

# Advanced SCRATCH Game Coding



It's fun and challenging!

## Let's improve coding skills with games!

Developing games is the best way to advance coding skills. It requires advanced coding skills, user experience design, game story design, and logical thinking. There are many ways to improve and customize each game. These customizations nurture the autonomy of your child. It is also fun!



### Advance coding skills

Your child will develop interactive games that require advanced coding skills, event handling, user experience design, and logical thinking.



### Build confidence in coding

Your child will build great confidence in coding after developing multiple fun games that he/she can play with his/her friends.



### Expand the boundary

Designing your games, customizing and improving the user experience, and making the games more fun and competitive are very challenging and take your child's skills to the next level.

**Prerequisite:** your child needs to know Scratch and have some programming experience with Scratch.

## After this program

Your child will be able to design and develop games and enhance them. Understand the importance of game stories and user experience. Understand advanced programming skills such as clone, costume control, and script synchronization with messaging.

## Syllabus (10 weeks/session sample up to full school-year)

- 1) Day 1
  - Develop the Chasing Mouse program
  - Review of Scratch fundamentals
  - Review of Sprite, backdrop, costume
- 2) Day 2
  - Make the Chasing mouse a game
  - Expand the idea
- 3) Day 3
  - Develop the Dodge Ball game
  - Multi-object movement
  - Control sprite with key
- 4) Day 4
  - Enhancement of the game
  - Develop the Flappy Bug game
- 5) Day 5
  - Understand clone capability
  - Control of costume within clones
- 6) Day 6
  - Develop the Missile shooting game
  - Clone control
  - Costume control
  - Use content on the Internet
- 7) Day 7
  - Enhance the Missile shooting game by reviewing the game story, user experience
- 8) Day 8
  - Develop the Golf game
  - Natural ball movement
  - Developing the bouncing logic
- 9) Day 9
  - Developing the bouncing logic continued
  - Enhancement
- 10) Day 10
  - Develop the Slider game
  - Use effects in the game