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Class:SE1

Batch:G1

Assignment No.:11

Code:

```
#include <iostream>
#include <bits/stdc++.h>
#include <vector>
#include <string>
#include <algorithm>
using namespace std;
class item
{
    string name;
    int code;
public:
    string get_name()
    {
        return name;
    }
    int get_code()
    {
        return code;
    }

    void get_data()
    {
        cout << "Enter the name of the item\n";
        cin >> name;
        cout << "Enter the code of the item\n";
        cin >> code;
    }
    void search_code()
    {
```

```

        cout<<"Enter the code of the user you want to search\n";
        cin >> code;
    }
    int operator==(const item &temp)
    {
        if (code == temp.code)
        {
            return 1;
        }
        else
        {
            return 0;
        }
    }
    void display()
    {
        cout << "Item Name"
              << " "
              << "Item Code\n";
        cout << name << " " << code << endl;
    }
};
void print(item &i1)
{
    cout << i1.get_name() << endl;
    cout << i1.get_code() << endl;
}

int sortv(item &i, item &j)
{
    return i.get_code() < j.get_code();
}

int main()
{
    vector<item> i1;

    item i, j;
    i.get_data();
    i1.push_back(i);
    j.get_data();
    i1.push_back(j);

```

```

    item temp;
    vector<item>::iterator p;
    cout << "Enter the option number of the operation you want to perform on the
vector\n";
    cout << "1) Display\n2) Search\n3) Sort\n";
    cout<<"Option Number:";
    int a;
    cin >> a;
    switch (a)
    {

    case 1:
        for_each(i1.begin(), i1.end(), print);
        break;

    case 2:

        temp.search_code();
        p = find(i1.begin(), i1.end(), temp);
        if (p == i1.end())
        {
            cout << "Item not found\n";
        }
        else
        {
            int index;
            index = p - i1.begin();
            cout << "Item: " << p->get_name() << " with item code: " << p-
>get_code() << " at position "<< index<<endl;
        }
        break;

    case 3:
        sort(i1.begin(), i1.end(), sortv);
        for_each(i1.begin(), i1.end(), print);
        break;
    }
}

```

Output:

```
Enter the name of the item
books
Enter the code of the item
002
Enter the option number of the operation you want to perform on the vector
1) Display
2) Search
3) Sort
Option Number:2
Enter the code of the user you want to search
001
Item: bag with item code: 1 at position 0
PS C:\Users\Amay\Documents> █
```