

8. Write a program to generate all the prime numbers using recursion

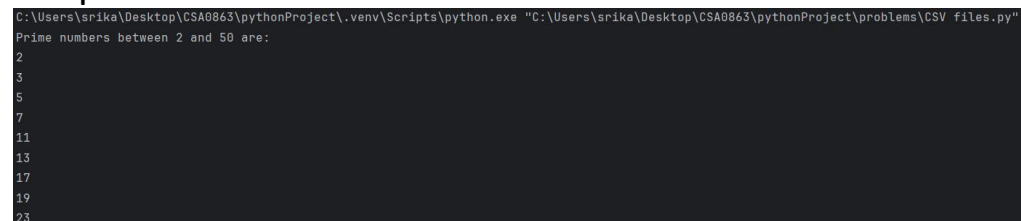
Program:

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

def generate_primes(start, end):
    if start > end:
        return
    if is_prime(start):
        print(start)
    generate_primes(start + 1, end)

start_num = 2
end_num = 50
print("Prime numbers between", start_num, "and", end_num,
      "are:")
generate_primes(start_num, end_num)
```

Output:



```
C:\Users\srika\Desktop\CSA0863\pythonProject\.venv\Scripts\python.exe "C:\Users\srika\Desktop\CSA0863\pythonProject\problems\CSV_files.py"
Prime numbers between 2 and 50 are:
2
3
5
7
11
13
17
19
23
```

Time complexity:

$O(n\sqrt{n})$