

## Assignment Solutions | Stacks - 1 | Week 16

- 1. You have two stack and 1,2,3,4,5 values and you have pushed all these values to S1 (in the order 1,2,3,4,5) and then you took 2 elements from top and inserted into S2, then pop 1 element from S1 and then take top of S2 and insert into S1. What is the second top element in S1.
  - 1. [3]
  - 2. [2]
  - 3. [1]
  - 4. [5]

Solution:

Option 2 : [2]

2. Remove kth element from top in a given stack.

Hint: Use another stack, just like insertion question.

Solution:

```
#include<bits/stdc++.h>
using namespace std;
void removeKthElement(int k , stack<int>&st){
   while(k--){
       st2.push(st.top());
        st.pop();
    st.pop();
    while(!st2.empty()){
       st.push(st2.top());
       st2.pop();
int main(){
   st.push(1);
   st.push(2);
    st.push(3);
    st.push(4);
   st.push(5);
    removeKthElement(3 , st);
```

## 3. What does this function do?

```
void fun(int n){
    stack<int> s;
    while (n > 0){
        s.push(n%2);
        n = n/2;
    }
    while (!s.empty()){
        cout<<s.top();
        s.pop();
    }
}</pre>
```

- 1. Prints binary representation of n in reverse order
- 2. Prints binary representation of n
- 3. Print the value of Log n
- 4. Print the value of Log n in reverse order

Solution:



option 2: Prints binary representation of n.

- 4. Which of the following statement(s) about stack data structure is/are NOT correct?
  - 1. Stack data structure can be implemented using linked list
  - 2. New node can only be added at the top of the stack
  - 3. Stack is the FIFO data structure
  - 4. Adding an element to a filled stack leads to underflow condition.

Solution:

option 1 and 2.