

Internship JetBrains task documentation

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Effective file transfer between machines for remote development

Overview

This Rust program connects to a local HTTP server and continuously downloads data in chunks until it collects a user-specified number of bytes. After retrieving the full content, it computes and prints its SHA-256 hash.

Functionality

- Prompts the user for the total number of bytes to download.
- Connects to a server at `127.0.0.1:8080`.
- Sends HTTP **Range** requests to fetch data in 10 000-byte segments.
- Extracts the HTTP response body from the received data.
- Appends the data to a buffer until the expected length is reached.
- Computes the SHA-256 hash of the resulting buffer.
- Prints the hash as a hexadecimal string.

Implementation Details

- The program uses `TcpStream` to send raw HTTP requests and receive responses.
- To extract the response body, it searches for the HTTP header terminator sequence `\r\n\r\n`.
- The hash is calculated using the `sha2` crate.