

# Programming Task

## Overview

The goal of the assignment is to create a solution we can use to have a conversation about software development using code that you are familiar and comfortable with.

This is not a test of how fast you can solve a problem. We want to see a solution that best represents you and what you're capable of. We're not looking for an elaborate solution, but we would like to see something that is clean and well reasoned. This is not a final exam submission, this is the start of a conversation. We care as much about your thought process as the code itself, so capture your assumptions and be prepared to discuss them with us.

We're looking for readable code, passing tests, and a README that includes instructions and assumptions.

## Time and effort

You may take as long as you wish to complete this assignment. However, we also wish to be respectful of your time. As an approximate guide we suggest it should take in the order of 2-4 hours.

If you find yourself spending more time you may want to revisit your approach or ask for clarification.

## The task

The task is to parse a log file containing HTTP requests and to report on its contents.

For a given log file we want to know,

- The number of unique IP addresses
- The top 3 most visited URLs
- The top 3 most active IP addresses

## Example Data

```
177.71.128.21 - - [10/Jul/2018:22:21:28 +0200] "GET /intranet-analytics/ HTTP/1.1" 200 3574
```

A log file with test data is included with this assignment.

## Deliverables

- For this task you can choose from Java, Python, JavaScript, Kotlin, Go, or C#.
- There are no restrictions on language features and you are free to use third-party libraries.
- Please include tests that demonstrate your solution is working.
- You can submit your solution as a zip file containing the source code or a public git repository.