ECE 111
ECE Orientation

Python Programming
Python Sequential Logic

```python
print("  *  ")
print(" *** ")
print(" ***** ")
print("********")
```

```
2 / 3
```

```
float(2/3) 0.0
```

```
float(2) / 3
```

```
2.0
```

```
4
```

```
11
```

```
operands operator operands
```

```
operands
```

```
he
```

```
10
```

```
0
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```

```
"""
```
```python
x = 1
if (x == 1):
    print("   *   ")
elif (x == 3):
    print("  ***  ")
elif (x == 5):
    print(" ***** ")
else:
    print("*******")
```
input vs. raw_input

```
num = input("Enter a number: ")  # This takes in a number

name = raw_input("Enter your name: ")  # This takes in strings

print(num)
print(name)
```
Operator and Operands

```python
num = raw_input("Enter a number: ")  #This takes in strings
name = raw_input("Enter your name: ")  #This takes in strings
print(num + str(1))  #Since both operands are strings, + concatenates
print(name)
```
Operator and Operands

```python
num = int(raw_input("Enter a number: "))  # Let's typecast to an integer
name = raw_input("Enter your name: ")  # This takes in strings
print(num + 1)  # Since both operands are numbers, + adds the two numbers
print(name)
```
Python Loop Logic

for x in range(7):
    #When you want to do something a specific number of times, i.e. loop for n times

OR

dx=1
while(x<=7):
    #When you want to do something while condition holds true, i.e. while the user wants to continue
    x+=1
Python Loop Logic

for x in range(7):
    print("*", end="")

OR

x=1
while(x<=7):
    print("*", end="")
    x+=1

→ x is 8

This will print 7 stars after each star, i.e.

X, starts at zero & goes to < range & steps one when no step is given

for x in range(start, stop, step)
Print Triangle w/ for

#This would be my approach, so I can make bigger triangles quickly
#without changing this number everywhere in my program.
MAX_TRI = 8

for x in range(1, MAX_TRI, 2):
  for sp in range((MAX_TRI-x)//2):
    print(" ", end="")
  for sp in range(x):
    print("*", end="")
  for sp in range((MAX_TRI-x)//2):
    print(" ", end="")
  print(x)
Problem Statement

• For all the employees in our company, calculate their gross pay based on their hours and pay rate.

Try writing your own program 😊