## **Course Overview: Scratch Programming**

#### **Session Breakdown (90 Sessions, 1 hour each):**

Sessions 1-8: Introduction to block-based programming.

Sessions 9-15: Basics of Scratch Jr. Sessions 16-21: Speed Block and Say Block.

Sessions 22-29: Advanced Say Block.

Sessions 30-48: Interactive game design covering: -

Sprites, sequencing, repeating algorithms, loops, iterations. -

Backgrounds and interaction logic. - Games created: Dance Party, Flappy Bird, Racing Game, Talking Friends, Maze Game.

#### **Advanced Levels:**

Sessions 49-57: Advanced platformer game.

Sessions 58-68: Game physics.

Sessions 69-80: 3D game design.

Sessions 81-90: Machine learning games.

#### **Skills Developed:**

STEM Skills:

- Sequential thinking, logic, algorithms, and mathematical skills.

Cognitive Skills:

- Visual processing, decision-making, creative and logical thinking.









**Outcomes:** Creation of interactive animations, platformer games, 3D objects, and machine learning-based games.

Examples include games Rock-Paper-Scissors, Super Mario, Monkey Ladder, 3D Car Racing,



### **Progression Levels:**

Level 0 (Scratch Jr Star): Foundations in block-based coding.

Level 1 (Scratch Star): Fundamentals of Scratch and basic game creation.

Level 2 (Scratch Superstar): Advanced games with physics and interaction.

Level 3 (Scratch Master): Expert-level games, including 3D and machine learning

# The Codojo promise

Kids who do well in coding, do much better at school!

