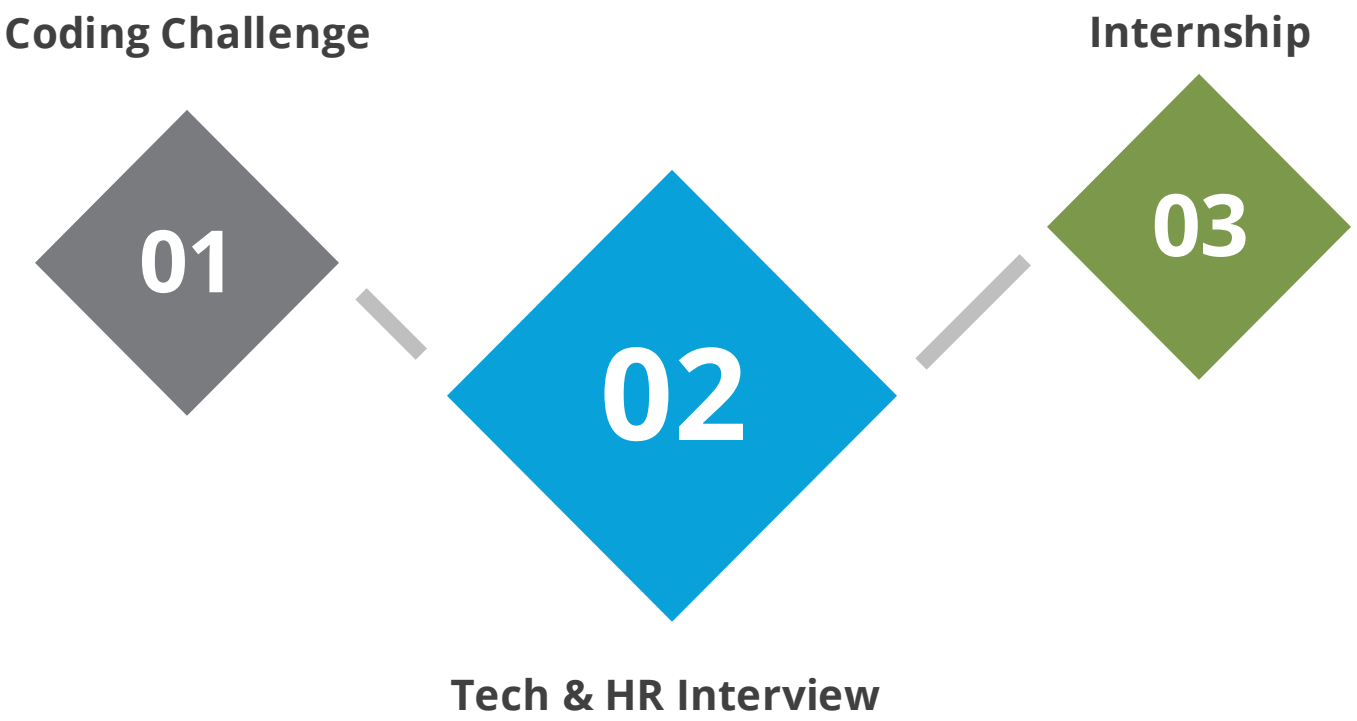
igniters hub
Transform, Forward Together..

Selection Process



Challenge 1 – Approximate Search

Write an interactive program to implement 'Approximate Search' for a given set of N strings. That is, given a word, find the top k strings in the set among those that are similar.

Language:- Python

The program must be able to read a text file and parse the content of the file and store it in-memory. The program should wait for the user's input. Once the user enters some text and presses enter the program should return a list of suitable suggestions.

Example:1

Input >> abslutly

Ouput >> absolutely

Example:2

Input >> actv

Ouput >> active, activist, activity

Challenge 2 – Evaluate Arithmetic Expressions

Write a program that reads a text file, solves all the Arithmetic Expressions given in the text file, and generates a new output file with answers.

Language:- Python

The program must be able to solve Arithmetic Expressions given in the input file by reading each line of the file then solving each expression one by one. In the end, the program should generate a new file containing the calculated answers filled in the right-hand side of the expression.

Allowed Characters and Expressions

Digits 0 - 9 and + - * / ^ . ( ) [ ] { }

Input	Output
10 – 2 =	10 – 2 = 8
100 * (2 + 12) =	100 * (2 + 12) = 1400
(10 + 5^2) ((5*-2) + 9 - 3^3) / 2=	(10 + 5^2) ((5*-2) + 9 - 3^3) / 2 = -490

Challenge 3 – Palindrome Checker

Write a program that checks whether a given string is a palindrome or not. A palindrome is a word, phrase, or sequence of characters that reads the same backwards as forward.

Language:- Python

Your program should prompt the user to enter a string, and then it should determine and display whether the input string is a palindrome or not.

Input	**Output**
Enter a string : racecar	The string ‘racecar’ is a palindrome.

Challenge 4 – Binary Search

Write a program that implements the binary search algorithm to search for a specific element in a sorted array. The program should allow the user to input a target element and then search for that element in the sorted array. It should return the index of the element if found or indicate that the element is not in the array.

Language:- Python

Input

Enter the target element: 7

The array: [1, 3, 5, 7, 9, 11, 13, 15, 17, 19]

Output

Element 7 is found at index 3.

Notes

1. Program for all the challenges must be committed in a new repository in GIT HUB (https://github.com/IgnitersHubProjects/interns-assignments)
2. Please grant **read** access to the repository.
3. If you don’t know how to do the above 2 steps, we are sure that you can figure it out.
4. All the challenge questions are mandatory.
5. Please use Google, Stack Overflow, etc to take help. There is no restriction on searching on the web.
6. Send your queries at hr@ignitershub.com


Thank You