Suggested answers to Activities 1.1 and 1.2

Activity 1.1

- Yes.
- It's an illusion – by switching the CPU quickly between processes, each process appears to be making continuous progress. This is similar to seeing people move in a projected movie.
- You need to save/restore all the CPU hardware state that keeps track of the process's execution, e.g., registers like SP, PC, PSR, etc. To/from main memory.
- Timer interrupts periodically give control to the OS, which can then force rescheduling even if the process doesn't give up the CPU voluntarily.
- Yes. Otherwise, by disabling say the timer interrupt, a process can hoard the CPU.

Activity 1.2

- A person can think (brain). She can interact with her environment (eyes, ears, nose, mouth, touch, etc). She remembers what she learned (short/long term memory).
- CPU (brain). Input devices like keyboard (eyes). Output devices like speaker (mouth). Cache and main memory (ST memory). Secondary storage like disks (LT memory).
- CPU management, IO management, memory management, storage management, etc.