

# Benefits

- **Responsiveness**

an application can continue running while it waits for some events in the background

- **Resource sharing**

threads can collaborate by reading and writing the same data in memory (instead of asking the OS to pass data around)

- **Economy of time and space**

no need to create a new PCB and switch the entire context (only the registers and the stack)

- **Scalability in multi-processor architecture**

the same application can run on multiple cores

# Multithreading Model