Artificial Intelligence and Data Science Department.

OS / Even Sem 2021-22 / Experiment 5.

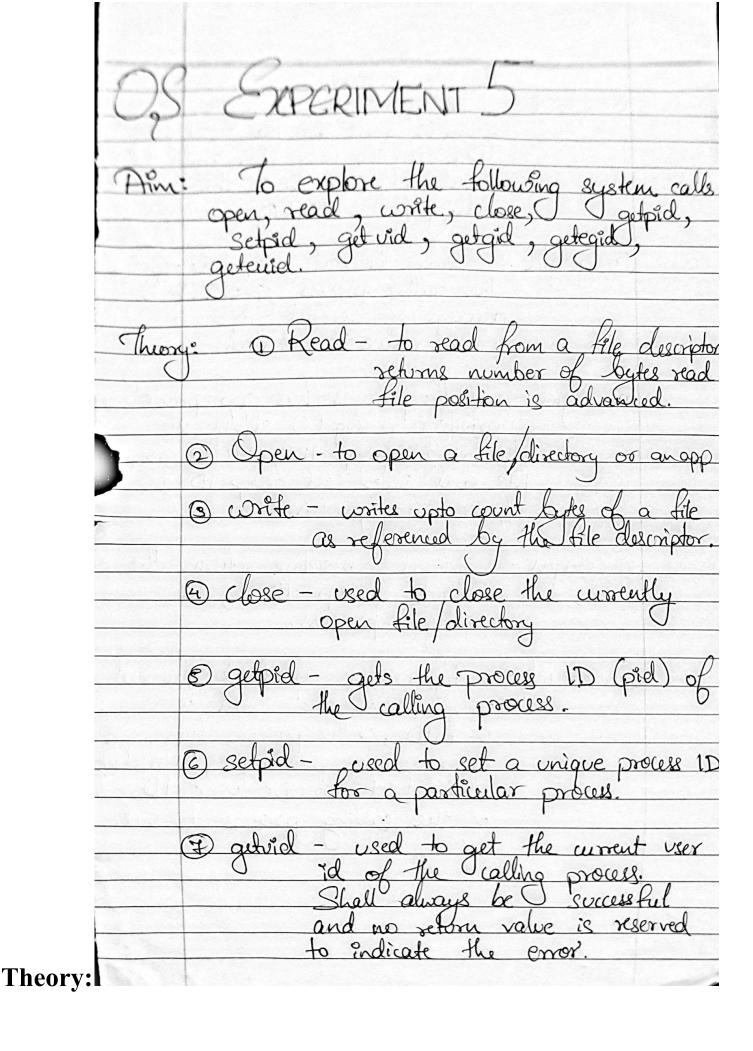
YASH SARANG.

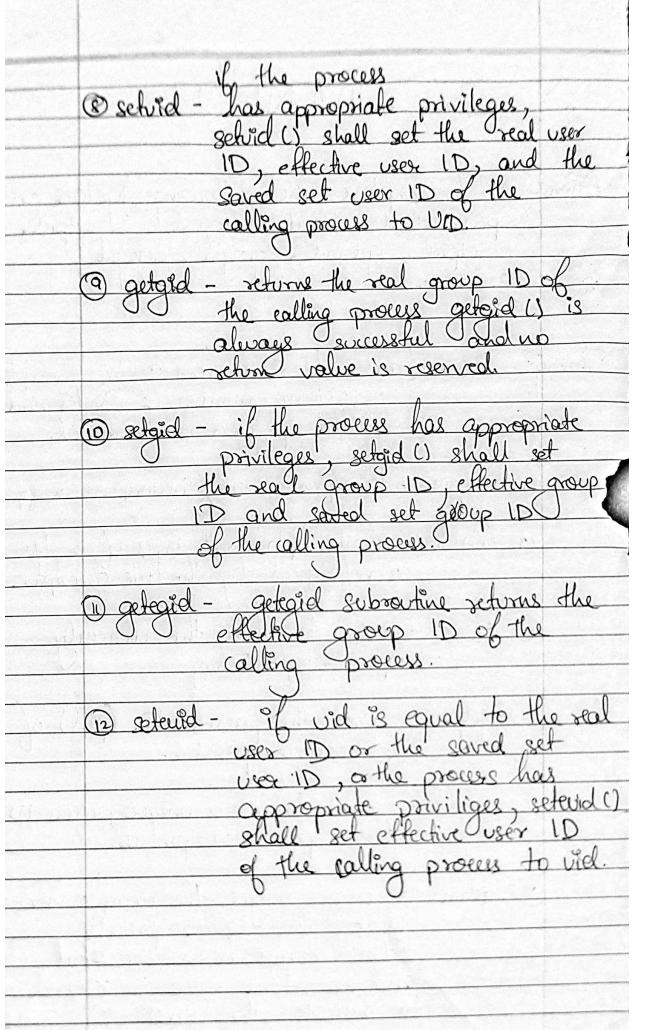
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EXPERIMENT - 5.

System Calls 2

Aim: Extend the above experiment to explore the following system calls: open, read, write, close, getpid, setpid, getuid, getgid, getegid, geteuid.





Code:

```
*lab5.cpp
   Open ▼ ...
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2 #include<sys/types.h>
3 #include<sys/stat.h>
4 #include<fcntl.h>
 5 #include<unistd.h>
 6 #include<stdlib.h>
 8 int main(int args, char *argv[])
 9 {
10
              int fd;
11
              char buf[14];
12
              fd = open("trial.txt", O_CREAT | O_WRONLY, 0600);
13
14
              if (fd = -1)
15
16
                        printf("Failed to create and open file\n");
17
                        exit(1);
18
              write(fd, "Hello World\n", 13);
19
20
              close(fd);
21
              fd = open("trial.txt", O_RDONLY);
22
23
              if(fd = -1)
24
25
                        printf("Failed to open and read\n");
26
                        exit(1);
27
28
29
30
             read(fd, buf, 13);
              buf[13] = '\0';
31
              close(fd);
                               %s\n", buf);
32
              printf("buf:
33
             printf("Real id is %d\n", getuid());
printf("Effective id is %d\n", geteuid());
printf("Real Group ID is %d\n", getgid());
printf("Effective Group ID is %d\n", getegid());
34
35
36
37
                                                      d\n", getegid());
38
39 }
                                                                            C++ ▼ Tab Width: 8 ▼
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                                                                                                                                           INS
```

Snippets:

```
(kali® kali)-[~/Desktop/Example/Assignment]
$ g++ lab5.cpp -o output5

(kali® kali)-[~/Desktop/Example/Assignment]
$ ./output5
buf: Hello World

Real id is 1000
Effective id is 1000
Real Group ID is 1000
Effective Group ID is 1000
```

Conclusion:-

Thus we can use the above commands and have learned in-depth about them.