**GROUP-A**

**ASSIGNMENT NUMBER-4**

**1 Aim**

Parallel ODD-Even Sort algorithm

* **Problem Statement**

Implement a Parallel ODD-Even Sort algorithm using GPU or ARM equivalent

* **Tools used**

Operating System:Ubuntu 14.04 LTS(64 bit) or windows, nvidea cuda

* **Mathematical Model**

Let S be the solution perspective of the class odd even sort such that

S={s, e, i, o, f, DD, NDD, success, failure}

s=initial state

e=end state.

i= input of the system.

o=output of the system.

f= functions used by the class

DD-deterministic data it helps identifying the load store functions or assignment functions.

NDD-Non deterministic data of the system S to be solved.

Success-desired outcome generated.

Failure-Desired outcome not generated or forced exit due to system error.

For class odd-even sort :

s=initial state of the variables

e= and e be the end state i.e. array of sorted element

Input I = (Array of unsorted elements)

I1= value of first element

I2= value of the second element

In=value of the nth element

O = result calculated according to function

f=(odd,even)

odd=odd element and right next element swap

even=even element and right next element swap

Success- correct result generated and displayed on the console.

Failure- correct result not generated and error is shown on the console.