Real-World C# Single-Dimensional Array Questions with Answers

# 1. How do you find the maximum value in a single-dimensional array?

Given an array of integers representing daily temperatures:  
  
```csharp  
int[] temperatures = { 23, 19, 31, 27, 30, 25 };  
```  
Write a program to find the highest temperature.

```csharp  
int max = temperatures[0];  
for (int i = 1; i < temperatures.Length; i++)  
{  
 if (temperatures[i] > max)  
 {  
 max = temperatures[i];  
 }  
}  
Console.WriteLine("Highest temperature: " + max);  
```

# 2. How do you calculate the average of elements in a single-dimensional array?

Given an array representing monthly sales:  
  
```csharp  
int[] sales = { 500, 700, 600, 800, 750 };  
```  
Write a program to calculate the average monthly sale.

```csharp  
int sum = 0;  
for (int i = 0; i < sales.Length; i++)  
{  
 sum += sales[i];  
}  
double average = (double)sum / sales.Length;  
Console.WriteLine("Average Sales: " + average);  
```

# 3. How do you reverse a single-dimensional array manually?

Reverse the following array manually (without using `Array.Reverse`):  
  
```csharp  
int[] items = { 1, 2, 3, 4, 5 };  
```

```csharp  
for (int i = 0; i < items.Length / 2; i++)  
{  
 int temp = items[i];  
 items[i] = items[items.Length - 1 - i];  
 items[items.Length - 1 - i] = temp;  
}  
Console.WriteLine("Reversed Array: " + string.Join(", ", items));  
```

# 4. How do you count even and odd numbers in an array?

Given an array of scores:  
  
```csharp  
int[] scores = { 11, 24, 33, 48, 55, 62 };  
```  
Count how many even and odd numbers are there.

```csharp  
int evenCount = 0, oddCount = 0;  
foreach (int score in scores)  
{  
 if (score % 2 == 0)  
 evenCount++;  
 else  
 oddCount++;  
}  
Console.WriteLine("Even numbers: " + evenCount);  
Console.WriteLine("Odd numbers: " + oddCount);  
```

# 5. How do you search for an element in an array?

Given a product ID array:  
  
```csharp  
int[] productIds = { 101, 203, 305, 407 };  
```  
Check if product ID `305` exists in the array.

```csharp  
int searchId = 305;  
bool found = false;  
foreach (int id in productIds)  
{  
 if (id == searchId)  
 {  
 found = true;  
 break;  
 }  
}  
Console.WriteLine(found ? "Product found." : "Product not found.");  
```