8.WRITE A PROGRAM TO GENERATE ALL PRIME NUMBER USING RECURSION

PROGRAM:

```
def is_prime(num, divisor=2):
    if num <= 2:
        return num == 2
    if num % divisor == 0:
        return False
    if divisor * divisor > num:
        return True
    return is_prime(num, divisor + 1)

def generate_primes(start, end):
    if start <= end:
        if is_prime(start):
            print(start)
        generate_primes(start + 1, end)

start_range = 1
end_range = 50
generate_primes(start_range, end_range)
```

TIME COMPLEXITY:O(sqrt(n))

INPUT:1,50

OUTPUT:

```
PS C:\Users\surya\Desktop\fruit> & C:/Users/surya/AppData/Local/Programs/Python/Python312/python.exe c:/Users/surya/Desktop/fruit/Untitled-1.py
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
PS C:\Users\surya\Desktop\fruit>
```