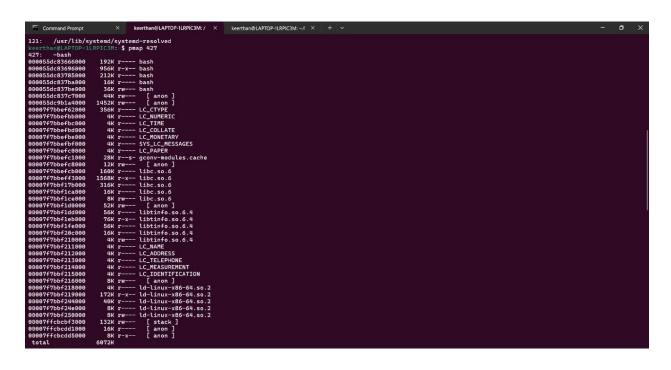
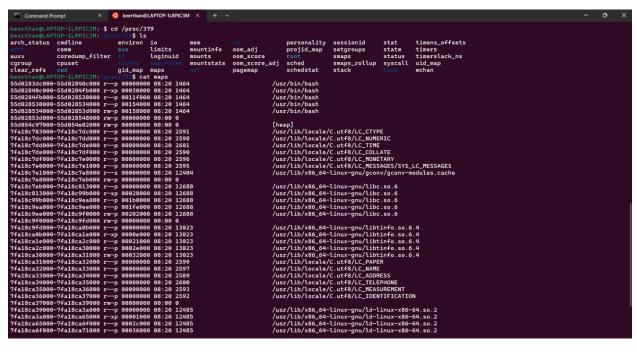
OPERATING SYSTEM LAB WEEK-2

SRN: PES2UG23CS272

```
file2.txt
.out
example1.c
                             folders
example1.c:Zone.Identifier
                             link1
                             nohup.out
example1a.c
xample1a.c:Zone.Identifier
                             orphan.c
                             orphan.c:Zone.Identifier
example2.c
example2.c:Zone.Identifier
                             osa.c
example3.c
                             p1
example3.c:Zone.Identifier
                             welcome.c
                             welcome.c:Zone.Identifier
example4.c
example4.c:Zone.Identifier
                             zombie-1.c
ile1.txt
                             zombie-1.c:Zone.Identifier
ceerthan@LAPTOP-1LRPIC3M:~/Documents/folders$ cd C
-bash: cd: C: No such file or directory
keerthan@LAPTOP-1LRPIC3M:~/Documents/folders$ gcc example1.c -o p1
ceerthan@LAPTOP-1LRPIC3M:~/Documents/folders$ size example1
ize: 'example1': No such file
xeerthan@LAPTOP-1LRPIC3M:~/Documents/folders$ size example1.c
size: example1.c: file format not recognized
ceerthan@LAPTOP-1LRPIC3M:~/Documents/folders$
```





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| Section | Sect
```

```
×  keerthan@LAPTOP-1LRPIC3M: × 🐧 keerthan@LAPTOP-1LRPIC3M × + v
  GNU nano 7.2
#include <stdio.h>
#include <unistd.h>
 int main()
    p1 = fork();
    if (p1 > 0) //parent process
       printf("This is parent. Process Id = %d, y = %d\n", getpid(), y);
    } else if (p1 == 0) // child process {
        printf("This is child. Process Id = %d, Parent Process Id = %d, y = %d\n", getpid(), getppid(), y);
        printf("fork creation failed!!!\n");
^G Help
^X Exit
                  ^K Cut
^U Paste
                                                                        ^T Execute
^J Justify
                                                                                          ^C Location
^/ Go To Line
                                                                                                            M–U Undo
M–E Redo
                                                                                                                               M-A Set Mark
M-6 Copy
```

```
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ gcc example1.c
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ ./a.out
This is parent. Process Id = 797, y = -1
This is child. Process Id = 798, Parent Process Id = 797, y = 1
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$
```

```
GNU nano 7.2
                                                      example1a.c
int main()
{
  pid_t p1;
p1 = fork();
       sleep(i);
     for (i = 0; i < 5; i++)
{
    sleep(i);</pre>
       ^G Help
^X Exit
            ^O Write Out
^R Read File
                                     ^K Cut
^U Paste
                                                             ^C Location
^/ Go To Line
                                                                                      M-A Set Mark
M-6 Copy
                                                                                                   M-] To Bracket
^Q Where Was
                        ^W Where Is
^\ Replace
                                                 ^T Execute
^J Justify
                                                                          M–U Undo
M–E Redo
```

```
Reerthan@LAPTOP-1LRPIC3M:-/Documents/folder $ gcc examplela.c keerthan@LAPTOP-1LRPIC3M:-/Documents/folder $ ./a.out
This is parent. Process Id = 815, y = -1
This is child. Process Id = 816, Parent Process Id = 815, y = 1
This is child. Process Id = 816, Parent Process Id = 815, y = 2
This is parent. Process Id = 816, Parent Process Id = 815, y = 3
This is child. Process Id = 816, Parent Process Id = 815, y = 3
This is child. Process Id = 815, y = -3
This is child. Process Id = 815, y = -4
This is parent. Process Id = 815, y = -4
This is parent. Process Id = 815, y = -5
This is child. Process Id = 816, Parent Process Id = 815, y = 5
keerthan@LAPTOP-1LRPIC3M:-/Documents/folder-$ ■
```

