

Q1. Design 3 classes called A,B,C then implement read() and get() functions as non- member functions and scan and print the data for three class with the help of friend functions.

```
#include<bits/stdc++.h>
```

```
using namespace std;
```

```
//vector<int>a,b,c;
```

```
class A{
```

```
    public:
```

```
    vector<int>a;
```

```
    void set(int n){
```

```
        a.push_back(n);
```

```
    }
```

```
    void get(){
```

```
        for(int i=0;i<a.size();i++)
```

```
        cout<<a[i]<<" ";
```

```
    }
```

```
};
```

```
class B{
```

```
    public:
```

```
    vector<int>b;
```

```
    void set(int n){
```

```
        b.push_back(n);
```

```
    }
```

```
    void get(){
```

```
        for(int i=0;i<b.size();i++)
```

```
        cout<<b[i]<<" ";
```

```
    }
```



```

};

class C{
    public:
    vector<int>c;
    void set(int n){
        c.push_back(n);
    }
    void get(){
        for(int i=0;i<c.size();i++)
            cout<<c[i]<<" ";
    }
};

```

```

int main(){
    int n,x;
    cout<<"Enter the total number of data u want to enter: ";
    cin>>n;
    char ch;
    A x1;
    B x2;
    C x3;
    for(int i=0;i<n;i++){
        cout<<"enter the class name u want to enter data either a or b or c: ";
        cin>>ch;
        if(ch=='a' || ch=='A'){

```



```

        cout<<"enter the number: ";

        cin>>x;

        x1.set(x);
    }

    else if(ch=='b'||ch=='B'){

        cout<<"enter the number: ";

        cin>>x;

        x2.set(x);
    }

    else if(ch=='c'||ch=='C'){

        cout<<"enter the number: ";

        cin>>x;

        x3.set(x);
    }

    else

        cout<<"you entered wrong class name!!!";

}

char ans;

cout<<"The data in class A are: ";

x1.get();

cout<<"\nThe data in class B are: ";

x2.get();

cout<<"\nThe data in class C are: ";

x3.get();

```



```
return 0;  
}
```

