KWoC | Kharagpur Winter of Code

Project Report

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Project Name: Leetcode

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Project Description: It is a project on Data Structure and Algorithms which aims to solve DSA problems available on LeetCode.

GitHub Repository: https://github.com/shruti170901/Leetcode

About KWoC:

Kharagpur Winter of Code is a 5-week long online programme for the students, who are new to open-source software development. The programme not only helps students to get involved in open source, but also preps them for many open-source summer programmes, Google Summer of Code being one of them.

Contribution #1

First Pull Request: Create Queue using Two Stacks.CPP

Description: This was the first pull request that I created. In this contribution I added solution for creating a queue using two stacks using C++ language.

https://github.com/shruti170901/Leetcode/commit/6020846d11edbd90a4679ce7ef1a71a56e8b75fa

Code:

```
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
#include<bits/stdc++.h>
using namespace std;


int main ()
 {
    int t;
    cin>>t;
    stack<int> s1;
    stack<int> s2;
    while(t--)
    {
    int num;
    cin>>num;
    switch(num)
        {
        case 1:
        {
            int insert;
            cin>>insert;
            s1.push(insert);
            break;
        }
        case 2:
        {
            if(s2.empty())
                {
                while(!s1.empty())
                   {
                s2.push(s1.top());
                s1.pop();
                }
            }

            s2.pop();
            break;

        }
        case 3:
            {
           if(!s2.empty())
              {
              cout<<s2.top()<<endl;
```

```
            }
          else
             {
             while(!s1.empty())
                {
                s2.push(s1.top());
                   s1.pop();
                }
             cout<<s2.top()<<endl;
          }
          break;
       }
    }
}
  return 0;
}
```

Contribution #2

Pull Request 2: Create Maximum Element.cpp

Description: In this contribution I added solution for Finding a Maximum element after performing insertion and deletion operation on stack using C++ language.

https://github.com/shruti170901/Leetcode/commit/90df24af42e8a655a5718bd44e2cb0215d4caa75

Code:

```
#include <iostream>
#include <algorithm>
#include <stack>
#include <vector>
using namespace std;

int main()
{
    stack<int> s;
    int n,j,k;
    cin >> n;
```

```
    while(n--)
    {
        cin >> j;
        if(j == 1)
        {
            cin >> k;
            s.push(max(k, s.size()>0?s.top():k));
        }
        else if(j == 2)
            s.pop();
        else if(j == 3)
            cout << s.top() << '\n';
    }
    return 0;
}
```

Verdict:

I want to thank **Shruti Shreyasi** for her guidance in this project. It was a great learning experience for me. I want to thank KOSS, IIT KGP for conducting this beginner friendly program. This program helped me to learn what open-source projects are and how to contribute to them.