

A woman with dark hair tied back is performing a barbell squat in a gym. She is wearing a light gray sleeveless zip-up top and bright orange leggings. She is holding a barbell with weights across her shoulders. The gym has various equipment, including dumbbells on racks and other exercise machines in the background. The lighting is warm and focused on the woman.

*Train Your Brain  
To Be Alive*

# Problem Solving Training



Release 0.3

[github.com/cs-MohamedAyman/Problem-Solving-Training](https://github.com/cs-MohamedAyman/Problem-Solving-Training)

# Presentation Agenda

We will discuss in this  
presentation the  
following topics

- 1- Introduction to Training
- 2- Training Content and Timeline
- 3- How to Practice on Online Judges
- 4- Environment Setup and Installations

LET'S

**START**



# Presentation Agenda

- *Introduction to Training*
- *Training Content and Timeline*
- *How to Practice on Online Judges*
- *Environment Setup and Installations*



# Introduction to Training

# Training Levels Prerequisites



## Level 1

The prerequisites for level 1 of this training are the basic knowledge for any programming language like (Variable Types - Basic Operators - Conditions - Loops - Functions - Lists/Arrays - Strings).

## Level 2

The prerequisites for level 2 of this training are the basic knowledge for Data Structures and Algorithms like (Linear Data Structures - Non-Linear Data Structures - Searching Algorithms - Sorting Algorithms - Divide and Conquer).

## Level 3

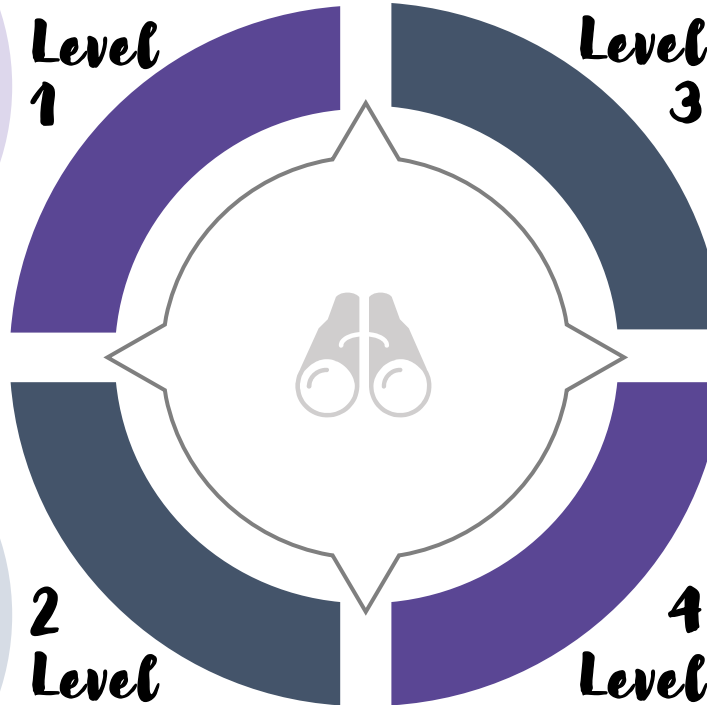
The prerequisites for level 3 of this training are the advanced knowledge for Data Structures and Algorithms Analysis like (Disjoint Sets - Trie - Segment Tree - Binary Indexed Tree - Divide and Conquer - Graph Algorithms - Greedy Algorithms - Dynamic Programming - Mathematical Algorithms).

## Level 4

The prerequisites for level 4 of this training are completing Level 1, 2, 3

# Training Levels Description

This level simply consists of 16 sheets, 6 sheets on URI Online Judge, 2 sheets on HackerRank Online Judge, 4 sheets on Codeforces Online Judge, and the last 4 sheets on HackerEarth Online Judge. The objective of this level is to apply best practice on the basic programming language topics.



This level simply consists of 24 sheets, 4 sheets on HackerRank Online Judge, 4 sheets on Codeforces Online Judge, 4 sheets on AtCoder Online Judge, 4 sheets on LeetCode Online Judge, and the last 8 sheets on HackerEarth Online Judge. The objective of this level is to apply best practice on the advanced data structures and algorithms topics.

This level simply consists of 24 sheets, 6 sheets on URI Online Judge, 2 sheets on HackerRank Online Judge, 2 sheets on AtCoder Online Judge, 4 sheets on Codeforces Online Judge, 6 sheets on LeetCode Online Judge, and the last 4 sheets on HackerEarth Online Judge. The objective of this level is to apply best practice on the basic data structures and algorithms topics.

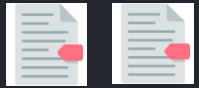
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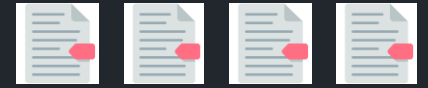
# Level 1 Sheets

(16 sheets)

HackerRank OJ  
(2 sheets)



Codeforces OJ  
(4 sheets)



URI OJ  
(6 sheets)



HackerEarth OJ  
(4 sheets)



# Level 2 Sheets

(24 sheets)

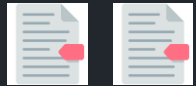
AtCoder OJ  
(2 sheets)



Codeforces OJ  
(4 sheets)



HackerRank OJ  
(2 sheets)



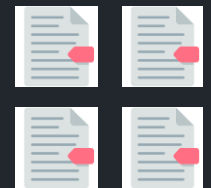
LeetCode OJ  
(6 sheets)



URI OJ  
(6 sheets)



HackerEarth OJ  
(4 sheets)



# Level 3 Sheets

(24 sheets)

Codeforces OJ  
(4 sheets)



AtCoder OJ  
(4 sheets)



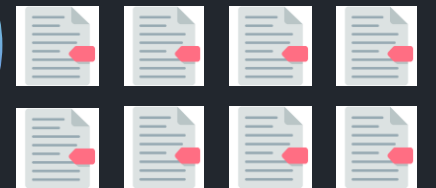
LeetCode OJ  
(4 sheets)



HackerRank OJ  
(4 sheets)



