

COL334 - Assignment 2

HTTP

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We made a python script (Q4.py) on the two Object Tree files, namely, www.nytimes.com.objt and www.vox.com.objt. All data collection was performed on the same network, i.e, Airtel Broadband

Q4a. Overview

The script takes in as input an **Object Tree** or a **HAR file**, the **maximum allowed TCP connections** per domain, and the **maximum number of objects** per TCP connection. If the input is a **HAR file**, it is first converted to an **Object Tree** and then processed.

Each layer of the **Object Tree** is processed sequentially, i.e objects of parents are downloaded before the objects of the children. At every layer, objects belonging to a domain are passed to the thread.

In the thread, at any given time, $\text{TCP connections} \leq (\text{TCP connections})_{max}$ are opened in parallel to the domain in consideration, with each TCP connection requesting and downloading $\text{objects} \leq (\text{objects})_{max}$. Downloading across domains is done in parallel on separate threads.

Q4c.

The parameters obtained from Q3c. were :

- **nytimes:**

- TCP Connections:
- Number of Objects:
- Browser Time:
- Downloader Time:

- **vox:**

- TCP Connections:
- Number of Objects:

- Browser Time:
- Downloader Time:

In conclusion,

Q4d. Running time for different parameters

Q4e.