```cpp
#include <bits/stdc++.h>

#define L(i) (i<<1)+1
#define R(i) (i+1)<<1
#define INF 1e9

using namespace std;

vector<vector<int>> T;
vector<int> A;

void create(){
        for(int i=0;i<A.size();i++){
                T[0][i]=i;
        }
        int s;
        for(int i=1;(1<<i)<=A.size();i++){
                s=1<<(i-1);
                for(int j=0;(j+(s<<1))<=A.size();j++){
                        if(A[T[i-1][j]]<A[T[i-1][j+s]])
                                T[i][j]=T[i-1][j];
                        else
                                T[i][j]=T[i-1][j+s];
                }
        }
}

int rmq(int a,int b){
        int s = (b-a)+1;
        int k = log2(s);
        return min(A[T[k][a]],A[T[k][(b-(1<<k))+1]]);
}

int main(){
        int t,n,q,v,x,y;

        cin >> t;
        for(int i=1;i<=t;i++){

                cin >> n >> q;

                while(n--){
                        cin >> v;
                        A.push_back(v);
                }

                T.assign(log2(A.size())+1,vector<int>(A.size(),-1));

                create();

                cout << "Scenario #"<<i<<":"<<endl;

                while(q--){
                        cin >> x >> y;
                        cout << rmq(x-1,y-1)<<endl;
                }
                A.clear();
        }
        return 0;
}
```