**Next Smaller Element**

#include<bits/stdc++.h>

vector<int> nextSmallerElement(vector<int> &arr, int n) {

stack<int> numStack;

numStack.push(-1);

vector<int> result(n);

for (int i = n - 1; i >= 0; i--) {

if (numStack.top() < arr[i]) {

result[i] = numStack.top();

numStack.push(arr[i]);

} else {

while (numStack.top() >= arr[i]) {

numStack.pop();

}

result[i] = numStack.top();

numStack.push(arr[i]);

}

}

return result;

}