Experiment No: 4

Name: Aniket Balendra Tiwari

Roll No: 21143285

Program:

Optimal Merge Pattern:

```
#include <bits/stdc++.h>
using namespace std;

int minComputation(int size, int files[])
{
   priority_queue<int, vector<int>, greater<int> > pq;
   for (int i = 0; i < size; i++)
      pq.push(files[i]);
   int count = 0;
   while (pq.size() > 1) {
      int first_smallest = pq.top();
      pq.pop();
      int second_smallest = pq.top();
      pq.pop();
      int temp = first_smallest + second_smallest;
      count += temp;
      pq.push(temp);
   }
   return count;
}

int main()
{
   cout << "Name : Aniket Tiwari\n";
```

```
    cout << "Roll No : 21143285\n";
    int n;
    cout << "Enter the no. of  file :  ";
    cin >> n;
    int files[50];
    cout << "Enter the files :  ";
    for (int i = 0; i < n; i++)
        cin >> files[i];
    cout << "\nMinimum Computations = " << minComputation(n, files);     return 0;
}
```

Output: