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Comparing Concurrency in C and Python

There are various approaches for concurrent programming in Python, including multiprocessing and multithreading. While Python provides libraries like `threading` and `concurrent.futures` for multithreading, Python's Global Interpreter Lock (GIL) does not support the full functionality of multithreading. The GIL restricts the concurrent execution of multiple threads within a single process. In contrast, C relies on the POSIX Threads API, the standard API on Unix-like operating systems that enables concurrent threads. Based on this distinction, this independent study aims to compare concurrency in C and Python. The outcome will be a five-page paper, with the deliverable being a program that spawns multiple threads and processes in both C and Python to demonstrate the difference in their execution and resource management. This research is relevant to the internship project in Python at Salesforce for file synchronization, as it could have involved concurrent download of multiple file contents.