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**EMBEDDED LINUX ON ARM(ESCU2050)**

**Assignment2**

**Short question**

1. What is a system call in Linux?
2. Name two common categories of system calls in Linux.
3. How are system calls invoked in Linux?
4. What is the purpose of the fork() system call?
5. Explain the difference between the exec() family of system calls.
6. What is the open() system call used for?
7. How does the read() system call work?
8. What is the purpose of the write() system call?
9. Explain the role of the wait() system call in process management.
10. How does the kill() system call work in Linux?.

**Long questions**

1. Explain the process of creating a new process using the fork() system call in Linux. Describe the steps involved and the behavior of the parent and child processes after the fork() call.
2. In Linux, the exec() family of system calls is used to replace the current process image with a new one. Compare and contrast the functionality of execve(), execl(), and execvp(). Explain when and how each of these system calls is used, and provide examples.
3. The open() system call is used to open files in Linux. Describe the different flags that can be used with the open() system call and their corresponding behavior. Provide examples of how these flags can be used to open files with specific access modes.
4. The read() system call is used for reading data from a file descriptor in Linux. Explain how the read() system call works, including its parameters and return value. Discuss the role of file offsets in reading from a file using read(), and provide an example of its usage.
5. The write() system call is used for writing data to a file descriptor in Linux. Describe the functionality of the write() system call, including its parameters and return value. Explain how the write() system call handles partial writes and discuss error handling strategies.