## untitled2

## May 13, 2023

```
[]: import time
     class CountdownTimer:
         def __init__(self, duration):
             self.duration = duration
             self.start_time = None
             self.pause_time = None
             self.paused_duration = 0
         def start(self):
             self.start_time = time.time()
         def pause(self):
             if self.start_time is not None and self.pause_time is None:
                 self.pause_time = time.time()
         def resume(self):
             if self.start_time is not None and self.pause_time is not None:
                 self.paused_duration += time.time() - self.pause_time
                 self.pause_time = None
         def stop(self):
             self.start_time = None
             self.pause_time = None
             self.paused_duration = 0
         def reset(self, duration):
             self.duration = duration
             self.start_time = None
             self.pause_time = None
             self.paused_duration = 0
         def get_time_remaining(self):
             if self.start_time is None:
                 return self.duration
             elif self.pause_time is not None:
```

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return self.duration - (self.pause_time - self.start_time - self.
 ⇒paused_duration)
        else:
            return self.duration - (time.time() - self.start_time - self.
 →paused_duration)
    def is_running(self):
        return self.start_time is not None and self.pause_time is None
    def run(self):
        self.start()
        while self.get_time_remaining() > 0:
            print("Time remaining: %d seconds" % self.get_time_remaining())
            time.sleep(1)
        print("Time's up!")
timer = CountdownTimer(60)
while True:
    print("Commands: start, pause, resume, stop, reset")
    command = input("Enter a command: ")
    if command == "start":
        if not timer.is_running():
            timer.run()
    elif command == "pause":
        timer.pause()
    elif command == "resume":
        timer.resume()
    elif command == "stop":
        timer.stop()
    elif command == "reset":
        duration = int(input("Enter a new duration: "))
        timer.reset(duration)
    else:
        print("Invalid command")
```