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Panel: C

Batch: C1

OOCCJ Lab Assignment 5A

CODE:

```cpp
#include<iostream>
#include <stdio.h>
#include<vector>
#include<algorithm>
using namespace std;

class vectors
{
   public:
   vector <int> v;
   vector <int> v1;
   vector <int> vnew;
   vector <int> :: iterator itr,itr1;
   void pop();
   void push();
   void display();
   void Sort();
   void find1();
};
```

```cpp
void vectors :: pop()
{
    int num;
    itr = v.end();
    itr-- ;
    num =*itr;
    v.pop_back();
    cout << "The element popped is: "<<num<<endl;
}


void vectors :: push()
{
    int num;
    cout << "Enter the number to be inserted : ";
    cin >> num;
    v.push_back(num);
    cout << endl;
}


void vectors :: display()
{
    cout << "The elements in the vector are : ";
    for (itr = v.begin() ; itr!=v.end() ; itr ++)
    {
        cout << *itr << " ";
```

```cpp
    }
    cout << endl;
}


void vectors::Sort()
{
  cout<<"Sorted: ";
    sort(v.begin(), v.end());
    for(itr=v.begin();itr!=v.end();itr++)
    {
        cout << *itr << " ";
    }
}


void vectors::find1()
{
    int ser;
    cout<<"Enter element to be searched: ";
    cin>>ser;
    itr1=find(v.begin(), v.end(), ser);
    if (itr1 != v.end())
      {
        cout << "Element " << ser << " found.";
      }
      else
```

```cpp
        cout << "Element not found.\n\n";
}


int main()
{
    int choice;
    char opt;
    vectors v,v1,vnew;
    do
    {
        cout << "MENU \n 1.Push \n 2.Pop \n 3.Display \n 4.Sort \n 5.Find \nEnter Choice: ";
        cin >> choice;
        switch(choice)
        {
            case 1:
                v.push();
                break;
            case 2:
                v.pop();
                break;
            case 3:
                v.display();
                break;
            case 4:
                v.Sort();
```

```
            break;
        case 5:
            v.find1();
            break;
        default:
            cout << "WRONG INPUT"<<endl;
            break;
    }
    cout << "\nDo you want to continue(y/n): ";
    cin >> opt;
}while(opt == 'y');
}
```

OUTPUT:

```
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 1
1Enter the number to be inserted : 4
Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 1
Enter the number to be inserted : 10
Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 1
Enter the number to be inserted : 6
```

```
Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 1
Enter the number to be inserted : 12
Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 1
Enter the number to be inserted : 1
Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 3
The elements in the vector are : 4 10 6 12 1
```

```
Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 2
The element popped is: 1

Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 3
The elements in the vector are : 4 10 6 12

Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
```

```
Enter Choice: 4
Sorted: 4 6 10 12
Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 5
Enter element to be searched: 4
Element 4 found.
Do you want to continue(y/n): y
MENU
 1.Push
 2.Pop
 3.Display
 4.Sort
 5.Find
Enter Choice: 6
WRONG INPUT

Do you want to continue(y/n):
```