

Step 1: Start

Step 2: Input String and Key:

2.1: Prompt "Enter a string" and store it as msg.

2.2: Remove the newline character from msg.

2.3: Prompt Enter an integer key and store it as key.

```
msg = user input
```

```
print("Enter an integer key (): ")
```

```
key = user input
```

Step 3: Initialize Variables:

3.1: Calculate the length len of msg.

Step 4: Perform XOR and AND Operations:

4.1: For each character i in msg, compute x\_r[i] as msg[i] XOR key and a\_r[i] as msg[i] AND key.

```
for i = 0 to len-1:
```

```
    x_r[i] = msg[i] XOR key
```

```
    a_r[i] = msg[i] AND key
```

Step 5: Display Results:

5.1: Print the original msg.

5.2: Print the XOR result x\_r[i] for each i.

5.3: Print the AND result a\_r[i] for each i.

```
for i = 0 to len-1:
```

```
    print x_r[i] as integer
```

```
for i = 0 to len-1:
```

```
    print a_r[i] as integer
```

Step 6: Stop