**Question 1**

#include <stdio.h>

#include <stdlib.h>

int data[100000],top,max=0;

void push()

{

int item;

scanf("%d",&item);

top++;

data[top]=item;

if(max < data[top])

max = data[top];

}

void pop()

{

int i;

if(max == data[top])

max=0;

top--;

for(i= top;i>=0;i--)

if(max < data[i])

max = data[i];

}

int main()

{

int t,n,choice;

top = -1;

scanf("%d",&t);

while(t--)

{

scanf("%d",&choice);

switch(choice)

{

case 1 : push();

break;

case 2: pop();

break;

case 3: printf("%d\n",max);

break;

}

}

return 0;

}

**Question 2**

#include <iostream>

#include <stack>

class Stack

{

std::stack<int> s;

int min;

public:

void push(int x)

{

if (s.empty()) {

s.push(x);

min = x;

}

else if (x > min) {

s.push(x);

}

else {

s.push(2 \* x - min);

min = x;

}

}

void pop()

{

if (s.empty()) {

std::cout << "Stack underflow!!" << '\n';

}

int top = s.top();

if (top < min)

min = 2 \* min - top;

s.pop();

}

int minimum()

{

return min;

}

};

int main()

{

Stack s;

s.push(6);

std::cout << s.minimum() << '\n';

s.push(7);

std::cout << s.minimum() << '\n';

s.push(5);

std::cout << s.minimum() << '\n';

s.push(3);

std::cout << s.minimum() << '\n';

s.pop();

std::cout << s.minimum() << '\n';

s.pop();

std::cout << s.minimum() << '\n';

return 0;

}