# Assignment - 7

# Divide and Conquer

You are designing an analytics tool for a competitive game. In this game, players accumulate points over a series of rounds. Each round's score is recorded as an integer in an array, where:

- **Positive values** represent points gained.
- **Negative values** represent penalties.

The tool's objective is to identify the **hottest streak**—the continuous sequence of rounds where the player achieved their **highest net gain**. If multiple streaks have the same highest score, the tool should return the **shortest streak** in terms of the number of rounds.

This modification helps players identify the most efficient periods of high performance, focusing on streaks with fewer rounds but maximum gains.

## Example

**Input**:
`scores = [6, 3, -7, 3, -2, 5, -1, 4, -3, 2]`

**Output**:
`[6, 3]` with a sum of 9.

**Explanation**:

- The subarray `[3, -2, 5, -1, 4]` has the highest net gain of 9 but spans 5 rounds.
- The subarray `[6, 3]` also has a sum of 9 but spans only 2 rounds, making it the **shortest hottest streak**.

Now, provide a solution using the divide and conquer approach to find the shortest hottest streak.

**Submission Guidelines**

● Create a directory with your 7-digit student ID as its name.

● Place all source files (.c, .h) into that directory.

● Zip the directory in the .zip format (any other format like .rar, .7z, etc. is not acceptable).

● Upload the .zip file to Moodle.