**Usage of Cache:**

**What is Cache?**

**A cache is a temporary storage area to store frequently accessed data for rapid access.**

**How The Cache Works:**

The cache in Linux is called **Page Cache**. It is that certain amount of system memory that the kernel reserves for caching the file system disk accesses. This is to make overall performance faster. During Linux read system calls, the kernel checks if the cache contains the requested blocks of data. If it does, then that would be a successful cache hit. The cache returns this data without doing any I/O to the disk system. This is especially true if there is some kind of workloads that opens frequently the same files or some other kind of I/O expensive operations.

The Linux cache approach is called a **write-back cache**. This means first, the data is written to cache memory and marked as dirty until synchronized to disk. Then, the kernel maintains the internal data structure to optimize which data to evict from the cache when the cache demands any additional space. For example, when memory usage reaches certain thresholds, background tasks start writing dirty data to disk, thereby emptying the memory cache.