

Python Placement Preparation Test 6

```
numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

even_numbers = list(filter(lambda x: x % 2 == 0, numbers))
odd_numbers = list(filter(lambda x: x % 2 != 0, numbers))

print(f"Original array: {numbers}")
print(f"Number of even numbers: {len(even_numbers)}")
print(f"Number of odd numbers: {len(odd_numbers)}")
```

```
Original array: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
Number of even numbers: 5
Number of odd numbers: 5
```

```
string_list = ["madam", "racecar", "hello", "level", "world", "refer", "python"]
```

```
palindromes = list(filter(lambda x: x == x[::-1], string_list))

print(f"Original list of strings: {string_list}")
print(f"Palindromes found: {palindromes}")
```

```
Original list of strings: ['madam', 'racecar', 'hello', 'level', 'world', 'refer', 'python']
Palindromes found: ['madam', 'racecar', 'level', 'refer']
```

```
num_rows = int(input("Enter the number of rows: "))

for i in range(1, num_rows + 1):
    ascending_part = "".join(str(j) for j in range(1, i + 1))
    descending_part = "".join(str(j) for j in range(i - 1, 0, -1))
    print(ascending_part + descending_part)
```

```
Enter the number of rows: 4
1
121
12321
1234321
```

```
def string_to_integer_list(input_string):
    byte_string = input_string.encode('utf-8')
    return list(byte_string)

sample_input = "hello"

result_list = string_to_integer_list(sample_input)

print(f"Original string: '{sample_input}'")
print(f"List of integers: {result_list}")
```

```
Original string: 'hello'
List of integers: [104, 101, 108, 108, 111]
```