Q:

Write a C++ program to create a linked stack data structure. This Stack data  
structure stores integer values. Your program should display a menu of choices to  
operate the Stack data structure. See the sample menu below:

#include <iostream>

using namespace std;

struct Node {

   int data;

   struct Node \*next;

};

struct Node\* top = NULL;

void push(int val) {

   struct Node\* newnode = (struct Node\*) malloc(sizeof(struct Node));

   newnode->data = val;

   newnode->next = top;

   top = newnode;

}

void pop() {

   if(top==NULL)

   cout<<"Stack Underflow"<<endl;

   else {

      cout<<"The popped element is "<< top->data <<endl;

      top = top->next;

   }

}

void display() {

   struct Node\* ptr;

   if(top==NULL)

   cout<<"stack is empty";

   else {

      ptr = top;

      cout<<"Stack elements are: ";

      while (ptr != NULL) {

         cout<< ptr->data <<" ";

         ptr = ptr->next;

      }

   }

   cout<<endl;

}

int main() {

   int ch, val;

   cout<<"1) Push in stack"<<endl;

   cout<<"2) Pop from stack"<<endl;

   cout<<"3) Display stack"<<endl;

   cout<<"4) Exit"<<endl;

   do {

      cout<<"Enter choice: "<<endl;

      cin>>ch;

      switch(ch) {

         case 1: {

            cout<<"Enter value to be pushed:"<<endl;

            cin>>val;

            push(val);

            break;

         }

         case 2: {

            pop();

            break;

         }

         case 3: {

            display();

            break;

         }

         case 4: {

            cout<<"Exit"<<endl;

            break;

         }

         default: {

            cout<<"Invalid Choice"<<endl;

         }

      }

   }while(ch!=4);

   return 0;

}