



**BHASKARACHARYA NATIONAL INSTITUTE FOR
SPACE APPLICATIONS AND GEO-INFORMATICS**
WEEKLY PROGRESS REPORT (16/02/2026 – 22/02/2026)

WEEK 11

PROJECT NAME	DIGITAL TOWN PLATFORM
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PROJECT DESCRIPTION :

**DESIGN TO PROVIDE TOWN-LEVEL
INFORMATION, SERVICES, THROUGH A SINGLE
SYSTEM**

GROUP MEMBER :

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23/02/2026	Marketplace Backend Implementation <ul style="list-style-type: none"> • Implemented Product schema and CRUD APIs for product management. • Developed Cart functionality allowing users to manage item quantities. • Designed Order schema with seller-wise grouping of purchased items. • Implemented order lifecycle logic (placed → accepted → completed). • Added cancellation request workflow and soft-delete functionality.
24/02/2026	Authentication & Authorization Enhancements <ul style="list-style-type: none"> • Integrated centralized axiosInstance for automatic JWT token handling. • Resolved 401 Unauthorized errors in Marketplace APIs. Fixed Vite proxy routing configuration. • Strengthened role-based middleware for protected routes. Conducted integration testing across modules.
25/02/2026	Role-Based UI Switching Implementation <ul style="list-style-type: none"> • Implemented toggleSellerMode logic inside AuthContext. • Added “Switch to Seller Dashboard” functionality in Profile page. • Configured isolated /seller route for seller interface. • Ensured Navbar hides dynamically in seller mode. • Prevented UI conflicts with Admin routes.
26/02/2026	Marketplace Frontend Integration <ul style="list-style-type: none"> • Developed ProductCard component. • Integrated Add-to-Cart functionality with backend API. • Implemented defensive UI rendering for undefined states. • Debugged token-related authorization issues. Improved frontend error handling.


27/02/2026	Module Integration & Final Testing <ul style="list-style-type: none"> • Verified seller approval updates database roles and status correctly. • Ensured login/profile APIs return updated role information. Refined role-switch logic for UI consistency. • Conducted cross-module testing between Marketplace, Services, and Admin. • Corrected minor UI alignment issues.
28/02/2026	4th Saturday
22/02/2026	Holiday (Sunday)

Next Week Plan	<ul style="list-style-type: none"> • Design and Implement Seller Analytics Dashboard Develop a dedicated seller analytics dashboard under /seller/analytics to visualize order trends and product-level performance insights using aggregated order data. • Location-Based Demand Analysis Engine Implement backend aggregation pipelines (MongoDB aggregation framework) to analyze order distribution by geographic regions (city/area/pincode) and identify high-demand zones for specific products. • Demand Heatmap & Insights Visualization Integrate location-based visualization (map-based heatmap or region clustering) on the frontend to help sellers identify demand concentration areas and make data-driven inventory decisions.
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Github link:

https://github.com/MeetanshuP/Digital_Town_Management


SCREEN SHOTS :

 VillageConnect

[Home](#) [News](#) [Services](#) [Market](#) [Grievance](#) [Events](#)


 Demo

Marketplace




Carrots
₹80

- 1 +



Cabbage
₹60

- 2 +



Banana
₹120

Add to Cart

Cart Summary

Carrots × 1	₹80
Cabbage × 2	₹120
<hr/>	
Total Items	3
Subtotal	₹200
Payment: Cash on Delivery	
<p>Place Order</p>	

Seller Dashboard


[Switch to Buyer Mode](#) [Logout](#)

My Products

Add Product


Fruits

Add Product




Banana
₹ 120
Status: available

[Toggle Availability](#) [Delete](#)



Cabbage
₹ 60
Status: available

[Toggle Availability](#) [Delete](#)



Carrots
₹ 80
Status: available

[Toggle Availability](#) [Delete](#)

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My Products

Orders

Seller Orders

Order #78e27c

3/2/2020, 11:07:05 AM

placed

Buyer:
Email: demouser1@gmail.comCabbage
Qty: 2

₹120

Carrots
Qty: 1

₹80

Total

₹200

Accept

Cancel

Order #e9cblb

2/26/2020, 12:30:50 PM

accepted

Buyer:
Email: demouser1@gmail.comCabbage
Qty: 2

₹120



Banana