

WEEK -2

1. Problem Statement: Parent process computes the SUM OF EVEN and Child Process computes the Sum Of ODD NUMBERS using fork() system call.

Code:

```
#include <stdio.h>
#include <unistd.h>

int main() {
    int n;
    printf("enter size of array : ");
    scanf("%d",&n);
    int esum=0,osum=0;

    int arr[n];
    printf("enter array: ");
    for(int i=0;i<n;i++){
        scanf("%d",&arr[i]);
    }

    pid_t pid= fork(); // child creation

    if(pid<0){ // fork() failed
        printf("fork failed :)\n");
        return 1;
    }
```

```

else if(pid == 0){ //fork() returns 0 for child process
// doing odd sum by child

printf("child id = %d \n",getpid());

for(int i=0;i<n;i++){
    if(arr[i]%2!=0){
        osum+=arr[i];
    }
}

printf("odd sum by child = %d\n",osum);
}

else{ //fork() returns +ve value for parent process
// doing even sum by parent

printf("parent id = %d \n",getpid());

for(int i=0;i<n;i++){
    if(arr[i]%2==0){
        esum+=arr[i];
    }
}

printf("even sum by parent = %d\n",esum);
}

return 0;
}

```

OUTPUT

```
root@MSI:/mnt/d/SECTION A/5th semester/OS/OS LAB/week2# ./a.out
enter size of array : 5
enter array: 1 2 3 4 5
parent id = 38
even sum by parent = 6
child id = 39
odd sum by child = 9
root@MSI:/mnt/d/SECTION A/5th semester/OS/OS LAB/week2# █
```