



## Artificial Intelligence and Data Science Department. OS / Even Sem 2021-22 / Experiment 4.

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YASH SARANG.

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EXPERIMENT - 4.

System Call

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**Aim:** Create a child process in Linux using the fork system call. From the child process obtain the process ID of both child and parent by using getpid and getppid system calls. Explore wait and waitpid before termination of process.

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**Theory:**

# EXPERIMENT 4

Aim: To create a child process in Linux using the fork system call.  
obtain process IDs of child & parent  
explore wait and waitpid before termination of the process.

Theory:

- ① `fork()` → `fork` is a system call to create a new process from an existing running process.
- ② `getpid` → returns the process ID of parent of the calling process.
- ③ `getppid` → blocks the calling process until one of its child processes exits or a signal is received.
- ④ `waitpid` → suspends execution of the current process until a child specified by `pid` argument has a changed state.
- ⑤ `wait` - block calling process until one of its child processes exits or a signal is received.

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## Snippets:

```
(kali㉿kali)-[~/Desktop/Example/Assignment]
$ gcc assignment4.c -o output

(kali㉿kali)-[~/Desktop/Example/Assignment]
$ ./output
Parent ⇒ PID: 7012
Waiting for child process to finish.
Child ⇒ PPID: 7012 PID: 7013
Child process finished.

(kali㉿kali)-[~/Desktop/Example/Assignment]
$
```

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## Conclusion:-

Thus we have implemented System Calling in Linux.

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