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**Mini Project 1**

**Define the class**

class FizzBuzz:

* This line creates a blueprint named FizzBuzz. You can make objects from this blueprint that will run the FizzBuzz logic.

**Constructor runs when you make an object**

def \_\_init\_\_(self, start, end):

self.start = start

self.end = end

* \_\_init\_\_ is a special method called automatically when you create a FizzBuzz object.
* It receives two values: start and end.
* self.start = start stores the start number inside the object.
* self.end = end stores the end number inside the object.
* Example: FizzBuzz(1, 15) sets self.start = 1 and self.end = 15.

**The play method: where the game runs**

def play(self):

n = self.start

while n <= self.end:

...

n += 1

* play is a method you call to run the game.
* n = self.start sets n to the starting number (the loop counter).
* while n <= self.end: repeats the loop as long as n is less than or equal to the end number.
* n += 1 moves to the next number at the end of each loop iteration.

**Inside the loop: the condition checks and printing**

if n % 3 == 0:

print("Fizz")

if n % 5 == 0:

print("Buzz")

elif n % 5 == 0:

print("Buzz")

else:

print(n)

print()

For each number n the code does:

1. if n % 3 == 0: — check if n is divisible by 3.
   * If true: print "Fizz".
   * **Then** (still inside that if) check if n % 5 == 0: — if the same number is also divisible by 5, print "Buzz" (so the number will produce two lines: Fizz then Buzz).
2. elif n % 5 == 0: — if n was **not** divisible by 3 but is divisible by 5, print "Buzz".
3. else: — if n is divisible by neither 3 nor 5, print the number itself.
4. print() — print a blank line to separate output for readability.

Important detail: Because the if n % 5 == 0 that prints "Buzz" is nested inside the if n % 3 == 0 block, numbers divisible by **both** 3 and 5 (like 15) will print:

Fizz

Buzz

(on two separate lines), not "FizzBuzz" on one line.

**5) Creating the object and running the game**

game = FizzBuzz(1, 15)

game.play()

* game = FizzBuzz(1, 15) creates an object with start = 1 and end = 15.
* game.play() starts the loop and produces the printed output for every number from 1 to 15.

