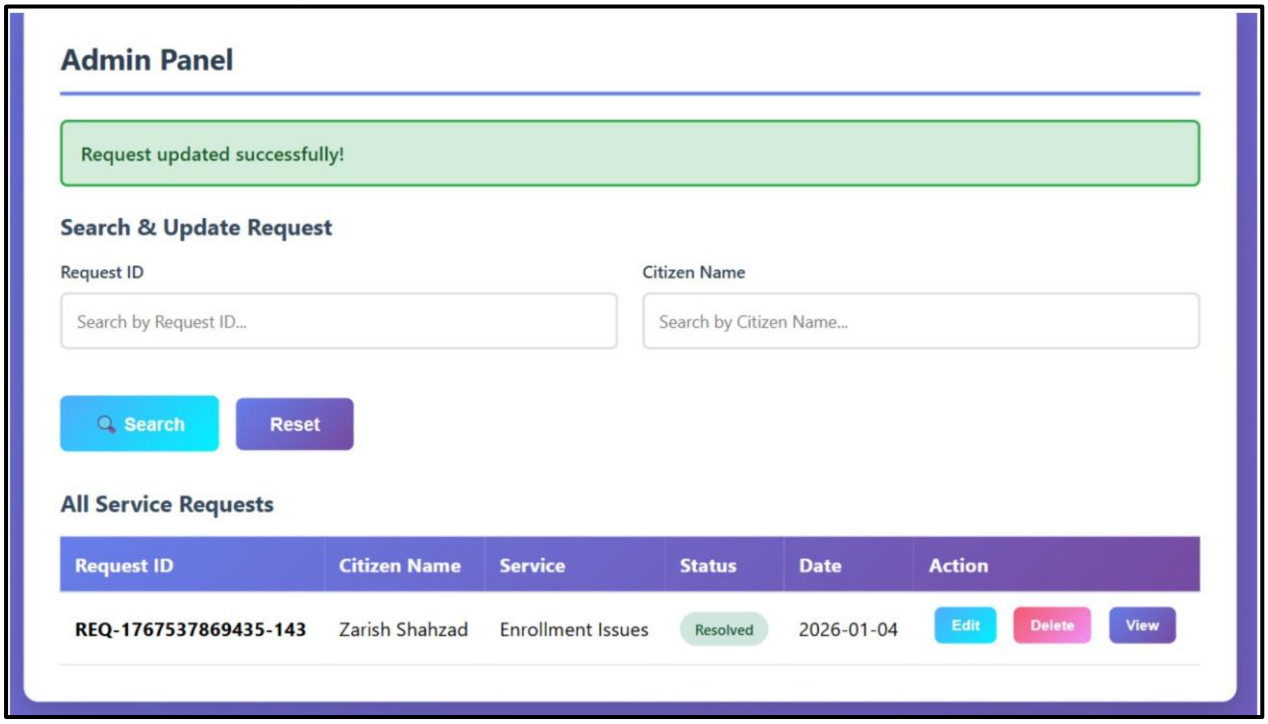
6.6.3: Admin Panel



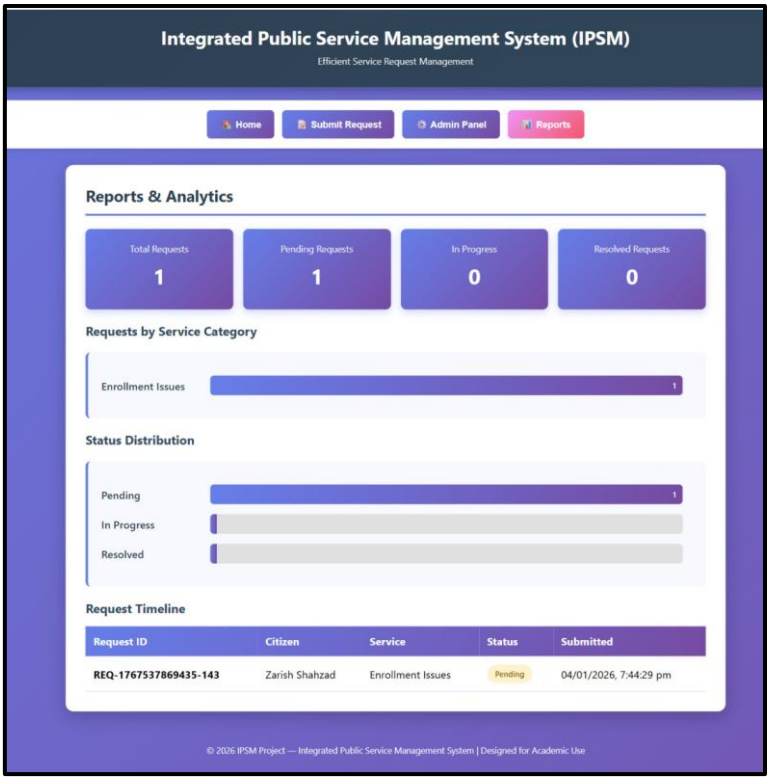
Admin can edit and update the user request:



