



**COLLEGE CODE : 3108**

**COLLEGE NAME : JEPPIAAR ENGINEERING COLLEGE**

**DEPARTMENT : B.TECH - IT**

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**ROLL NO : 23JEIT119**

**DATE : 15 - 05 - 2025**

**Completed the project named as**

**TECHNOLOGY-PROJECT NAME :**

**URBAN PLANNING AND DESIGNING**

**SUBMITTED BY,**

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## **Urban Planning and Designing - Phase 4: Project Implementation**

### **1. Select the Implementation Mode**

#### **Choose the appropriate method:**

- Software-based: AutoCAD, SketchUp, Revit, GIS
- Model-based: Physical models using cardboard, foam, 3D print
- Web/App simulation: Urban features simulation like traffic, waste, parks

### **2. Break Down Project Scope**

#### **Implement key features like:**

- Smart transportation
- Green buildings
- Waste management
- Public space planning
- Land use zoning

### **3. Tools & Technologies**

Design: AutoCAD, Revit, SketchUp

GIS: QGIS, ArcGIS

Web: HTML, CSS, JavaScript, Leaflet.js, Three.js

Models: Cardboard, Foam

Presentation: Canva, PPT, Google Slides

### **4. Create a Prototype or Simulation**

#### **Build a working prototype:**

- Digital: Maps, diagrams, flow charts
- Web/App: Simulations of traffic or resource use
- Physical: Miniature models of proposed zones

## **5. Documentation**

### **Prepare a report with:**

- Introduction
- Objectives
- Design & Implementation
- Tools Used
- Output with visuals
- Challenges and improvements

## **6. Presentation Video (Optional)**

### **Record a 3-5 minute video walkthrough of your project:**

- Explain your design
- Show simulation or model
- Highlight key features

## **Sample Project Idea**

Topic: Smart Neighborhood for Sustainable Living

Implementation:

- Design using SketchUp or Revit
- Mapping with QGIS
- Dashboard with energy/water usage
- Combine into video and report

## **7. Web-Based Simulation with Code (Sample)**

**You can implement a basic urban planning simulation using HTML, CSS, and JavaScript. Here's an example of how to simulate a simple interactive city map using Leaflet.js (an open-source JavaScript library for interactive maps):**



HTML + JS Sample Code:

```
<!DOCTYPE html>

<html>

<head>

<title>Urban Planning Map</title>

<link rel="stylesheet" href="https://unpkg.com/leaflet/dist/leaflet.css" />

<style> #map { height: 500px; } </style>

</head>

<body>

<h3>Smart City Simulation</h3>

<div id="map"></div>

<script src="https://unpkg.com/leaflet/dist/leaflet.js"></script>

<script>

var map = L.map('map').setView([13.0827, 80.2707], 13); // Chennai coordinates

L.tileLayer('https://{s}.tile.openstreetmap.org/{z}/{x}/{y}.png', {

maxZoom: 19,

}).addTo(map);

L.marker([13.0827, 80.2707]).addTo(map).bindPopup('Smart Traffic Point').openPopup();

</script>

</body>

</html>
```