```
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ nano welcome.c
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ gcc welcome.c
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ ./a.out
welcome to process control demonstration
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ ./a.out
welcome to process control demonstration
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$
```

```
GNU nano 7.2
                                                                                        example2.c
  nt main()
     p1 = fork();
         wait(NULL);
         y = y - 1;
        printf("This is parent. Process Id = %d, y = %d\n", getpid(), y);
        y = y + 1;
         printf("This is child. Process Id = %d, Parent Process Id = %d, y = %d\n", getpid(), getppid(), y);
         exit(0);
        printf("fork creation failed!!!\n");
                                                                                 [ Read 36 lines ]
^G Help
^X Exit
                   ^O Write Out
^R Read File
                                        ^W Where Is
^\ Replace
                                                           ^K Cut
^U Paste
                                                                                                   ^C Location
^/ Go To Line
                                                                                                                                           M-A Set Mark
M-6 Copy
                                                                                                                                                               M-] To Bracket
^Q Where Was
                                                                                                                       M–U Undo
M–E Redo
```

```
keerthan@LAPIOP-1LRPIC3M:-/Documents/folder:$ nano example2.c
keerthan@LAPIOP-1LRPIC3M:-/Documents/folder:$ gcc example2.c
keerthan@LAPIOP-1LRPIC3M:-/Documents/folder:$ ./a.out
This is child. Process Id = 833, Parent Process Id = 832, y = 1
This is parent. Process Id = 832, y = -1
keerthan@LAPIOP-1LRPIC3M:-/Documents/folder:$ ...
keerthan@LAPIOP-1LRPIC3M:-/Documents/folder:$ ...
```

```
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ nano example3.c
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ gcc example3.c
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ ./a.out
This is grandchild. Process Id = 844, Parent Process Id = 843, y = 5
This is child. Process Id = 844, Parent Process Id = 842, y = 1
This is parent. Process Id = 842, y = -1
```

```
Command Prompt × 🧐 keerthan@LAPTOP-1LRPIC3M: × 🧐 keerthan@LAPTOP-1LRPIC3M × + -
  GNU nano 7.2
  int main()
     pid_t p1, p2;
     p1 = fork();
         wait(NULL);
         y = y - 1;
          printf("This is parent. Process Id = %d, y = %d\n", getpid(), y);
          p2 = fork();
              wait(NULL);
          Ware(
}
else if (p2 == 0)
{
    y = y + 5;
                                                                                          [ Read 59 lines ]
T Execute ^C Location
J Justify ^/ Go To Line
^G Help
^X Exit
                      ^O Write Out
^R Read File
                                          ^W Where Is
^\ Replace
                                                                                        ^T Execute
^J Justify
                                                                                                                                                          M-A Set Mark
M-6 Copy
                                                                                                                                                                                M-] To Bracket
^O Where Was
                                                                  ^K Cut
^U Paste
                                                                                                                                    M-U Undo
M-E Redo
```

```
      Reerthan@LAPTOP-1LRPIC3N:-/Documents/folder: $ none example4.c

      keerthan@LAPTOP-1LRPIC3N:-/Documents/folder: $ /a.out

      This is grandchild. Process Id = 852, Parent Process Id = 852, y = 5

      zombie-1.c:Zone.Identifier ophan.c:Zone.Identifier welcome.c:Zone.Identifier welcome.c:Zone.Identifier orphan.c
      osa.c
      nohup.out file1.txt
      example4.c:Zone.Identifier example2.c:Zone.Identifier example3.c
      example4.c
      example2.c: example2.c:Zone.Identifier example3.c:Zone.Identifier
      example4.c:Zone.Identifier example4.c:Zone.Identifier
      example4.c:Zone.Identifier
      example4.c:Zone.Identifier
      example4.c:Zone.Identifier
      example4.c:Zone.Identifier
      example4.c:Zone.Identifier
      example4.c:Zone.Identifier
      example4.c:Zone.Identifier
      example4.c:Zone.Identifier
      orphan.c:Zone.Identifier
      welcome.c:Zone.Identifier
      example4.c:Zone.Identifier
      example4.c:Zone.Identifier
      comphan.c:Zone.Identifier
      example4.c:Zone.Identifier
      comphan.c:Zone.Identifier
      comphan.c:Zone.Identifier
      combie-1.c:Zone.Identifier

      example1.c:Zone.Identifier
      example3.c:Zone.Identifier
      file2.txt
      orphan.c:Zone.Identifier
      zombie-1.c:Zone.Identifier
```

```
GNU nano 7.2

GNU nano 7.2

(Frequent to demonstrate Orphan Process.

// Parent process sinishes execution while the child process is running. The child process becomes orphan.

sinclude scatdio hy

sinclude systytypes.hy

sinclude systytypes.hy
```

```
GNU nano 7.2

Wrongs at the demonstrate Zombie Process.

// Child becomes Zombie as parent is sleeping when child process exits.

### Sinclude scatils have a statile as the statile as the statile scatile have a statile h
```

```
keerthan@LAPTOP-1LRPIC3M:-$ cd Documents
keerthan@LAPTOP-1LRPIC3M:-/Documents$ cd folders
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ nano zombie-1.c
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ gcc zombie-1.c
keerthan@LAPTOP-1LRPIC3M:-/Documents/folders$ ./a.out
In child
In parent
```