

# IT project Management

## Assessment – 1

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### Project Description – Public Grievance Redressal System

The **Public Grievance Redressal System** is a web-based platform designed to provide citizens with a simple and transparent way to register, track, and resolve grievances related to public services. The system aims to bridge the gap between citizens and authorities by offering a centralized digital solution for grievance management.

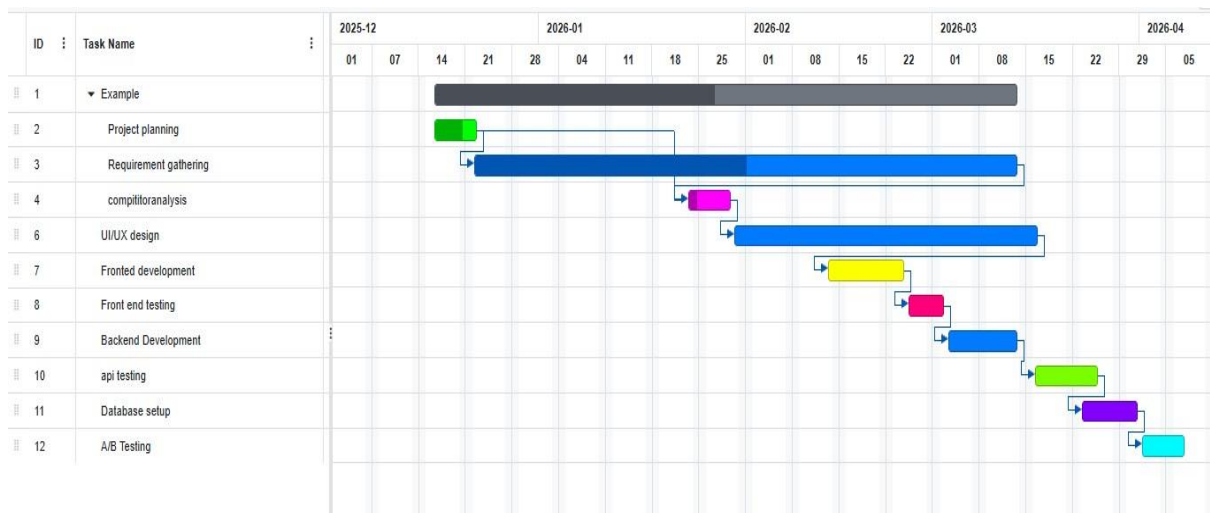
Through this platform, users can submit grievances by selecting the relevant department, describing the issue, and attaching supporting documents if required. Each grievance is assigned a unique tracking ID, allowing users to monitor the status of their complaint in real time. Authorities can view, categorize, prioritize, and respond to grievances through an administrative dashboard, ensuring timely and accountable resolution.

The system also includes features such as role-based access, status updates, notifications, and data storage for grievance history. By digitizing the grievance redressal process, the project improves efficiency, reduces manual effort, enhances transparency, and promotes citizen trust in public administration.

Overall, the Public Grievance Redressal System serves as an effective e-governance solution that supports better communication, faster issue resolution, and improved service delivery.

