Python Lab # 4

1. Python Function to Check if a Number is Even or Odd

python
Copy code
```
def check_even_odd(number):
    if number % 2 == 0:
        return "Even"
    else:
        return "Odd"

# Test the function
print(check_even_odd(7))   # Output: Odd
print(check_even_odd(10))  # Output: Even
```

2. Python Function to Find the Maximum of Three Numbers

python
Copy code
```
def find_max(num1, num2, num3):
    if num1 >= num2 and num1 >= num3:
        return num1
    elif num2 >= num1 and num2 >= num3:
        return num2
    else:
        return num3

# Test the function
print(find_max(3, 7, 5))   # Output: 7
print(find_max(10, 15, 10)) # Output: 15
```

3. Starred Shapes Using Loops

(a) Right-Angled Triangle

python
Copy code
```
def right_angle_triangle(n):
    for i in range(1, n + 1):
        print('*' * i)

# Output for 5 rows
right_angle_triangle(5)
```
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(b) Inverted Triangle

python
Copy code
```
def inverted_triangle(n):
    for i in range(n, 0, -1):
        print('*' * i)

# Output for 5 rows
inverted_triangle(5)
```
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```

(c) Pyramid

python
Copy code
```
def pyramid(n):
    for i in range(n):
        print(' ' * (n - i - 1) + '*' * (2 * i + 1))

# Output for 5 rows
pyramid(5)
```
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```

(d) Diamond

python
Copy code
```
def diamond(n):
    for i in range(n):
        print(' ' * (n - i - 1) + '*' * (2 * i + 1))
    for i in range(n-2, -1, -1):
        print(' ' * (n - i - 1) + '*' * (2 * i + 1))

# Output for 5 rows
diamond(5)
```
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(e) Square

python
Copy code
```
def square(n):
    for i in range(n):
        print('* ' * n)

# Output for 5 rows
square(5)
```
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Copy code
```
* * * * *
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```

Each shape uses loops to create the desired patterns. You can adjust the number of rows (`n`) for different shapes as desired.