1. Design and implement Parallel Breadth First Search and Depth First Search based on existing algorithms using OpenMP. Use a Tree or an undirected graph for BFS and DFS

1. Write a program to implement Parallel Bubble Sort and Merge sort using OpenMP. Use existing algorithms and measure the performance of sequential and parallel algorithms.
2. Implement Min, Max, Sum and Average operations using Parallel Reduction.
3. Write a CUDA Program for : Addition of two large vectors
4. Write a CUDA Program for: Matrix Multiplication using CUDA C

6 Evaluate performance enhancement of parallel Quicksort Algorithm using MPI  
 - Compare Execution Time – Serial vs Parallel Quicksort using MPI

1. Implement Huffman Encoding on GPU  
    - Implement Parallel Frequency Count on GPU using CUDA
2. Implement Parallelization of Database Query optimization  
    - Implement Parallel Execution of SQL Queries using Python’s concurrent.futures module
3. Implement Non-Serial Polyadic Dynamic Programming with GPU Parallelization  
    - Implement the parallel prefix sum (scan) algorithm on GPU using CuPy

10 .Linear regression by using Deep Neural network: Implement Boston housing price prediction problem by Linear regression using Deep Neural network. Use Boston House price prediction dataset.

11. Classification using Deep neural network (Any One from the following)   
A. Multiclass classification using Deep Neural Networks: Example: Use the OCR letter recognition dataset https://archive.ics.uci.edu/ml/datasets/letter+recognition

12. Binary classification using Deep Neural Networks Example: Classify movie reviews into positive" reviews and "negative" reviews, just based on the text content of the reviews. Use IMDB dataset

13. Convolutional neural network (CNN)  
 - Use MNIST Fashion Dataset and create a classifier to classify fashion clothing into categories.

14. Convolutional neural network (CNN)

-Use any dataset of plant disease and design a plant disease detection system using CNN.

**15** Human Face Recognition  
 - Face Detection Using OpenCV

**16.** Gender and Age Detection: predict if a person is a male or female and also their age  
 - Gender Prediction Using Pre-trained Model

**17.** Colorizing Old B&W Images: color old black and white images to colorful images  
 - Do Basic Colorization Using OpenCV and Pre-trained Model