HackerEarth OJ  
(8 sheets)



# Presentation Agenda

- Introduction to Training
- Training Content and Timeline
- How to Practice on Online Judges
- Environment Setup and Installations



# *Training Content and Timeline*

*Level 1 (4 Online Judges) (16 sheets)*



# Level 1 Timeline



URI OJ (6 sheets) each sheet of them divided into (Beginner, Ad-Hoc, Strings, Data Structures, Mathematics, Geometry)



Codeforces OJ (4 sheets) each sheet of them divided into (Basic Operators, Conditions, Loops, Lists/Arrays, Strings)

6 weeks

2 weeks

4 weeks

4 weeks



HackerRank OJ (2 sheets) each sheet of them divided into (Introduction, Conditionals and Loops, Arrays and Strings, Functions, Standard Libraries, Classes and Inheritance)



HackerEarth OJ (4 sheets) each sheet of them divided into (Input/Output, Bit Manipulation, Recursion, Operators)

# Level 1 Sheets



## URI sheets

The URI OJ sheets:

phase-1-(1,2,3,4,5,6), each sheet of them divided into (Beginner - Ad-Hoc - Strings - Data Structures - Mathematics - Geometry). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~175 problems.



6 sheets \* 175 problems



## HackerRank sheets

The HackerRank OJ sheets:

phase-1-cpp, phase-1-python, each sheet of them divided into (Introduction - Conditionals and Loops - Arrays and Strings - Functions - Standard Libraries - Classes and Inheritance). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~80 problems.



2 sheets \* 80 problems

# Level 1 Sheets



## Codeforces sheets

The Codeforces OJ sheets:

phase-1-(1,2,3,4), each sheet of them contains A-Div2 problems and divided into (Basic Operators - Conditions - Loops - Lists/Arrays - Strings). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~120 problems.



4 sheets \* 120 problems



## HackerEarth sheets

The HackerEarth OJ sheets:

phase-1-(1,2,3,4), each sheet of them divided into (Input/Output - Bit Manipulation - Recursion - Operators). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~100 problems.



4 sheets \* 100 problems

# *Training Content and Timeline*

*Level 2 (6 Online Judges) (24 sheets)*

# Level 2 Timeline



URI OJ (6 sheets) each sheet of them divided into (Ad-Hoc, Strings, Data Structures, Mathematics, Graph, Paradigms, Geometry)



AtCoder OJ (2 sheets) each sheet contains beginner contests (easy contests)



LeetCode OJ (6 sheets) each sheet of them divided into (Array, LinkedList, Stack, Queue, Binary Tree, Heap Tree, HashTable) plus (Binary Search, Sorting, Divide and Conquer, Greedy, Bit Manipulation)

6 weeks

2 weeks

2 weeks

4 weeks

6 weeks

4 weeks



HackerRank OJ (2 sheets) each sheet of them contains linear and non-linear data structures problems, and basic algorithms problems



Codeforces OJ (4 sheets) each sheet of them divided into (Data Structure, Mathematics, String, Greedy, Brute Force)



HackerEarth OJ (4 sheets) each sheet of them contains linear and non-linear data structures problems, plus searching and sorting algorithms



# Level 2 Sheets



## URI sheets

The URI OJ sheets:

phase-2-(1,2,3,4,5,6), each sheet of them divided into (Ad-Hoc - Strings - Data Structures - Mathematics - Graph - Paradigms - Geometry). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~160 problems.



6 sheets \* 160 problems



## HackerRank sheets

The HackerRank OJ sheets:

phase-2-data-structures, phase-2-algorithms-basics, each sheet of them contains linear and non-linear data structures problems, and basic algorithms problems. These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~120 problems.



2 sheets \* 120 problems

# Level 2 Sheets



## AtCoder sheets

The AtCoder OJ sheets:

phase-2-(1,2), These sheets contain beginner contests (easy contests) and each sheet contains ~180 problems.



2 sheets \* 180 problems



## Codeforces sheets

The Codeforces OJ sheets:

phase-2-(1,2,3,4), each sheet of them contains B-Div2 problems and divided into (Data Structure - Mathematics - String - Greedy - Brute Force). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~120 problems.



4 sheets \* 120 problems

# Level 2 Sheets



## LeetCode sheets

The LeetCode OJ sheets:

phase-2-linear-data-structurs-(1,2), phase-2-nonlinear-data-structurs-(1,2), phase-2-basic-algorithms-(1,2), each sheet of them divided into (Array - LinkedList - Stack - Queue - Binary Tree - Heap Tree - HashTable) plus (Binary Search - Sorting - Divide and Conquer - Greedy - Bit Manipulation). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~190 problems.



6 sheets \* 190 problems



## HackerEarth sheets

The HackerEarth OJ sheets:

phase-2-linear-data-structures, phase-2-non-linear-data-structures, phase-2-algorithms-searching, phase-2-algorithms-sorting, each sheet of them contains linear and non-linear data structures problems, plus searching and sorting algorithms. These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~100 problems.



4 sheets \* 100 problems

# *Training Content and Timeline*

*Level 3 (5 Online Judges) (24 sheets)*

# Level 3 Timeline



HackerRank OJ (4 sheets) each sheet of them divided into (String, Number Theory, Algebra, Graph, Greedy, Mathematics, Bit Manipulation, Dynamic Programming)



Codeforces OJ (4 sheets) each sheet of them divided into (Divide and Conquer, Graph, Data Structure, Math and Number Theory, String, Greedy and Brute Force, Dynamic Programming)



HackerEarth OJ (8 sheets) each sheet of them divided into (String, Graph, Greedy, Mathematics, Number Theory, Dynamic programming)

4 weeks

4 weeks

4 weeks

4 weeks

8 weeks



AtCoder OJ (4 sheets) each sheet contains (regular + grand) contests (medium contests)

LeetCode OJ (4 sheets) each sheet of them divided into (Binary Search, Divide and Conquer, Sort, Greedy, Graph, Breadth First Search, Depth First Search, Backtracking, Dynamic Programming)





# Level 3 Sheets



## AtCoder sheets

The AtCoder OJ sheets:

phase-3-(1,2,3,4), These sheets contain (Regular + Grand) contests (medium contests) and each sheet contains ~60 problems.



