

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 various geometric shapes like circles and lines. The text is centered within a white rectangular box.

`</i>tk`

Aarya Rahman

IRA

2 - Opal

# 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	8/8	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