

Array/List Practice Problems with Solutions (Python & C#)

1. Track Daily Sales

Python Solution:

```
sales = [12, 15, 10, 20, 18, 25, 17]
total_sales = 0
highest_sale = sales[0]
highest_day_index = 0

for i in range(len(sales)):
    total_sales += sales[i]
    if sales[i] > highest_sale:
        highest_sale = sales[i]
        highest_day_index = i

print("Total sales is:", total_sales)
print("Day with highest sale (index):", highest_day_index)
```

C# Solution:

```
int[] sales = new int[] { 12, 15, 10, 20, 18, 25, 17 };
int total = 0;
int highest = sales[0];
int indexfind = 0;
for (int i = 0; i < sales.Length; i++)
{
    total += sales[i];
    if (highest < sales[i])
    {
        highest = sales[i];
        indexfind = i;
    }
}
Console.WriteLine("Total sales: " + total);
Console.WriteLine("Day with highest sale (index): " + indexfind);
```

2. Filter Low Ratings

Python Solution:

```
ratings = [5, 2, 4, 1, 3, 5, 2]
finding = []
for rating in ratings:
    if rating >= 3:
        finding.append(rating)
print(finding)
```

C# Solution:

```
List<int> ratings = new List<int> { 5, 2, 4, 1, 3, 5, 2 };
List<int> finding = new List<int>();
```

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```
foreach (var rating in ratings)
{
    if (rating >= 3)
    {
        finding.Add(rating);
    }
}
foreach (var item in finding)
{
    Console.WriteLine(item);
}
```

3. Track Inventory Changes

Python Solution:

```
stock = [10, 5, 8, 3, 0, 15]
orders = [2, 1, 5, 2, 1, 10]
li = []
for i in range(len(stock)):
    li.append(stock[i] - orders[i])
print(li)
```

C# Solution:

```
int[] stock = new int[] { 10, 5, 8, 3, 0, 15 };
int[] orders = new int[] { 2, 1, 5, 2, 1, 10 };
List<int> list = new List<int>();
for (int i = 0; i < stock.Length; i++)
{
    int ans = stock[i] - orders[i];
    list.Add(ans);
}
foreach (var item in list)
{
    Console.WriteLine(item);
}
```

4. Merge Product Lists

Python Solution:

```
supplier1 = [101, 102, 103, 104]
supplier2 = [103, 104, 105, 106]
supplier1.extend(supplier2)
supplier1.sort()
result = []
for i in range(len(supplier1)-1):
    if supplier1[i] != supplier1[i+1]:
        result.append(supplier1[i])
result.append(supplier1[-1])
```

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```
print(result)
```

C# Solution:

```
int[] supplier1 = new int[] { 101, 102, 103, 104 };
int[] supplier2 = new int[] { 103, 104, 105, 106 };
List<int> list = new List<int>();
list.AddRange(supplier1);
list.AddRange(supplier2);
List<int> unique = new List<int>();
foreach (var item in list)
{
    if (!unique.Contains(item))
    {
        unique.Add(item);
    }
}
unique.Sort();
foreach (var item in unique)
{
    Console.Write(item + " ");
}
```

5. Section-Based Search

Python Solution:

```
students = ["A-John", "A-Maya", "B-Ravi", "C-Anna", "B-Liam", "C-Rose"]
for student in students:
    parts = student.split('-')
    if parts[0] == "B":
        print(parts[1])
```

C# Solution:

```
string[] students = new string[] { "A-John", "A-Maya", "B-Ravi", "C-Anna", "B-Liam",
"C-Rose" };
List<string> list = new List<string>();
foreach (var item in students)
{
    string[] part = item.Split('-');
    if (part[0] == "B")
    {
        list.Add(part[1]);
    }
}
foreach (var item in list)
{
    Console.Write($"{item} ");
}
```