4 sheets \* 60 problems



## HackerRank sheets

The HackerRank OJ sheets:

phase-3-mathematics-(1,2), phase-3-graph-string, phase-3-dynamic-programming, each sheet of them divided into (string, number theory, algebra, graph, greedy, mathematics, bit manipulation, and dynamic programming). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~130 problems.



4 sheets \* 130 problems

# Level 3 Sheets



## LeetCode sheets

The LeetCode OJ sheets:

phase-3-breadth-first-search-depth-first-search, phase-3-graph-advanced-data-structures, phase-3-math-string, phase-3-dynamic-programming, These sheets contain string, graph, bfs, dfs, mathematics, backtracking, and dynamic programming problems, in addition to advanced data structures. These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~190 problems.



4 sheets \* 190 problems



## Codeforces sheets

The Codeforces OJ sheets:

phase-3-(1,2,3,4), each sheet of them contains C-Div2/A-Div1 problems and divided into (Divide and Conquer - Graph - Data Structure - Math and Number Theory - String - Greedy and Brute Force - Dynamic Programming). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~120 problems.



4 sheets \* 120 problems

# Level 3 Sheets



## HackerEarth sheets

The HackerEarth OJ sheets:

phase-3-mathematics-strings-(1,2), phase-3-graph-(1,2), phase-3-dynamic-programming-(1,2), phase-3-advanced-data-structures-(1,2), each sheet of them divided into (string, graph, greedy, mathematics, number theory, dynamic programming, advanced data structures). These sheets were ordered based on the problem difficulty and grouped by the problem topic. Finally, each sheet contains ~120 problems.



8 sheets \* 120 problems

# Presentation Agenda

- Introduction to Training
- Training Content and Timeline
- How to Practice on Online Judges
- Environment Setup and Installations



# *How to Practice on Online Judges*





# Codeforces Online Judge

12 sheets



# Codeforces Online Judge

Phase 1-1	140 Problems
Basic Operator	15 problems
Condition	15 problems
Loop	35 problems
String	35 problems
List / Array	40 problems

Phase 1-3	120 Problems
Basic Operator	5 problems
Condition	20 problems
Loop	25 problems
String	30 problems
List / Array	40 problems



Phase 1-2	120 Problems
Basic Operator	10 problems
Condition	15 problems
Loop	20 problems
String	30 problems
List / Array	40 problems

Phase 1-4	120 Problems
Basic Operator	5 problems
Condition	20 problems
Loop	20 problems
String	30 problems
List / Array	45 problems

# Codeforces Online Judge

Phase 2-1	120 Problems
Data Structure	10 problems
String	40 problems
Mathematics	25 problems
Greedy	30 problems
Brute Force	15 problems

Phase 2-3	105 Problems
Data Structure	30 problems
String	5 problems
Mathematics	35 problems
Greedy	25 problems
Brute Force	10 problems



Phase 2-2	130 Problems
Data Structure	20 problems
String	25 problems
Mathematics	35 problems
Greedy	35 problems
Brute Force	15 problems

Phase 2-4	145 Problems
Data Structure	30 problems
String	30 problems
Mathematics	40 problems
Greedy	30 problems
Brute Force	15 problems

# Codeforces Online Judge

## Phase 3-1

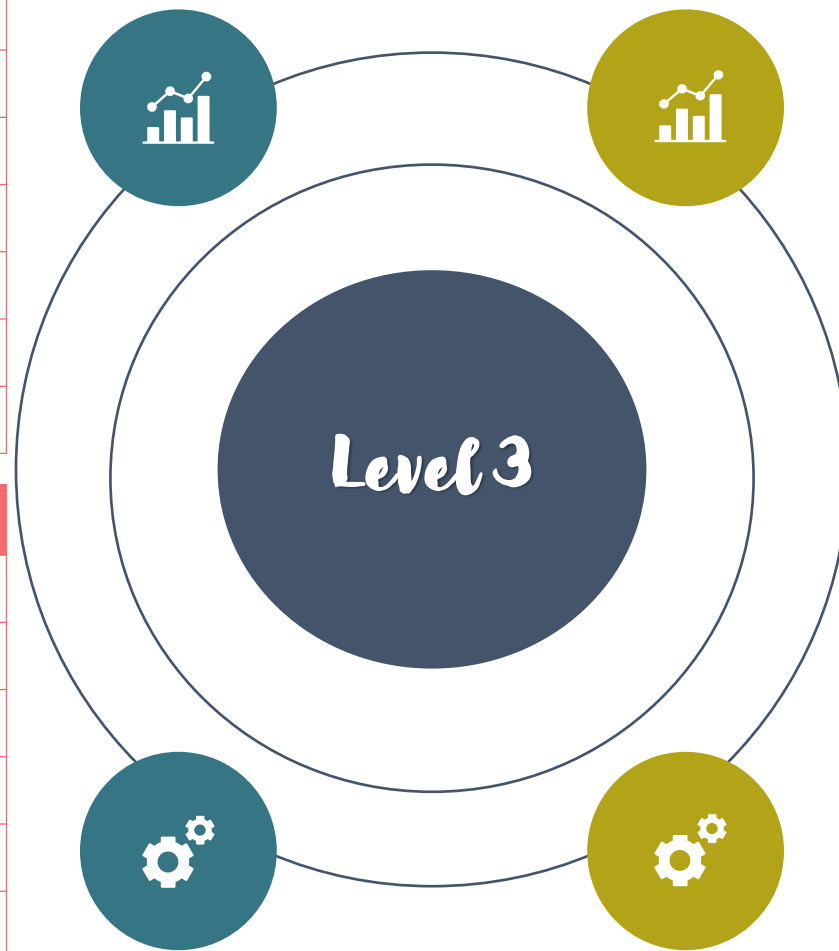
120 Problems

Divide and Conquer	10 problems
Graph	15 problems
String	15 problems
Data Structure	20 problems
Math & Number Theory	30 problems
Greedy & Brute Force	25 problems
Dynamic Programming	10 problems

## Phase 3-3

120 Problems

Divide and Conquer	10 problems
Graph	15 problems
String	15 problems
Data Structure	20 problems
Math & Number Theory	30 problems
Greedy & Brute Force	25 problems
Dynamic Programming	10 problems



## Phase 3-2

120 Problems

Divide and Conquer	10 problems
Graph	15 problems
String	15 problems
Data Structure	20 problems
Math & Number Theory	30 problems
Greedy & Brute Force	25 problems
Dynamic Programming	10 problems

## Phase 3-4

130 Problems

Divide and Conquer	10 problems
Graph	15 problems
String	15 problems
Data Structure	20 problems
Math & Number Theory	30 problems
Greedy & Brute Force	25 problems
Dynamic Programming	10 problems





LeetCode

# LeetCode Online Judge

10 sheets



# LeetCode Online Judge

## Phase 2-linear-data-structures-1 200 Problems

Array I	40 problems
Array II	40 problems
Array III	40 problems
Linked List	10 problems
Stack	50 problems
Queue and Dequeue	20 problems

## Phase 2-nonlinear-data-structures-1 170 Problems

Recursion	30 problems
Binary Tree	30 problems
Heap Tree	30 problems
Hash Table I	30 problems
Hash Table II	30 problems
Hash Table III	20 problems



## Phase 2-linear-data-structures-2 210 Problems

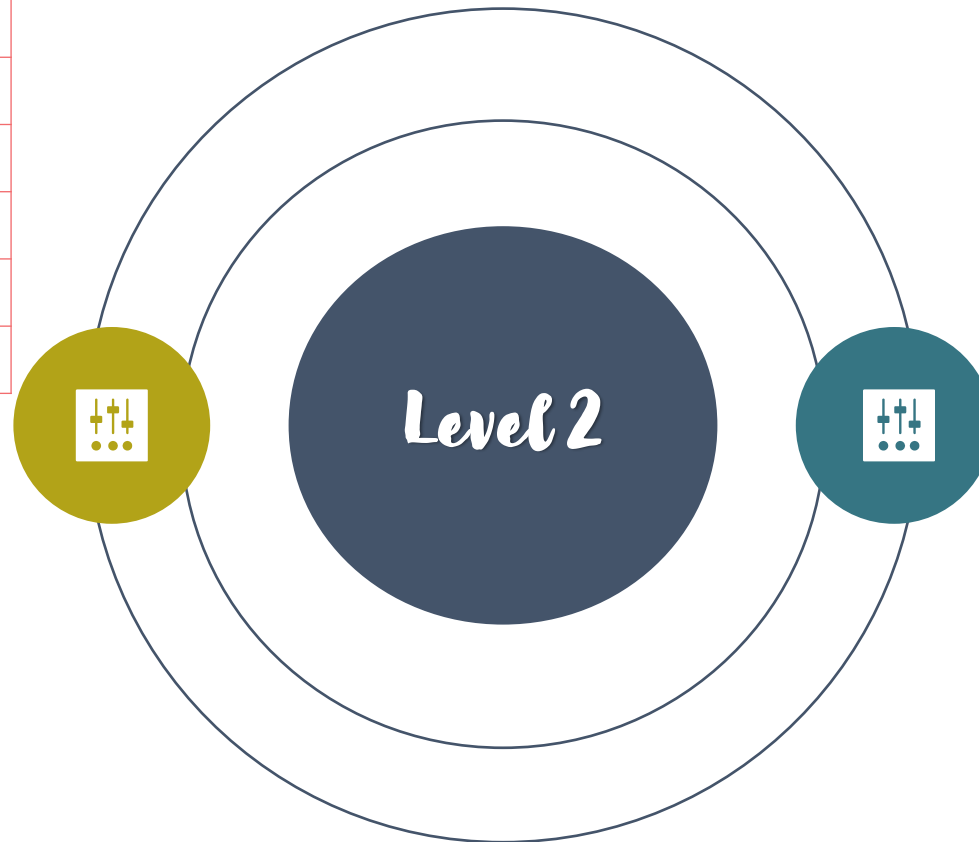
Array I	50 problems
Array II	50 problems
Array III	50 problems
Linked List	30 problems
Stack	10 problems
Queue and Dequeue	20 problems

## Phase 2-nonlinear-data-structures-2 180 Problems

Recursion	30 problems
Binary Tree	30 problems
Heap Tree	30 problems
Hash Table I	30 problems
Hash Table II	30 problems
Hash Table III	30 problems

# LeetCode Online Judge

Phase 2-basic-algorithms-1	190 Problems
Binary Search I	35 problems
Binary Search II	35 problems
Divide and Conquer	20 problems
Sorting I	40 problems
Sorting II	40 problems
Greedy	20 problems



Phase 2-basic-algorithms-2	200 Problems
Binary Search	30 problems
Greedy I	40 problems
Greedy II	40 problems
Greedy III	40 problems
Bit Manipulation I	25 problems
Bit Manipulation II	25 problems