Request Updated:



6.6.4: Reports and Analytics:



7. Microsoft Excel (Data Analysis and Visualization Tool):

7.1 Objective:

To analyze IPSM data and generate meaningful insights.

7.2 Purpose:

To summarize and visualize service request data.

7.3 Procedure / How It Was Used:

- Imported IPSM data
- Created Pivot Tables for analysis
- Designed charts (bar, column)
- Applied conditional formatting
- Used filters, sorting, formulas, margins, and alignment

7.4 Explanation / Where It Was Used:

Excel was used during the analysis phase of the project.

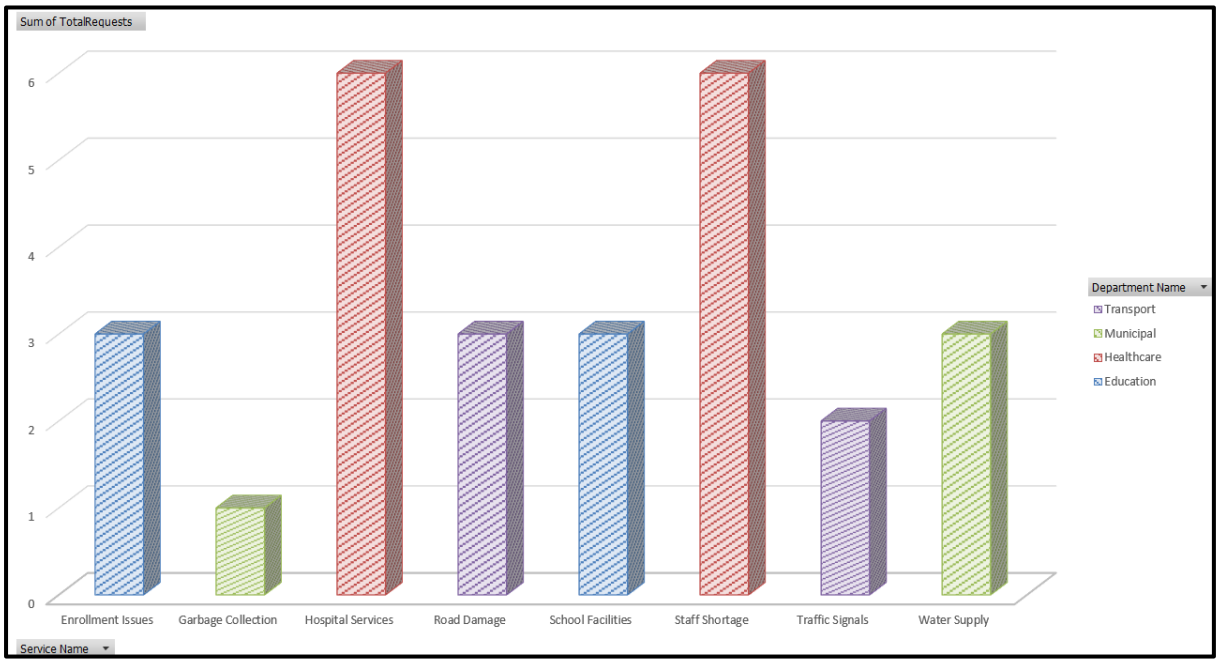
7.5 Output:

- Summary tables
- Visual charts
- Performance analysis reports

7.5.1 Macro for Critical Department:

A	B	C	D	E
Department	Pending	In-Progress	Resolved	Status Flag
Education	2	1	1	CRITICAL
Healthcare	1	4	7	OK
Muncipal	1	3	2	OK
Transport	1	6	1	OK
				Check Status

