Q.1) Write a Python program to count the even, odd numbers in a given array of integers using Lambda.

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


e_count = len(list(filter(lambda x: (x % 2 == 0), numbers)))

o_count = len(list(filter(lambda x: (x % 2 != 0), numbers)))


print(f"list: {numbers}")

print(f"even numbers: {e_count}")

print(f"odd numbers: {o_count}")
```

```
list: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
even numbers: 5
odd numbers: 5
```

Q.2) Write a Python program to find palindromes in a given list of strings using Lambda.

```
strings = ["madam","mam","Patil"]

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

print(f"Palindromes: {palindromes}")
```

```
Palindromes: ['madam', 'mam']
```

Q.3) Solve the following pattern using one loop only: accept no. of rows from user.

```
1

121

12321

1234321

n = 4

for i in range(1, n + 1):

    a = "".join(str(j) for j in range(1, i + 1))
```

```
    b = "".join(str(j) for j in range(i - 1, 0, -1))
    print(a + b)
```

```
1
121
12321
1234321
```

Q.4) Write a Python program to convert a byte string to a list of integers.

Sample Input:

“hello”

Sample Output:

[104, 101, 108, 108, 111]

```
s = "hello"
byte = s.encode('utf-8')
integers = list(byte)
print(integers)
```

```
[104, 101, 108, 108, 111]
```