eDUNIQUE

Scratch Programming

Learning coding is not only about understanding the programming being used, but also developing important computational thinking skills, which are useful for problem-solving across many disciplinary areas. In this course, students will learn basic programming skills by creating interactive animations, which is a block-based visual programming language for anyone new to coding.

Requirement :

- Software or App : Scratch editor
- Required Laptop/Phone with internet connection
- No prior knowledge in programming or electronics

Learning Outcome:

Scratch is designed specifically for young people (ages 8 and up) to help them develop 21st century learning skills: thinking creatively, communicating clearly, analyzing systematically, using technologies fluently, collaborating effectively, designing iteratively, and learning continuously.

Scratch helps young people learn to think creatively, reason systematically, and work collaboratively — essential skills for life in the 21st century

Why Teach Students Programming

- The benefits students can gain from learning computer programming.
- The worldwide need for more computer programmers.
- How "blocky" programs allow people to create programs without memorization.
- The types of projects can be created with Scratch.
- Programs similar to Scratch or derived from it.

The Basics of Scratch

- The history of Scratch.
- The difference between sprites and images.
- Using Scratch's built-in sprites.
- Creating your own sprites.
- How are "blocky" activities the same and/or different than coding?
- Scratch's block categories.

First Project Basics

- Adding movement to a sprite.
- Adding sound to a sprite.
- Changing the colors of a sprite.
- Making a sprite appear to speak.
- Making a sprite appear to think.

Adding Sound

- Linking sounds to a sprite.
- Playing Scratch's sounds.
- Recording and playing your sounds.
- Adding narration to your story.

Logic

- The Stop block.
- The Wait block.
- The Forever block.
- Repeating actions.
- The Broadcast block.
- Conditional statements.
- Nested control statements.

Costumes and Background Changes

- Adding and changing costumes.
- Adding and changing backgrounds.
- Graphic special effects.
- Changing the size of a sprite.
- Working with multiple sprites.

Classroom Management and Scratch Accounts

- Student accounts.
- Sharing.
- Collaborating.
- Remixing.
- Backing up files and standalone player.
- Appropriate content.
- Resources for help.