# LeetCode Online Judge

## Phase 3-breadth-first-search-depth-first-search

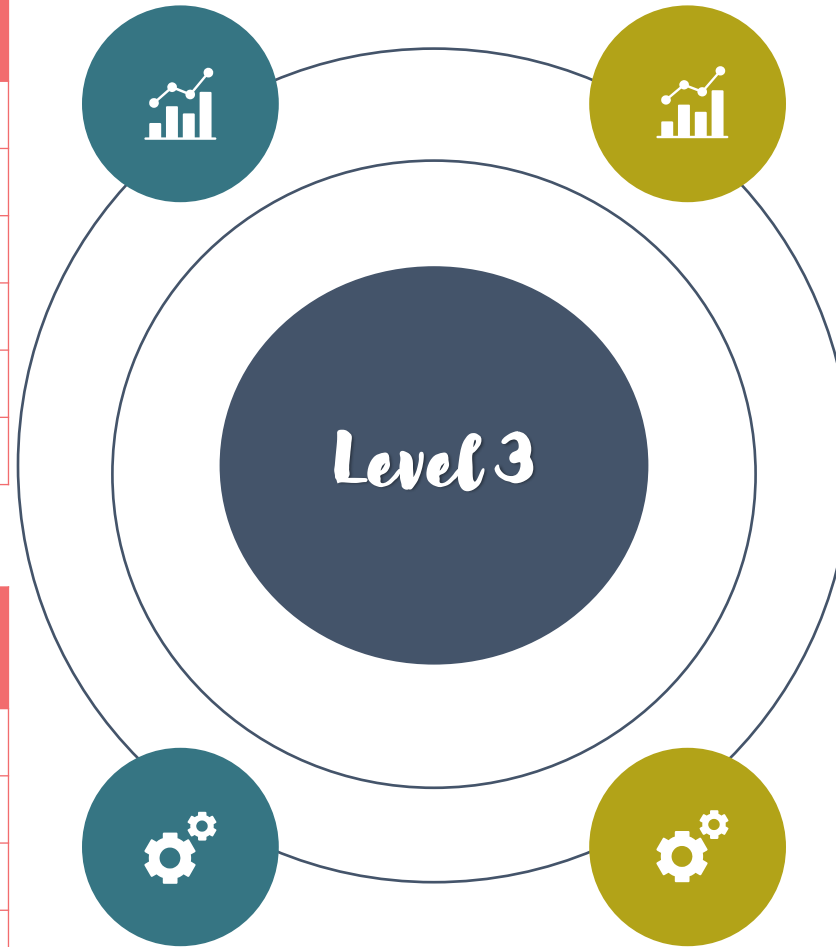
160 Problems

Breadth First Search I	25 problems
Breadth First Search II	25 problems
Breadth First Search III	25 problems
Depth First Search I	30 problems
Depth First Search II	30 problems
Depth First Search III	25 problems

## Phase 3-mathematics-strings

220 Problems

Math I	60 problems
Math II	60 problems
String I	50 problems
String II	50 problems



## Phase 3-graph-advanced-data-structures

190 Problems

Backtracking I	35 problems
Backtracking II	35 problems
Graph I	30 problems
Graph II	30 problems
Union Find, Binary Indexed Tree, Trie	30 problems
Segment Tree, Suffix Array, Geometry	30 problems

## Phase 3-dynamic-programming

200 Problems

Dynamic Programming I	50 problems
Dynamic Programming II	50 problems
Dynamic Programming III	50 problems
Dynamic Programming IV	50 problems





# HackerRank Online Judge

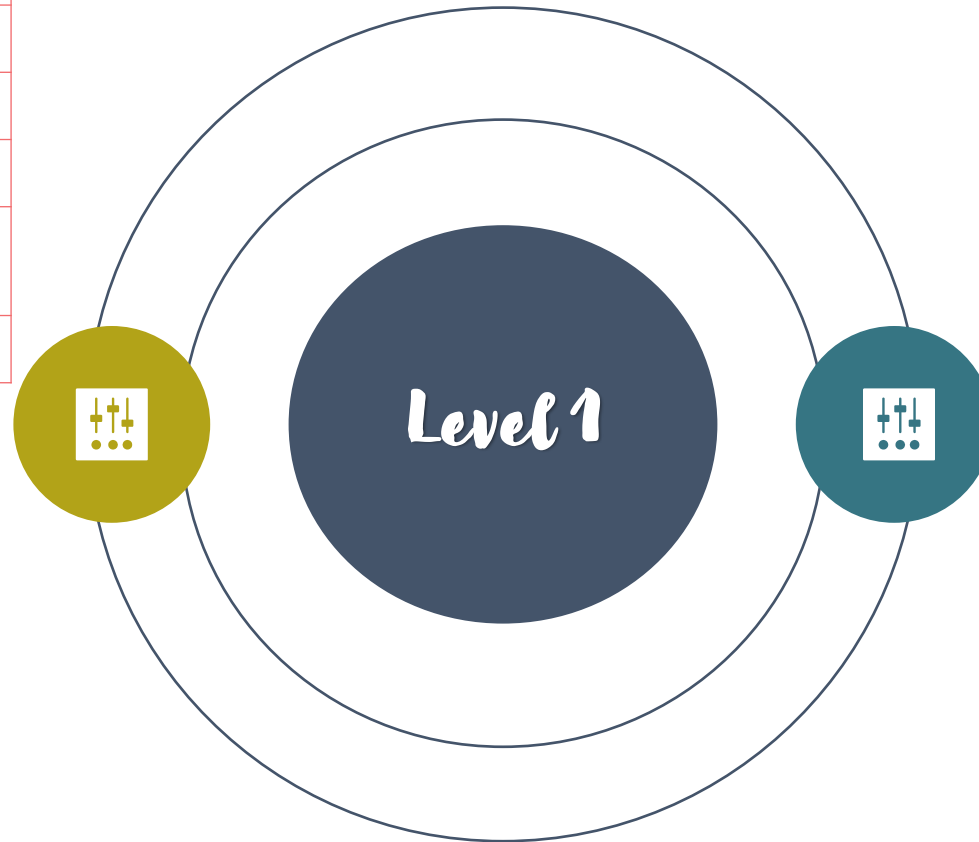
8 sheets



# HackerRank Online Judge



Phase cpp	70 Problems
Introduction	15 problems
Conditionals & Loops	5 problems
Arrays and Strings	10 problems
Functions	5 problems
Standard Template Libraries	5 problems
Structs and Classes	30 problems

