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OS Lab6

Ques 1

```
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ gcc Ques1.c
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ ./a.out
Enter the string to be passed through pipe :Nandita
String received from parent (Child) is : Nandita
ASCII sum of the given string (Parent): 703
```

Ques 2

```
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ gcc Ques2.c
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ ./a.out
Enter the size of array : 7
Enter the elements of array:1
3
6
2
9
4
1
Acending Order of the array in child
1 1 2 3 4 6 9
Descending Order of the array in parent
9 6 4 3 2 1 1
```

Ques 3

```
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ gcc Ques3.c
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ ./a.out
Enter the size of array : 5
Enter the elements of array:1
153
231
371
123
The elements of array are :
1 -> 1
153 -> 1
231 -> 0
371 -> 1
123 -> 0
```

Ques 4

```
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ gcc Ques4p1.c -o p1
Ques4p1.c: In function ‘main’:
Ques4p1.c:21:9: warning: implicit declaration of function ‘sleep’ [-Wim
plicit-function-declaration]
   21 |         sleep(1);
      |         ^~~~~
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ ./p1

Enter the string to be stored in shared memory
Nandita
The string is not a palindrome
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ gcc Ques4p1.c -o p1
Ques4p1.c: In function ‘main’:
Ques4p1.c:21:9: warning: implicit declaration of function ‘sleep’ [-Wim
plicit-function-declaration]
   21 |         sleep(1);
      |         ^~~~~
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ ./p1

Enter the string to be stored in shared memory
malayalam
The string is a palindrome
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$
```

```
nandita@DESKTOP-2LH63U6:~/OSLab$ cd OSLab6
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ gcc Ques4p2.c -o p2
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ ./p2
Data read from memory: Nandita
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ gcc Ques4p2.c -o p2
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$ ./p2
Data read from memory: malayalam
nandita@DESKTOP-2LH63U6:~/OSLab/OSLab6$
```

Lab 6

1. First take an input of the string in the parent process. Write to the pipe 2 and the child will read the string through the pipe 2. In the child process will calculate the ASCII sum of the string and write the sum into the pipe 1 and the parent process will read the sum and display it.

2. First take the input of numbers into an array. Arrange the array into an ascending order in the parent process and write into the pipe 2. The child process will read the array and sort the array in desending order and write into the pipe 1. The parent process will read the desending order array and print it.

3. First take the input of the numbers into an array and print the elements of the input array inside the parent process. Now the parent process will write into the pipe 2 and the child process will read the array and create an other array having 0's or 1's where 0's shows the integer is not an amstrong number an 1's is an amstrong number.

Write the array of 0's and 1's into the parent process and the parent process will display it.

4) We have taken 3 shared memory variables string, temp, flag. In P1, we will take the input for the string. P2 will read it and check if it is palindrome or not and change the flag varible to '0' or '1' accordingly. And after the check is over it will change the temp variable to '*'. The P1 process will sleep until the temp variable is '*'. Now P1 will check if the flag is '0' or '1' and print if the given string is a palindrome or not.