

LOWPREP



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सत्यमेव जयते

DRONE-SOFTWARE CHALLENGE





Introduction

Panchayats have been the fulcrum of local self-government since ancient times, exercising both executive and judicial powers over village-level issues ranging from land distribution and tax collection to disputes. However, they were not part of the formal government structure. We plan to develop a virtual 3D environment based gaming platform for village development plan activities.

Problem Statement

Need for a simulated environment for developing a self-sustained village development is required, which can be done in collaboration with villagers. There is a need to develop a village development plan game where the user can plan various facilities in the village using the resources (financial & physical) available. It is envisaged to develop a SIMCITY/Farmville kind of a game for a hypothetical village. Developers can use any Game development platform for creating the game. SVAMITVA GIS data and Gram Panchayat Development Plan will be provided as an input.

Each year, a Gram Panchayat has between 5 lakh and 1 crore rupees available to prepare their Gram Panchayat Development Plan, the amount depending on population. Having been provided with 1:10,000 scale images of the Gram Panchayats area and 1:500 scale images of the part where habitats exist (10-15 in a GP), the game must first turn these into simpler images showing buildings, streets, fields, trees, water bodies etc. It should then become possible to play the game by using a wallet to visualize an asset in different parts of the Gram Panchayat with cost implications. With finalization/completions of each asset, the wallet would deplete until it is empty. The unit cost of each asset is an essential ingredient, which should be configurable. Typically, the financial resources available to Gram panchayats could be used for the construction of a path (Kutcha, paved with bricks, paver blocks or Cement concrete), side drains, buildings (Gp Bhawan, toilets, additional room, boundary wall etc). The few areas that can be considered development of the villages and in the vicinity like -Building roads (connectivity) in the Panchayat, Addressing the sanitation related issues on account of increase in households (Sanitation Plant), Building schools, health care centers to cater to the population. Depending on the size of population, the areas & capacity of Public Buildings to increase. Building Public Utilities (electricity, water), having Market Haats / Shops / CSCs to cater to Panchayat citizen's demand, Setting up of Solar Plants, Biogas plants, Wind Mills, in an area earmarked. The game shall include the progress scale of Panchayats based on Happiness index. For instance, Buildings like hospitals, Schools, Aanganwadis, CSCs need to be in close vicinity of the Houses. The game could show the citizen's morale as high and installations such as Sanitation, PowerPlants, Biogas need to be at a distance from the inhabited area/ or on barren land. In case it is closer to the houses, Residents morale goes down.





Inputs Available

- 2D vector data of village
- Drone Data of village

The Drone data (image as well as Vector data) of Kalonda Gram Panchayat can be downloaded from the following [google drive link](#).

Expected Output

- Game for panchayat development activities for planning.

Deliverables

- Design / develop an application/ game to help in Gram Panchayat development Planning
- The game should have a multifaceted approach focusing on development of villages with cost implications

Evaluation Criteria

Submission Deadline – **20th December**

- Relevance - 5
- User friendliness - 20
- Design - 20
- Extent of the objective being fulfilled - 20
- Depth of work and research – 20
- Clarity of illustrations - 5
- Originality - 10