

Introduction to Game Development

Techfest is the annual science and technology festival of IIT Bombay. Following is the basic outline of the workshop that would be happening at **Techfest, IIT Bombay** in offline mode by **Ubisoft**.

Pitch

Creation of a grid-based game using Unity. The game will have terrain with a grid system with vegetation, wildlife, and other modifiers for the same. The workshop will teach the basics of terrain generation, grid system, application of modifiers to the grid to simulate various environmental effects, etc.

Things to be taught/shown:

- Introduction to Unity
- Prefab
- Terrain system/painting
- Grid-based world system
- Tile modifiers
- Particle system for wildlife
- Terrain sculpting/modification
- Weather system
- Inter-system interactions/Systemic design
- Runtime modification of systemic values

References - Games such as Caesar 3, Sim City, Terra Nil.

Videos: [Terra Nil - Gameplay Trailer | Wholesome Direct 2022](#)

Game Development Workshop

Day 1:

Session 1

- What is a game engine
- Introduction to Unity
- Installing and running Unity for the first time
- Familiarizing with the Unity UI

- Unity prefabs

Session 2

- Creating a level with basic shapes
- Prototyping with Unity
- Scripting – Introduction to C#
- Creating a grid system for level tiling
- Implementing modifiers – Tile properties

Day 2:

Session 3

- Systemic game design
- Designing a system
- Systemic variables and modifiers
- Creating an environment
- Modifying system entities

Session 4

- Inter-system communication
- Run time value adjustment and simulation
- Completing a prototype – Implementing art
- Introduction & Implementing particle system
- Polish and completion