

#### **KIDS & TEENS FREELANCING TRAINING**

## **Minecraft Programming Course Outline**

## **MODULE 1: Introduction to Minecraft & Programming Basics**

- Overview of Minecraft Education Edition or Java Edition with mods
- Understanding block-based coding (using tools like Code.org, Tynker, or MakeCode)
- Basic logic: loops, events, and conditionals

# MODULE 2: Block Coding in Minecraft

- Using visual block coding to control Minecraft agents
- Simple build commands (e.g. place blocks, dig tunnels)
- First mini-project: Build a house with code

### **MODULE 3: Redstone Engineering & Logic Circuits**

- Introduction to Redstone components
- Create logic gates (AND, OR, NOT) using Redstone
- Design simple contraptions like doors, lights, or traps

# **MODULE 4: Python Programming in Minecraft**

- Introduction to text-based coding with Python (via Minecraft Pi or Edu Edition)
- Use Python to build structures and automate gameplay
- Project: Code a custom maze generator

### MODULE 5: Game Design & Custom World Building

- Elements of fun: gameplay, rules, challenges
- Create custom Minecraft maps
- Add NPCs (non-player characters) with simple AI

MODULE 6: Modding with JavaScript or Java (Advanced)

- Intro to Minecraft modding using platforms like MCreator or LearnToMod
- Customize game mechanics and items
- Create a basic mod (e.g. flying boots or magic potion)

# **MODULE 7: Team Collaboration & Multiplayer Projects**

- Coding in teams using shared worlds or servers
- Version control basics (like saving checkpoints)
- Build a group mini-game or challenge map

## **MODULE 8: Final Project & Showcase**

- Kids plan, code, and present their own Minecraft-based game or interactive world
- Use concepts from all previous modules
- Presentation to parents/teachers with feedback

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