

The background is a dark blue field filled with various line-art icons in light blue, yellow, and red. These icons include: a speech bubble with 'HTML5', a speech bubble with 'JS', a speech bubble with binary code '01101000' and '01101001', a Python logo, a satellite, a planet with a ring, a network diagram, an '@' symbol, a computer monitor and tower, a globe, a laptop with binary code on its screen, a Wi-Fi symbol, a cloud, a magnifying glass, a group of stylized people, and the text '</>tk' in multiple colors.

`</>tk`

Vivan Saurabh Singh

IRA

1 - Sapphire

Overview:



Table:

All exercises			
Exercise	Levels	Concepts	Blocks Used
Fun with Basics - Grade 1 & 2	8/8	Sequence, Algorithmic Thinking	0
Loopy Loops - Grade 1/2	4/8	Loops, Debugging	0

List of Concepts:

Decomposition

Breaking down a problem into smaller, more manageable parts.

Computational Thinking Concepts

Pattern Recognition

Identifying similarities or patterns within problems.

Computational Thinking Concepts

Abstraction

Simplifying complex problems by focusing on essential details and ignoring unnecessary information.

Computational Thinking Concepts

Algorithmic Thinking

Developing step-by-step instructions or rules to solve a problem.

Computational Thinking Concepts

Sequence

Understanding and writing instructions in a specific order.

Programming Concepts

Variables

Introducing the concept of containers for storing information.

Programming Concepts

Loops

Repeating a set of instructions multiple times.

Programming Concepts

Conditional Statements

Making decisions in the program based on certain conditions.

Programming Concepts

Events

Reacting to user inputs or specific occurrences in the program.

Programming Concepts

Functions

Creating reusable blocks of code to perform specific tasks.

Programming Concepts

Data Types

Introducing the idea of different types of data, such as numbers, text, and Boolean values.

Programming Concepts

Input and Output

Understanding how programs receive information (input) and produce results (output).

Programming Concepts

Debugging

Identifying and fixing errors or mistakes in the code.

Programming Concepts

Comments

Adding explanations and notes within the code for better understanding.

Programming Concepts

Event Handling

Responding to events triggered by user actions or other parts of the program.

Programming Concepts

Graphics and Animation

Introducing basic concepts of drawing and creating movement in a program.

Programming Concepts

Simulation

Creating virtual scenarios to model real-world situations.

Programming Concepts

Collaboration

Encouraging teamwork and sharing of code with others.

Programming Concepts

Iteration

Repeating a set of instructions or a process.

Programming Concepts