

## Assignment no 10

Problem statement: Read the marks obtained by students of second year in an online examination of particular subject. Find out maximum and minimum marks obtained in that subject. Use heap data structure. Analyze the algorithm.

```
#include <iostream>
#include <vector>
#include <queue>
using namespace std;

void findMinMaxMarks(const vector<int>& marks) {

    priority_queue<int> maxHeap(marks.begin(), marks.end());

    priority_queue<int, vector<int>, greater<int>> minHeap(marks.begin(), marks.end());

    cout << "Maximum Marks: " << maxHeap.top() << endl;
    cout << "Minimum Marks: " << minHeap.top() << endl;
}

int main() {
    vector<int> marks = {85, 72, 90, 65, 78, 88, 92, 56, 74};

    cout << "Student Marks: ";
    for (int mark : marks)
        cout << mark << " ";
    cout << endl;

    findMinMaxMarks(marks);

    return 0;
```

}

Output:

Student Marks: 85 72 90 65 78 88 92 56 74

Maximum Marks: 92

Minimum Marks: 56