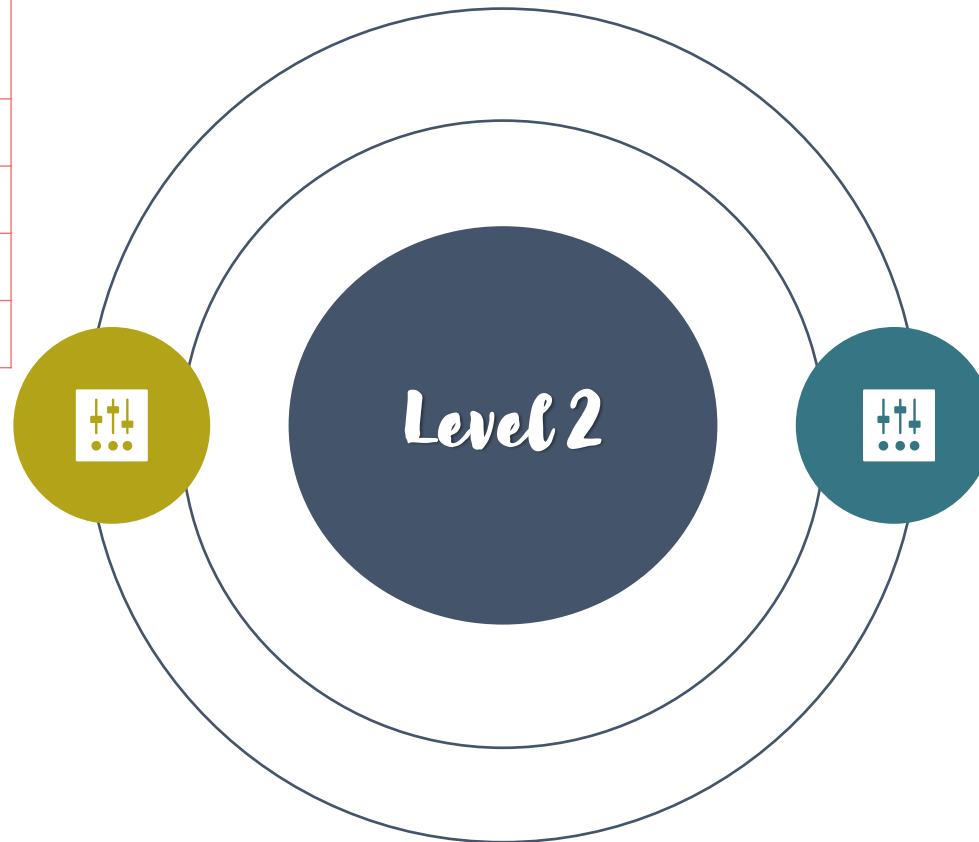


Phase python	100 Problems
Introduction	5 problems
Basic Data Types	20 problems
Collections	30 problems
Functions	10 problems
Standard Libraries	25 problems
Classes	10 problems

# HackerRank Online Judge



Phase data-structures	120 Problems
Arrays & Linked Lists	20 problems
Stacks & Queues	10 problems
Balanced Trees	25 problems
Heap & Disjoint Set	10 problems
Advanced	50 problems



Phase algorithms-basics	120 Problems
Warm-up & Recursion	20 problems
Sorting	15 problems
Search	25 problems
Implementation I	30 problems
Implementation II	30 problems

# HackerRank Online Judge



Phase mathematics-1	120 Problems
Fundamentals	10 problems
Number Theory	35 problems
Combinatorics	25 problems
Algebra	25 problems
Geometry	30 problems

Phase graph-string	130 Problems
Graph Theory I	30 problems
Graph Theory II	30 problems
Greedy	25 problems
Strings I	20 problems
Strings II	20 problems



Phase mathematics-2	120 Problems
Fundamentals	10 problems
Number Theory	35 problems
Combinatorics	25 problems
Algebra	25 problems
Geometry	30 problems

Phase dynamic-programming	140 Problems
Bit Manipulation	30 problems
DP I	40 problems
DP II	30 problems
DP III	30 problems
Constructive Algorithms	10 problems





# HackerEarth Online Judge

16 sheets



# HackerEarth Online Judge



Phase 1-1	100 Problems
Implementation	25 problems
Implementation	25 problems
Implementation	25 problems
Implementation	25 problems

Phase 1-3	100 Problems
Implementation	25 problems
Implementation	25 problems
Implementation	25 problems
Implementation	25 problems



Phase 1-2	100 Problems
Implementation	25 problems
Implementation	25 problems
Implementation	25 problems
Implementation	25 problems

Phase 1-4	130 Problems
Input / Output	50 problems
Bit Manipulation	40 problems
Recursion	10 problems
Operators	35 problems

# HackerEarth Online Judge



Phase linear-data-structures	110 Problems
Arrays 1D	45 problems
Arrays Multi-dimensional	40 problems
Stacks	25 problems
Queues	5 problems

Phase algorithms-searching	120 Problems
Linear Search	15 problems
Binary Search I	50 problems
Binary Search II	50 problems
Ternary Search	5 problems



Phase non-linear-data-structures	90 Problems
Binary Tree	10 problems
Binary Search Tree	10 problems
Heaps / Priority Queues	20 problems
Hash Tables	50 problems

Phase algorithms-sorting	140 Problems
Bubble, Selection, Insertion, Merge	40 problems
Quick, Count, Heap	20 problems
Greedy Algorithms I	40 problems
Greedy Algorithms II	40 problems

# HackerEarth Online Judge



Phase mathematics-strings-1	110 Problems
Basic Number Theory	30 problems
Primality Tests	30 problems
Totient Function	10 problems
Basics of String Manipulation	40 problems

Phase graph-1	150 Problems
Graph Representation	35 problems
Breadth First Search	35 problems
Depth First Search I	40 problems
Depth First Search II	40 problems



Phase mathematics-strings-2	110 Problems
Basic Number Theory	30 problems
Primality Tests	30 problems
Totient Function	10 problems
Basics of String Manipulation	40 problems

Phase graph-2	150 Problems
Depth First Search	40 problems
Shortest Path	50 problems
Spanning Tree	30 problems
Minimum Cost & Maximum Flow	30 problems



# HackerEarth Online Judge



Phase dynamic-programming-1	110 Problems
DP I	25 problems
DP II	25 problems
DP 2D I	25 problems
DP 2D II	25 problems
DP and Bit Masking	10 problems

Phase advanced-data-structures-1	120 Problems
Disjoint Sets	30 problems
Trie	20 problems
Segment Tree I	35 problems
Segment Tree II	35 problems



Phase dynamic-programming-2	110 Problems
DP I	25 problems
DP II	25 problems
DP 2D I	25 problems
DP 2D II	25 problems
DP and Bit Masking	10 problems

Phase advanced-data-structures-2	110 Problems
Segment Tree	30 problems
Binary Indexed Tree I	30 problems
Binary Indexed Tree II	30 problems
Suffix (Tree, Array)	20 problems



# AtCoder Online Judge

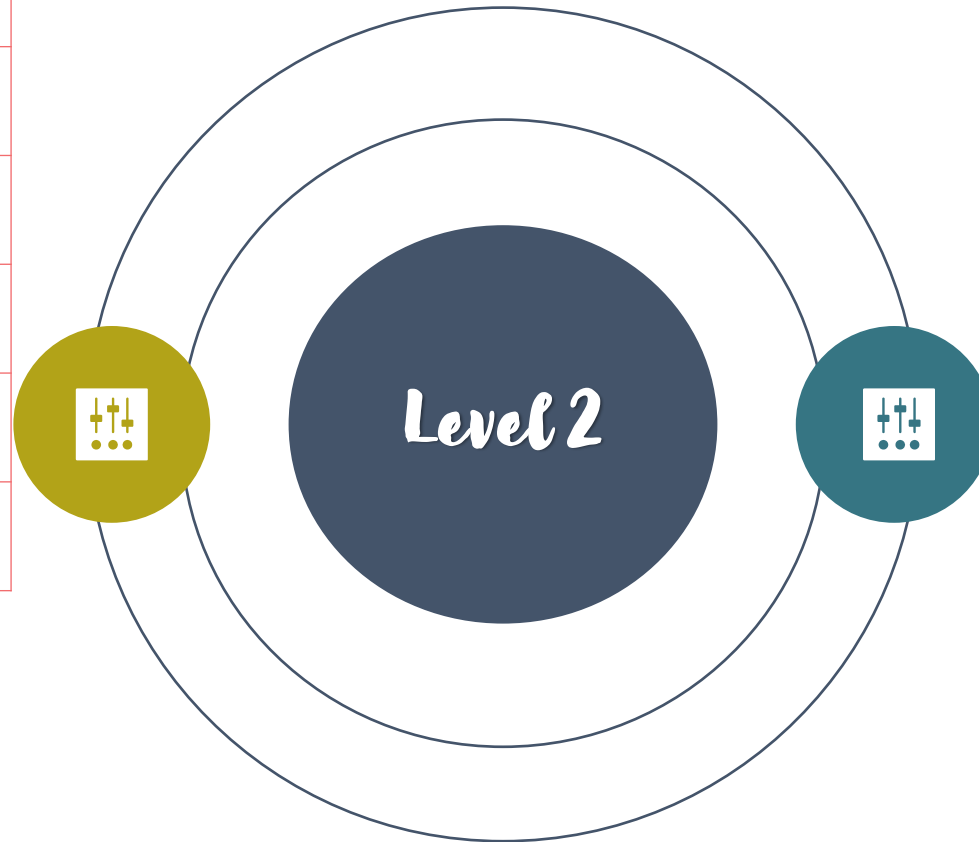
6 sheets



# AtCoder Online Judge



Phase 2-1	180 Problems
2016-2017 Beginner Contests I	20 problems
2018-2019 Beginner Contests I	30 problems
2020-2021 Beginner Contests I	40 problems
2016-2017 Beginner Contests II	20 problems
2018-2019 Beginner Contests II	30 problems
2020-2021 Beginner Contests II	40 problems



Phase 2-2	180 Problems
2016-2017 Beginner Contests I	20 problems
2018-2019 Beginner Contests I	30 problems
2020-2021 Beginner Contests I	40 problems
2016-2017 Beginner Contests II	20 problems
2018-2019 Beginner Contests II	30 problems
2020-2021 Beginner Contests II	40 problems

# AtCoder Online Judge



Phase 3-1	70 Problems
2016-2017 Regular Contests	30 problems
2018-2019 Regular Contests	15 problems
2020-2021 Regular Contests	25 problems

Phase 3-3	55 Problems
2016-2017 Grand Contests	20 problems
2018-2019 Grand Contests	20 problems
2020-2021 Grand Contests	15 problems



Phase 3-2	70 Problems
2016-2017 Regular Contests	30 problems
2018-2019 Regular Contests	15 problems
2020-2021 Regular Contests	25 problems

Phase 3-4	55 Problems
2016-2017 Grand Contests	20 problems
2018-2019 Grand Contests	20 problems
2020-2021 Grand Contests	15 problems



# URI Online Judge

12 sheets



# URI Online Judge

Phase 1-1	175 Problems
Beginner	45 problems
Ad-Hoc I	40 problems
Ad-Hoc II	35 problems
Strings	10 problems
Data Structures	15 problems
Mathematics	25 problems
Geometry	5 problems

Phase 1-3	175 Problems
Beginner	45 problems
Ad-Hoc I	40 problems
Ad-Hoc II	35 problems
Strings	10 problems
Data Structures	15 problems
Mathematics	25 problems
Geometry	5 problems