## PART A – PROJECT PLANNING & WBS CREATION

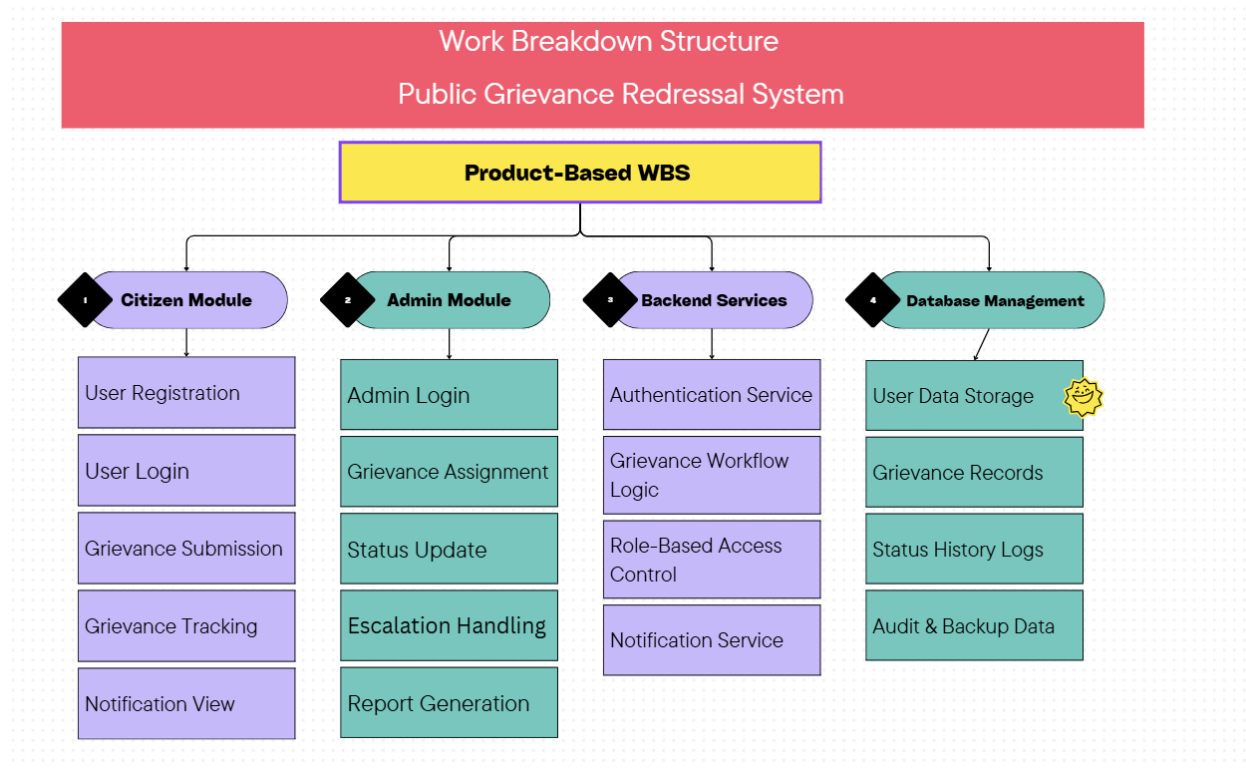
### 1. Gantt Chart for Public Grievance Redressal System



ID	Task Name	Start	End	Duration	Progress %	Dependency	Resources	Color
1	Example	2025-12-16	2026-03-13	64 days	48			
2	Project planning	2025-12-16	2025-12-22	5 days	65		Team Member 1	
3	Requirement gathering	2025-12-22	2026-03-13	60 days	50	2FS-1 days	Team Member 2	
4	compititoranalysis	2026-01-23	2026-01-29	5 days	20	2FS+23 days,3FS-...	Team Member 3	
6	UI/UX design	2026-01-30	2026-03-16	32 days	0	4FS		
7	Fronted development	2026-02-13	2026-02-24	8 days	0	6FS-22 days		
8	Front end testing	2026-02-25	2026-03-02	4 days	0	7FS		
9	Backend Development	2026-03-03	2026-03-13	9 days	0	8FS		
10	api testing	2026-03-16	2026-03-25	8 days	0	9FS		
11	Database setup	2026-03-23	2026-03-31	7 days	0	10FS-3 days		
12	A/B Testing	2026-04-01	2026-04-07	5 days	0	11FS		

