**Printing patterns:**

We need to print the below

Shape

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Let’s print # with print(‘# ‘)

2) Print(‘# # # #’)

3)there is a problem with the above statement as we are repeating the same thing over and over

4) So we will

print(‘# ‘)

print(‘# ‘)

print(‘# ‘)

print(‘# ‘)

5) in the above statement we are getting the output in new line, so we will add end=””

print(‘# ‘, end=””)

print(‘# ‘, end=””)

print(‘# ‘, end=””)

print(‘# ‘, end=””)

6) in the above statement we are repeating the same statement 4 times so we will try to reduce it and make it better

For j in range(4):

Print(‘# ‘,end=””)

7) now we will do the same thing 4 times as shown below which will give the desired result.

For j in range(4):

Print(‘# ‘,end=””)

Print()

For j in range(4):

Print(‘# ‘,end=””)

Print()

For j in range(4):

Print(‘# ‘,end=””)

Print()

For j in range(4):

Print(‘# ‘,end=””)

Print()

8) In the above code we are doing the same thing again and again 4 times, so we what can we do?

Can we create a loop ?

How?

***For i in range(4):***

***For j in range(4):***

***Print(‘# ‘, end=””)***

***Print()***

Let’s debug and see how this code works.

2nd pattern: we need to print something like this as shown below.

A picture containing calendar

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***For i in range(4):***

***For j in range(i):***

***Print(‘# ‘, end=””)***

***Print()***

We will change the value of range from i to (i + 1) for the inner loop

Pattern 3: we need to print something like shown below.

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Ans: 4-i for inner loop will give the answer : how do we know ? debug and check 😊

**For else:**

Yes, you heard it right- we will see a combination of for and else today:

Let’s say we want to print ONLY THE FIRST number which is divisible by 5 from a list [111,12,15,20,25]

How do we write the program ?

1. Start with variable and list of values
2. For loop
3. If loop with condition
4. Do we need to use something from break/continue/pass? – to print only the first value
5. Else – what do we want to print?
6. Now how to fix the problem printing the same statement 4 times.?

for i in range(4):

    for j in range(4-i):

        print('# ', end="")

    print()

# i = 1

# while i <= 4:

#     j =1

#     while j <=1:

#         print('# ')

#         j += 1

#     print('# ', end="")

#     i += 1

nums = [1,12,11,26,51,1111]

for i in nums:

    if i %5 == 0:

        print(i)

        break

else:

    print('No number is not divisible by 5')

Text

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