



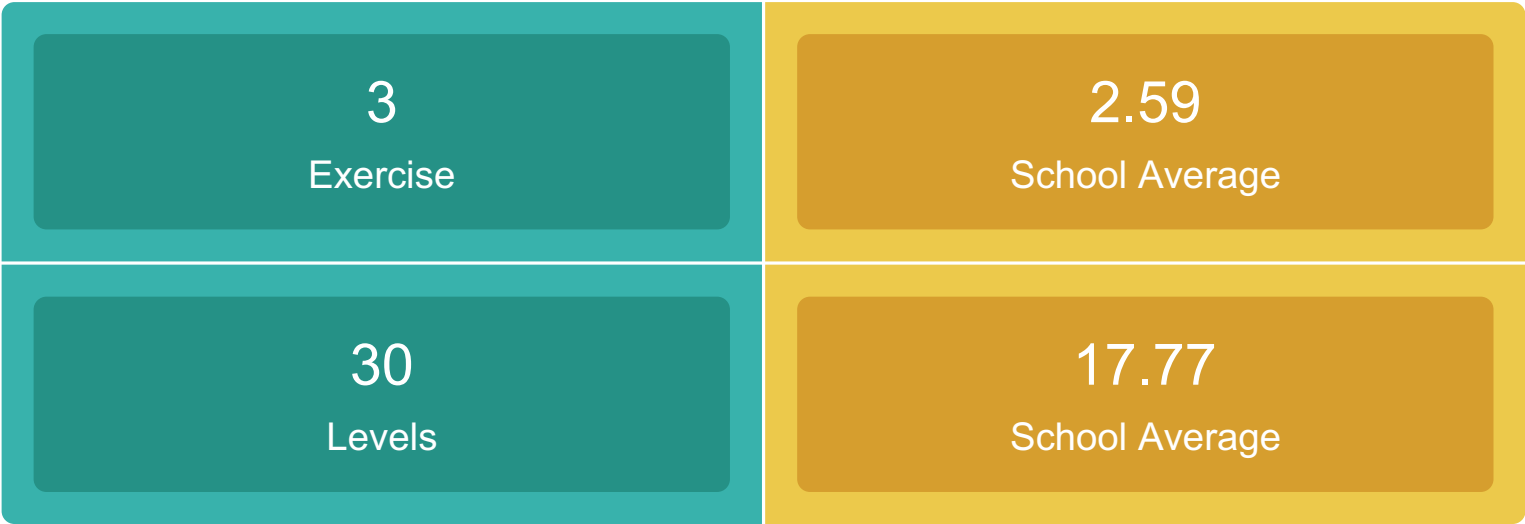
`</i>tk`

Vighnesh Shinde

Bhiwandi School

5 - Onyx

# Overview:



# Table:

| All exercises     |        |                                |             |
|-------------------|--------|--------------------------------|-------------|
| Exercise          | Levels | Concepts                       | Blocks Used |
| Fun with Basics   | 10/10  | Sequence, Algorithmic Thinking | 128         |
| Loopy Loops       | 12/12  | Loops, Debugging               | 188         |
| Dog and the loops | 8/8    | Loops, Variables, Functions    | 208         |

# 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).

## Debugging

Identifying and fixing errors or mistakes in the code.

## Comments

Adding explanations and notes within the code for better understanding.

## Event Handling

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

## Graphics and Animation

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

## Simulation

Creating virtual scenarios to model real-world situations.

## Collaboration

Encouraging teamwork and sharing of code with others.

## Iteration

Repeating a set of instructions or a process.