1. What is the purpose of system calls?
System calls allow user-level processes to request services of the operating system.

2. What is the purpose of system programs?
System programs can be thought of as bundles of useful system calls. They provide basic functionality to users so that users do not need to write their own programs to solve common problems.

3. What system calls have to be executed by a command interpreter or shell in order to start a new process?
In UNIX systems, a fork system call followed by an exec system call need to be performed to start a new process. The fork call clones the currently executing process, while the exec call overlays a new process based on a different executable over the calling process.

4. Why use APIs rather than system calls?
- An application programmer designing a program using an API can expect his program to compile and run on any system that supports the same API.
- Actual system calls can often be more detailed and difficult to work with the API available to an application programmer.