7.5.2 Request per Service:

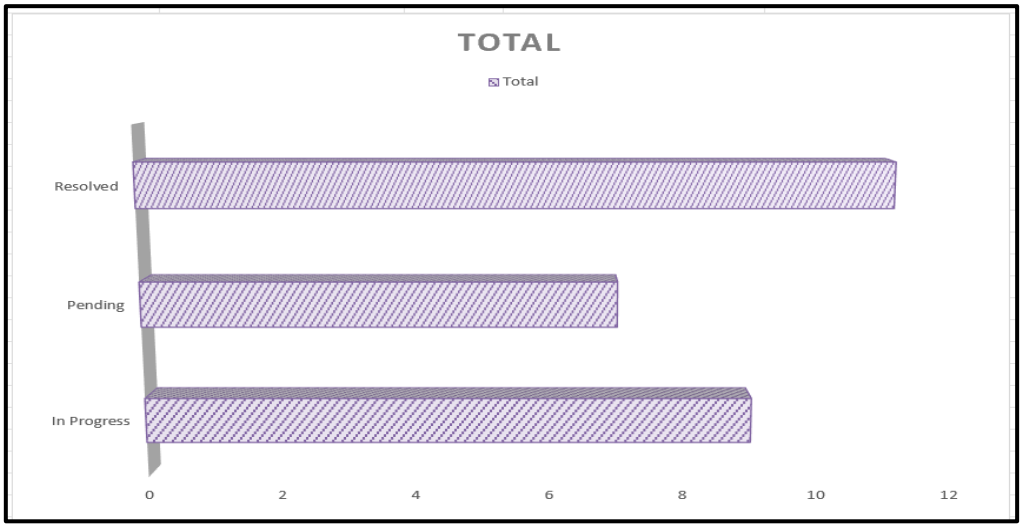


7.5.3 Status:

Status	CountRequests
In Progress	1
In Progress	8
Pending	7
Resolved	11

Status	Sum of CountRequests
In Progress	9
Pending	7
Resolved	11
Grand Total	**27**

7.5.4 Resolves vs Pending vs In Progress:



8. Microsoft PowerPoint (Presentation Tool):

8.1 Objective:

To present the IPSM project clearly and professionally.

8.2 Purpose:

To visually explain the project design, tools, and results.

8.3 Procedure / How It Was Used:

- Designed slides for objectives, tools, and outcomes
- Inserted charts and screenshots
- Used layouts and transitions

8.4 Explanation / Where It Was Used:

PowerPoint was used during project presentation.

8.5 Output:

- Clear and engaging presentation
- Professional project explanation

9. GitHub (Version Control System):

9.1 Objective:

To manage and store all project files securely.

9.2 Purpose:

To ensure version control and safe backup of project files.

9.3 Procedure / How It Was Used:

- Uploaded HTML, CSS, database, Excel, and Word files
- Maintained file versions
- Organized project structure

9.4 Explanation / Where It Was Used:

GitHub was used throughout the project lifecycle.

9.5 Output:

- Centralized repository
- Secure and organized file storage

Link for GitHub:

https://github.com/zarish-shahzad/ICT-Project-IPSM.git

10. Microsoft Word (Documentation Tool):

10.1 Objective:

To document the IPSM project in a formal academic format.

10.2 Purpose:

To prepare a structured and professional project report.

10.3 Procedure / How It Was Used:

- Used headings and subheadings
- Applied margins, spacing, and alignment
- Inserted tables and bullet points
- Used spelling and grammar tools

10.4 Explanation / Where It Was Used:

Word was used in the final documentation stage.

10.5 Output:

- Complete professional report
- Clear and organized documentation

11. Final Output of the Project:

- Fully functional IPSM system
- Organized database
- Interactive web interface
- Analytical reports and charts
- Professional presentation
- Complete project documentation

12. Conclusion:

The IPSM project successfully integrates multiple tools to achieve effective public service management. Each tool served a specific purpose, contributing to system development, analysis, presentation, and documentation. The project demonstrates practical application of database systems, web technologies, and productivity software.

ACKNOWLEDGEMENT:

The successful completion of this project would not have been possible without the knowledge and practical skills gained through the **Information and Communication Technology (ICT)** course. This course provided us with a strong foundation in databases, web technologies, data analysis tools, and documentation techniques.

Through ICT, we were able to integrate multiple tools such as Microsoft Access, HTML, CSS, Excel, PowerPoint, GitHub, and Word into a single functional project. The course enabled us to understand how modern information systems are designed, developed, analyzed, and documented in real-world scenarios.

We sincerely acknowledge the support of the ICT department and instructor for guiding us.