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ECE 1770
Homework 1

1a)

Example 1:

```
This program will display the sum of the current and previous number up to value N.  
Value for N: 5  
[-1, 1, 3, 5, 7]
```

Example 2:

```
This program will display the sum of the current and previous number up to value N.  
Value for N: 10  
[-1, 1, 3, 5, 7, 9, 11, 13, 15, 17]
```

1b)

Example 1:

```
This program will display characters at even indices of the given string.  
**This assumes 0 is an even index.  
Test string: I enjoy machine learning!  
['I', 'e', 'j', 'y', 'm', 'c', 'i', 'e', 'l', 'a', 'n', 'n', '!']
```

Example 2:

```
This program will display characters at even indices of the given string.  
**This assumes 0 is an even index.  
Test string: Hello World  
['H', 'l', 'o', 'W', 'r', 'd']
```

2)

Example 1:

```
This program will check if the first and last numbers are equal and then displays the numbers divisible by 5.  
Enter the number of elements in the list: 5  
Enter one element: 1  
Enter one element: 5  
Enter one element: 11  
Enter one element: 15  
Enter one element: 1  
[5, 15]  
True
```

Example 2:

```
This program will check if the first and last numbers are equal and then displays the numbers divisible by 5.  
Enter the number of elements in the list: 4  
Enter one element: 1000  
Enter one element: 555  
Enter one element: 2  
Enter one element: 1  
[1000, 555]  
False
```

3)

Example 1:

```
This program will check if the given number is a palindrome.  
Input palindrome: 15251  
True
```

Example 2:

```
This program will check if the given number is a palindrome.  
Input palindrome: 12345  
False
```

4)

Example 1:

```
This program will combine the even numbers of one list with the odd numbers of the other.  
Enter the number of elements in the odd list: 4  
Enter one element: 1  
Enter one element: 2  
Enter one element: 3  
Enter one element: 4  
Enter the number of elements in the even list: 5  
Enter one element: 1  
Enter one element: 2  
Enter one element: 3  
Enter one element: 4  
Enter one element: 5  
[1, 3, 2, 4]
```

Example 2:

```
This program will combine the even numbers of one list with the odd numbers of the other.  
Enter the number of elements in the odd list: 3  
Enter one element: 1  
Enter one element: 5  
Enter one element: 7  
Enter the number of elements in the even list: 3  
Enter one element: 2  
Enter one element: 1234  
Enter one element: 5000  
[1, 5, 7, 2, 1234, 5000]
```

5)

Example 1:

```
This program will print the values of an integer backwards separated by a space.  
Input int: 156712  
2 1 7 6 5 1
```

Example 2:

```
This program will print the values of an integer backwards separated by a space.  
Input int: 541  
1 4 5
```