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## Lab 8

A1)

```
struct Date{  
    int month;  
    int day;  
    int year;  
};
```

```
struct Item{  
    string name;  
    string artist;  
    double price;  
    string track[50];  
    int num;  
    Date release;  
};
```

A3)

```
#include <iostream>
```

```
using namespace std;
```

```
struct Date{  
    int month;  
    int day;  
    int year;  
};
```

```
struct Item{  
    string name;  
    string artist;  
    double price;
```

```
string track[50];
int num;
Date d;
};
```

```
void initializeItem(Item& it){
    cout<<"Name of item: ";
    getline(cin,it.name);
    cout<<"Artist name: ";
    getline(cin,it.artist);
    cout<<"Price of item: ";
    cin>>it.price;
    cout<<"Enter number of tracks: ";
    cin>>it.num;
    for (int i=0; i<it.num;i++){
        cout<<"Enter track "<<i+1<<": ";
        getline(cin,it.track[i]);
    }
    cout<<"Enter date month, day, year: ";
    cin>>it.d.month;
    cin>>it.d.day;
    cin>>it.d.year;
}
```

```
void printItem(Item it){
    cout<<"Name: "<<it.name<<endl;
    cout<<"Artist: "<<it.artist<<endl;
    cout<<"Price: $"<<it.price<<endl;
    for (int i=0; i<it.num; i++){
        cout<<"Track "<<i+1<<": "<<it.track[i]<<" , "<<endl;
    }
    cout<<"Date: "<<it.d.month<<"/"<<it.d.day<<"/"<<it.d.year<<endl;
}
```

```
int main()
{
    Item it;

    initializeItem(it);
    printItem(it);

    return 0;
}
```

#### A5) C++ code

```
#include <iostream>
#include <string>
using namespace std;
```

```
struct Date{
    int month;
    int day;
    int year;
};
```

```
struct Item{
    string name;
    string artist;
    double price;
    string track[50];
    int num;
    Date d;
};
```

```
double fillCart(Item a[], int size){
    string ans1;
    string ans2;
    double total = 0;
    for (int i=0; i<size; i++){
```

```

cout<<"Item: "<<a[i].name<<" , by "<<a[i].artist<<" for $"<<a[i].price<<endl;
cout<<"Would you like to 'purchase', see more 'details', or 'pass'?"<<endl;
cin>>ans1;
if (ans1 == "details"){
    cout<<"Name: "<<a[i].name<<" , by: "<<a[i].artist<<endl;
    cout<<"Price: $"<<a[i].price<<endl;
    cout<<"Contents: ";
    for (int t=0; t<a[i].num; t++){
        cout<<a[i].track[t]<<" , ";
    }
    cout<<"Released: "<<a[i].d.month<<"/"<<a[i].d.day<<"/"<<a[i].d.year<<endl;
    cout<<"Would you like to 'purchase' or 'pass'?"<<endl;
    cin >> ans2;
    if (ans2 == "purchase"){
        total += a[i].price;
    }
}
if (ans1 == "purchase"){
    total += a[i].price;
}
else{
    cout<<endl;
}
}
return total;
}

```

```

int main()
{
Item a[3] = {"Slaughterhouse 5", "Kurt Vonnegut", 7.99,{"Ten Chapters"},1,{3,31,1969}},
{"Let it Be", "The Replacements", 11.49,{"I Will Dare", "Favorite Thing", "We're Comin'
Out",
    "Tommy Gets His Tonsils Out","Androgynous","Black Diamond","Unsatisfied",
    "Seen Your Video","Gary's Got","Sixteen Blue","Answering Machine"}, 11, {10,
2, 1984}},
{"Let it Be", "The Beatles", 16.29, {"Two Of Us", "Dig A Pony","Across The Universe",
    "I Me Mine","Dig It","Let It Be","Maggie Mae","I've Got A Feeling","One After
909",

```

```
"The Long And Winding Road","For You Blue","Get Back"}, 12, {5, 11, 1970}}};
```

```
cout<<"Total cost: $"<<fillCart(a, 3);
```

```
return 0;
```

```
}
```