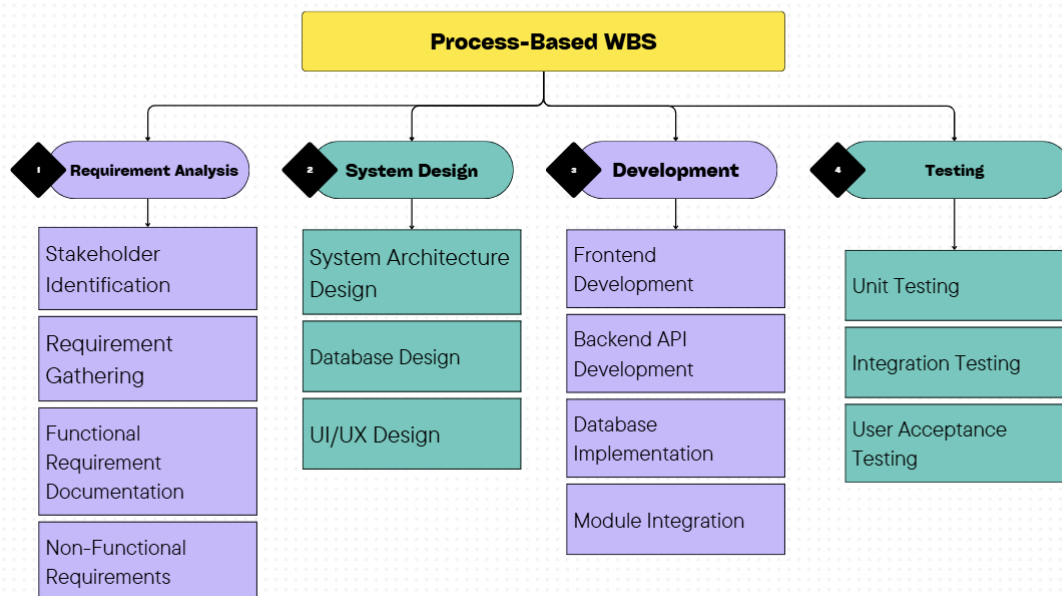
## 2. WBS

### 1. Product-Based WBS – Public Grievance Redressal System



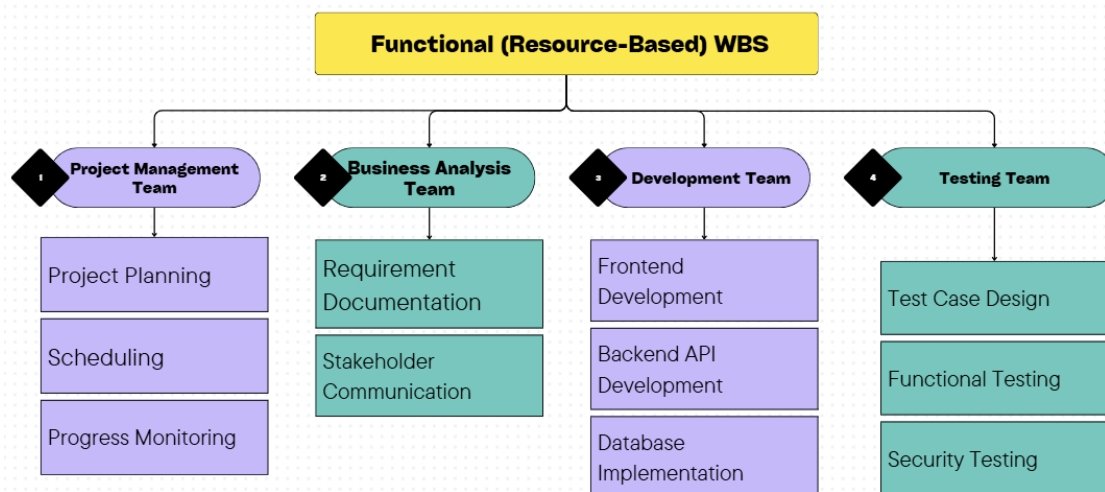
### 2. Process-Based WBS – Public Grievance Redressal System

