Multi Threading And Multi Processing

① Program
② Process
③ Threads
④ Examples of Process And Thread.

① Program ⟶ A program is a sequence of Instructions written in programming language [eg: Python, C++]

Eg: Google Chrome → .exe ← Program ⟶ Browser should work.
Word
Excel

② Process : A process is simply an instance of a program that is being executed

Separate Memory Space

Eg: Browser
Excel → process → Id
App → Process.

Code Segment	Data Segment	Heap
Stack	Registers	

⊛ One process cannot corrupt another process

⊛ I/O Requirements [Resources]

⊛ → Increased execution time to switch between processes.

③ Thread → A thread is a unit of execution within a process

Single Threaded Process

Code Segment	Data Segment	Heap
Stack		Registers

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Multi Threaded Process

Code Segment	Data Segment	Heap
Stack	Regis Stack	Regis

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Eg: MS PAINT → [   ] → Box
⇓
Process ⟵ Thread ◯ → Circle