PDC - Lab 7

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12 - September - 2020

Question 1
To find the sum of numbers from 1 to n and broadcast the sum.

```c
#include <mpi.h>
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>

int main(int argc, char **argv)
{
    int myid, numprocs;
    int sum=0;

    MPI_Init(&argc, &argv);
    MPI_Comm_size(MPI_COMM_WORLD, &numprocs);
    MPI_Comm_rank(MPI_COMM_WORLD, &myid);

    if(myid == 0) {
        for(int i=0;i<40;i++)
            sum+=i;
    }

    printf("Thread [%d]: Before Broadcast, sum is %d\n", myid, sum);
    MPI_Bcast(&sum, 1, MPI_INT, 0, MPI_COMM_WORLD);
```

```c
    printf("Thread [%d]: After Broadcast, sum is %d\n",
myid, sum);

    MPI_Finalize();
}
```

```
(base) Aadhityas-MacBook-Air:12Sep2020 aadhitya$ mpicc p1.c
(base) Aadhityas-MacBook-Air:12Sep2020 aadhitya$ mpirun a.out
Thread [0]: Before Broadcast, sum is 780
Thread [1]: Before Broadcast, sum is 0
Thread [0]: After Broadcast, sum is 780
Thread [1]: After Broadcast, sum is 780
(base) Aadhityas-MacBook-Air:12Sep2020 aadhitya$
```