## Work Breakdown Structure Public Grievance Redressal System

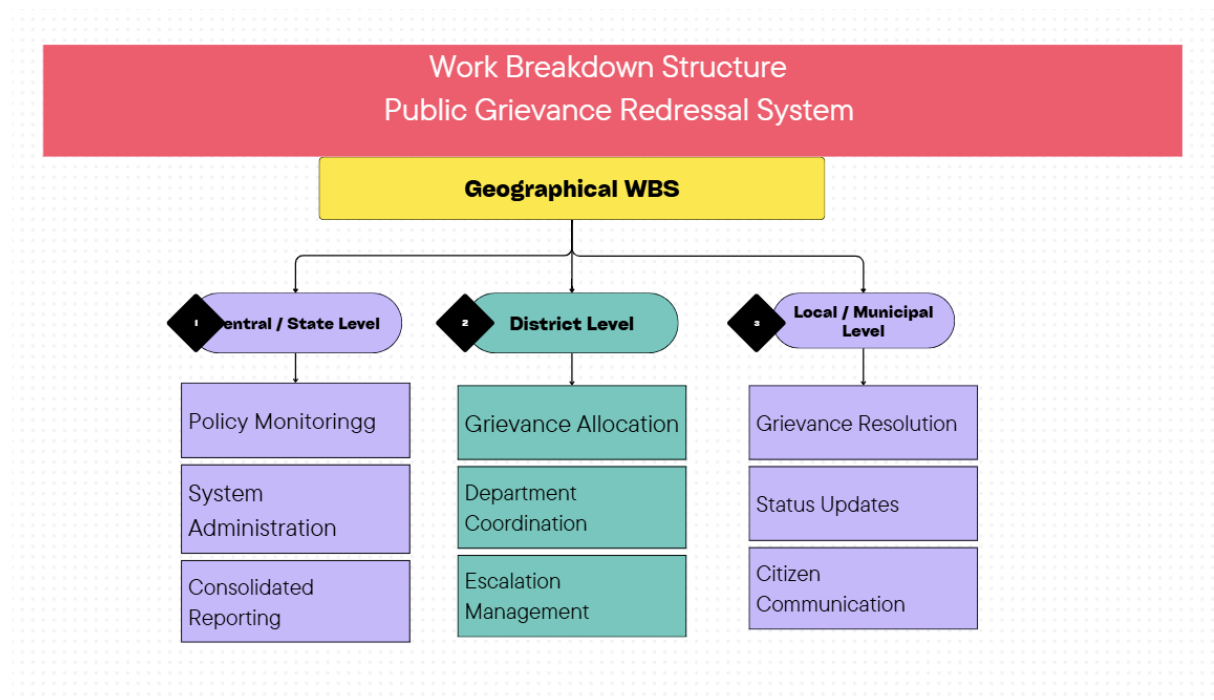


### 3. Functional (Resource-Based) WBS – Public Grievance Redressal System

## Work Breakdown Structure Public Grievance Redressal System



#### 4. Geographical WBS – Public Grievance Redressal System



#### PART B – RESOURCE CREATION & COST ESTIMATION

#### 3. Resource Sheet – Public Grievance System

Resource	Role Description	Cost / hr (₹)
Project Manager	Planning, coordination, tracking progress	750
Business Analyst	Requirement gathering, user flow design	650
Backend Developer	APIs, database, grievance workflow logic	600
Frontend Developer	UI, dashboards, citizen portal	550
Database Administrator	Data design, security, backups	650
QA / Tester	Functional & security testing	400

Resource	Role Description	Cost / hr (₹)
DevOps Engineer	Deployment, CI/CD, server maintenance	800
Support Engineer	Handling system issues & user support	350

#### 4. Task Cost Table – Public Grievance Redressal System

Task	Days	Rate / hr (₹)	Total Cost (₹)
Requirement Analysis	6	650	31,200
System Design	5	650	26,000
Frontend Development	12	550	52,800
Backend Development	13	600	62,400
Integration & Workflow Setup	5	600	24,000
Testing & Quality Assurance	7	400	22,400
Cloud Deployment	3	800	19,200
Maintenance & Support Setup	4	350	11,200

#### Assumptions:

1 working day = 8 hours

Costs are estimated based on standard industry rates in India

Maintenance cost covers initial post-deployment support

#### PART C – BASELINE & COST CONTROL

## 5. Baseline versus Actual Comparison

This report compares the baseline schedule with the actual execution of the **Public Grievance Redressal System**. While the project broadly adhered to the planned timeline, **minor schedule variances were observed across multiple phases**, primarily due to requirement refinements, iterative UI changes, and extended validation during testing.

Although several tasks experienced delays, partial parallel execution helped absorb some of the impact. However, the project ultimately recorded a **net schedule slippage of 11 days**, with one post-testing activity remaining partially incomplete at the reporting stage.

### Phase-wise Baseline vs Actual Analysis

Project Phase	Baseline (Days)	Actual (Days)	Variance (Days)	Status	Primary Cause
Project Planning	4	5	+1	<div><div></div></div> Completed	Extended stakeholder alignment
Requirement Gathering	52	60	+8	<div><div></div></div> Completed	Iterative grievance flow changes
Competitor Analysis	4	5	+1	<div><div></div></div> Completed	Additional benchmarking
UI/UX Design	28	32	+4	<div><div></div></div> Completed	Accessibility & usability revisions
Frontend Development	7	8	+1	<div><div></div></div> Completed	UI dependency on final designs
Frontend Testing	3	4	+1	<div><div></div></div> Completed	Cross-browser issues
Backend Development	7	9	+2	<div><div></div></div> Completed	Workflow logic complexity
API Testing	6	8	+2	<div><div></div></div> Completed	Authentication edge cases
Database Setup	6	7	+1	<div><div></div></div> Completed	Security hardening