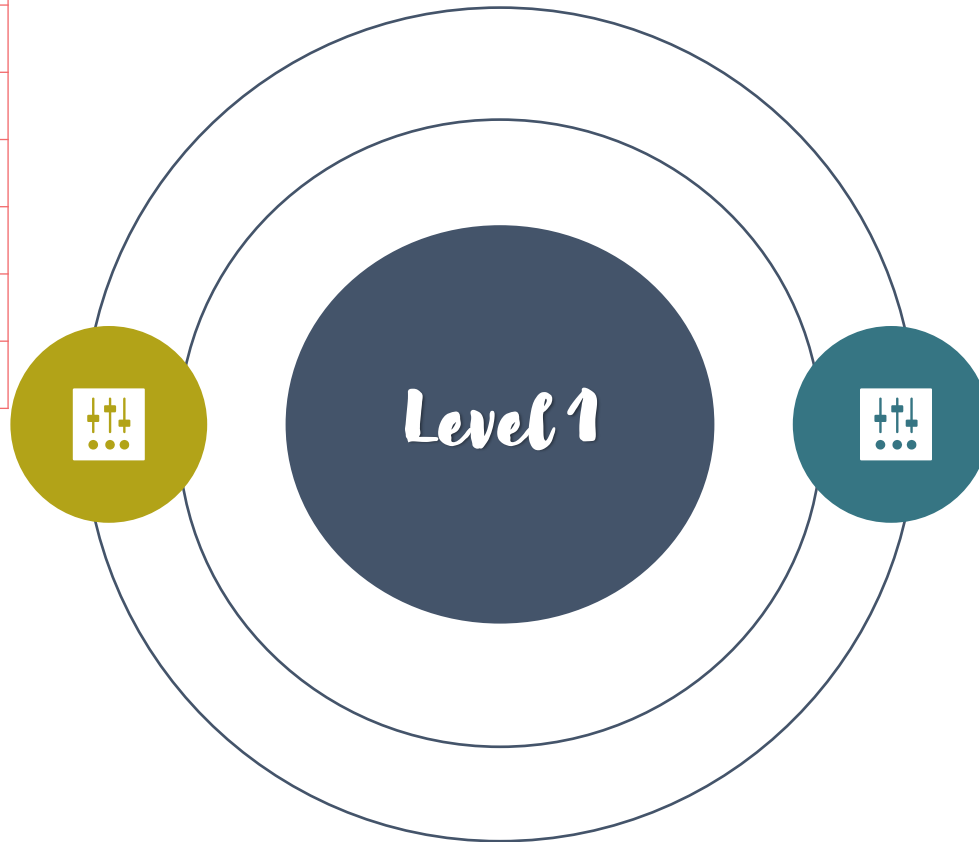


Phase 1-2	175 Problems
Beginner	45 problems
Ad-Hoc I	40 problems
Ad-Hoc II	35 problems
Strings	10 problems
Data Structures	15 problems
Mathematics	25 problems
Geometry	5 problems

Phase 1-4	175 Problems
Beginner	45 problems
Ad-Hoc I	40 problems
Ad-Hoc II	35 problems
Strings	10 problems
Data Structures	15 problems
Mathematics	25 problems
Geometry	5 problems

# URI Online Judge

Phase 1-5	175 Problems
Beginner	45 problems
Ad-Hoc I	40 problems
Ad-Hoc II	35 problems
Strings	10 problems
Data Structures	15 problems
Mathematics	25 problems
Geometry	5 problems



Phase 1-6	165 Problems
Beginner	35 problems
Ad-Hoc I	40 problems
Ad-Hoc II	35 problems
Strings	10 problems
Data Structures	15 problems
Mathematics	25 problems
Geometry	5 problems

# URI Online Judge

Phase 2-1	160 Problems
Ad-Hoc	25 problems
Strings	15 problems
Data Structures	15 problems
Mathematics	20 problems
Graph	40 problems
Paradigms	35 problems
Geometry	10 problems

Phase 2-3	160 Problems
Ad-Hoc	25 problems
Strings	15 problems
Data Structures	15 problems
Mathematics	20 problems
Graph	40 problems
Paradigms	35 problems
Geometry	10 problems



Phase 2-2	160 Problems
Ad-Hoc	25 problems
Strings	15 problems
Data Structures	15 problems
Mathematics	20 problems
Graph	40 problems
Paradigms	35 problems
Geometry	10 problems

Phase 2-4	160 Problems
Ad-Hoc	25 problems
Strings	15 problems
Data Structures	15 problems
Mathematics	20 problems
Graph	40 problems
Paradigms	35 problems
Geometry	10 problems



# URI Online Judge

Phase 2-5	125 Problems
Ad-Hoc	15 problems
Strings	10 problems
Data Structures	10 problems
Mathematics	10 problems
Graph	50 problems
Paradigms	25 problems
Geometry	5 problems



Phase 2-6	125 Problems
Ad-Hoc	15 problems
Strings	10 problems
Data Structures	10 problems
Mathematics	10 problems
Graph	50 problems
Paradigms	25 problems
Geometry	5 problems

# Online Competitions



- ICPC (4 Rounds) [Sep - Mar]



- Google CodeJam (5 Rounds) [Mar - Aug]



- Google KickStart (8 Rounds) [Mar - Nov]



- Google HashCode (2 Rounds) [Nov - Apr]



- Topcoder Open TCO (4 Rounds) [Jul - Jun]



- Meta HackerCup (5 Rounds) [Jun - Sep]

# Presentation Agenda

- Introduction to Training
- Training Content and Timeline
- How to Practice on Online Judges
- Environment Setup and Installations



# *Environment Setup and Installations*

# Online Environments



[codechef.com/ide](https://codechef.com/ide)



[ideone.com](https://ideone.com)



[leetcode.com/playground/new](https://leetcode.com/playground/new)



[mycompiler.io](https://mycompiler.io)



[tutorialspoint.com/codingground.htm](https://tutorialspoint.com/codingground.htm)



[onecompiler.com](https://onecompiler.com)



[replit.com](https://replit.com)



[geekflare.com/online-compiler](https://geekflare.com/online-compiler)

# IDEs & Editors



[python.org](https://python.org)



[jetbrains.com](https://jetbrains.com)



[atom.io](https://atom.io)



[sublimetext.com](https://sublimetext.com)



[codeblocks.org](https://codeblocks.org)



[eclipse.org](https://eclipse.org)



[visualstudio.microsoft.com](https://visualstudio.microsoft.com)



[netbeans.apache.org](https://netbeans.apache.org)



A scenic landscape featuring a wide, unpaved dirt road that curves through a valley. The valley is filled with dense, low-lying shrubs and bushes in shades of yellow and brown, suggesting an autumn or dry season. In the background, a range of rugged, dark mountains rises against a pale, overcast sky. The overall mood is quiet and contemplative.

*The way to get started  
is to quit talking and  
begin doing.*