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| Programme | : | **B.Tech.(CSE)** | Semester | : | **Fall ’22-23** | |
| Course | : | **Parallel and Distributed Computing** | Code | : | **CSE4001** | |
| Faculty | : | **R. Kumar** | Slot | : | **L9+L10** | |

1. Write a program in OpenMP to find out the largest number in an array of 1000000 randomly generated numbers from 1 to 100000 using reduction clause. Compare the versions of serial, parallel for and reduction clause.
2. Write a program in OpenMP to find out the standard deviation of 1000000 randomly generated numbers using reduction clause. Document the development versions of serial, parallel for and reduction clause.
3. Write a multithreaded program using OpenMP to implement sequential and parallel version of the Monte Carlo algorithm for approximating Pi. Compare the results of sequential, loop-level parallelism and reduction clause with 10000000 samples.