Project Phase	Baseline (Days)	Actual (Days)	Variance (Days)	Status	Primary Cause
A/B Testing	4	5	+1	<div><div></div>Incomplete</div>	Limited user sample size

Overall Schedule Summary

Metric	Value
Baseline Duration	53 Days
Actual Duration	64 Days
Net Schedule Variance	+11 Days
Project Status	Minor Delay with Partial Incompletion

Key Metrics

- Original Timeline: 53 Days
- Revised Timeline: 64 Days
- Schedule Performance Index (SPI): 0.83

Interpretation:

An SPI of **0.83** indicates that progress lagged behind the planned schedule, mainly during requirement analysis, UI/UX design, and system testing phases.



## 6. Variance Analysis Report

This variance analysis evaluates the financial and schedule impact of the **11-day delay** observed during project execution. While most core deliverables were completed, extended development and testing cycles increased resource utilization and cost exposure.

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### Cost & Variance Analysis

**Assumption:** Average blended resource burn rate = ₹1,000 per day

Metric	Formula	Value
Planned Value (PV)	Baseline Days × Daily Rate	₹53,000
Actual Cost (AC)	Actual Days × Daily Rate	₹64,000
Earned Value (EV)	Completed Work × Baseline Rate	₹59,000
Cost Variance (CV)	EV – AC	–₹5,000
Schedule Variance (SV)	EV – PV	+₹6,000*

\*Positive SV reflects higher-than-planned work completion despite delay, due to overlapping activities.

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### Key Performance Indicators (KPIs)

- **Cost Performance Index (CPI): 0.92**
  - *Interpretation:* For every ₹1 spent, ₹0.92 worth of planned work was delivered.
- **Schedule Performance Index (SPI): 0.83**
- **Budget at Completion (BAC): ₹53,000**
- **Estimate at Completion (EAC): ₹64,000**

## 7. One-Page Interpretation

The comparison between the baseline plan and the actual execution of the **Public Grievance Redressal System** provides meaningful insights into project scheduling, cost control, and coordination among different teams. Although the project successfully delivered its core objectives, **minor schedule deviations and partial task incompleteness** were observed during execution, primarily due to evolving requirements and extended validation efforts.

The **Requirement Gathering phase** exceeded its planned duration due to repeated interactions with stakeholders and refinements in grievance workflows. Since the system serves citizens across multiple administrative levels, additional time was required to accurately define user roles, grievance routing logic, and escalation rules. While this resulted in a schedule overrun for this phase, the extra effort improved requirement clarity and reduced the risk of major functional gaps in later stages.

The **UI/UX Design and Development phases** also experienced moderate delays. Design iterations were extended to accommodate accessibility improvements, usability feedback, and interface consistency across the citizen portal and administrative dashboards. These changes slightly increased development effort but enhanced user experience and transparency, which are critical for a public-facing governance platform.

Delays in development phases had a cascading effect on the **Testing and API validation activities**. Additional time was required for regression testing, role-based access verification, and end-to-end grievance workflow validation. Furthermore, **A/B Testing remained partially incomplete** at the reporting stage due to limited real-user participation and time constraints. However, core functional and security testing was successfully completed, ensuring system stability.

Due to the cumulative impact of extended effort in analysis, development, and testing, the project incurred a **moderate increase in cost compared to the baseline estimate**. This cost variation reflects additional resource utilization rather than inefficiencies and remains acceptable given the improved reliability, security, and usability of the system.

Several important lessons emerged from this analysis. Early finalization of requirements can significantly reduce downstream changes and rework. Allocating contingency buffers for design and testing phases is essential when developing citizen-centric systems. Strong coordination between business analysts, developers, and testers helps mitigate schedule dependencies and limits cost escalation.

In conclusion, despite minor deviations from the original plan and partial incompleteness of one validation activity, the **Public Grievance Redressal System** was delivered effectively. The project achieved its intended goals and offers valuable insights into better estimation, risk handling, and project management practices for future large-scale e-governance software initiatives.