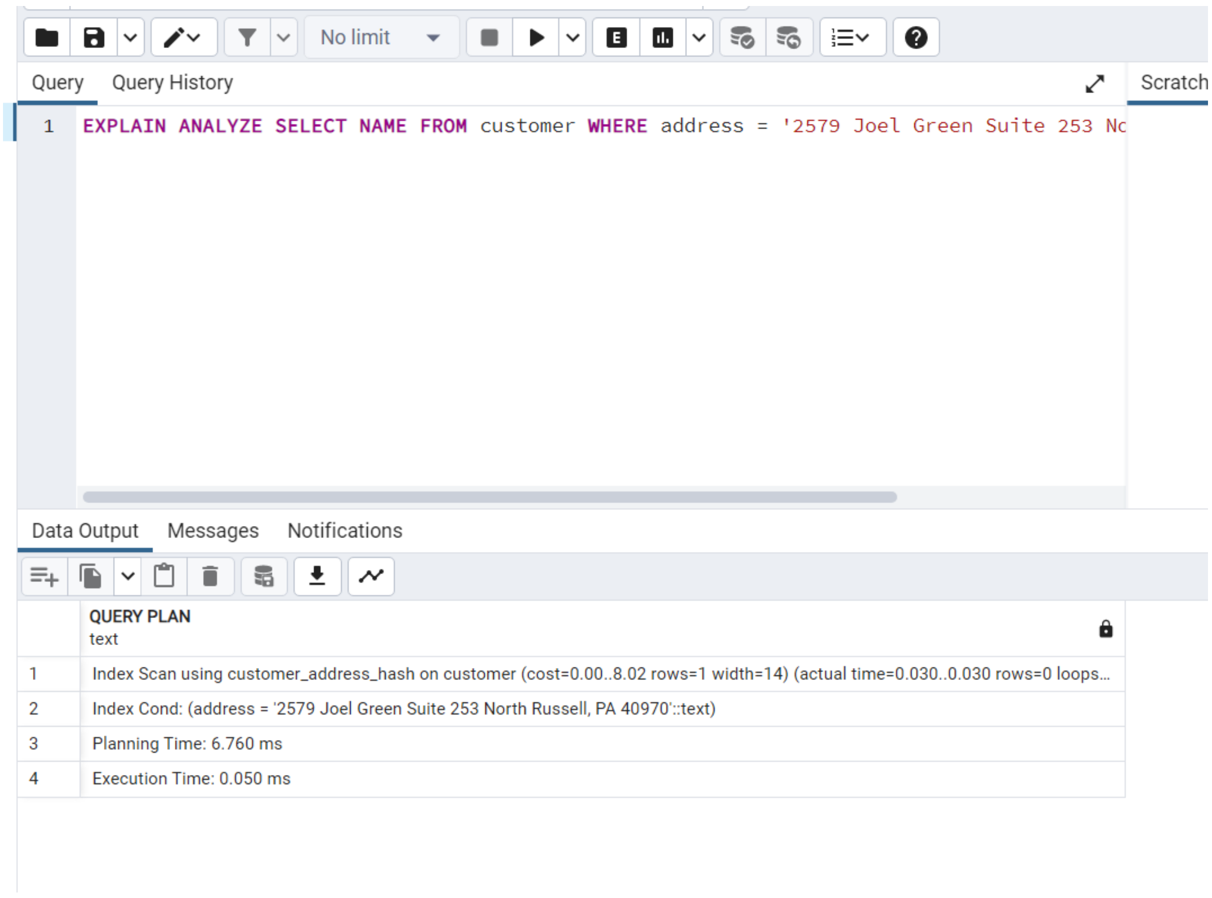
Task1:

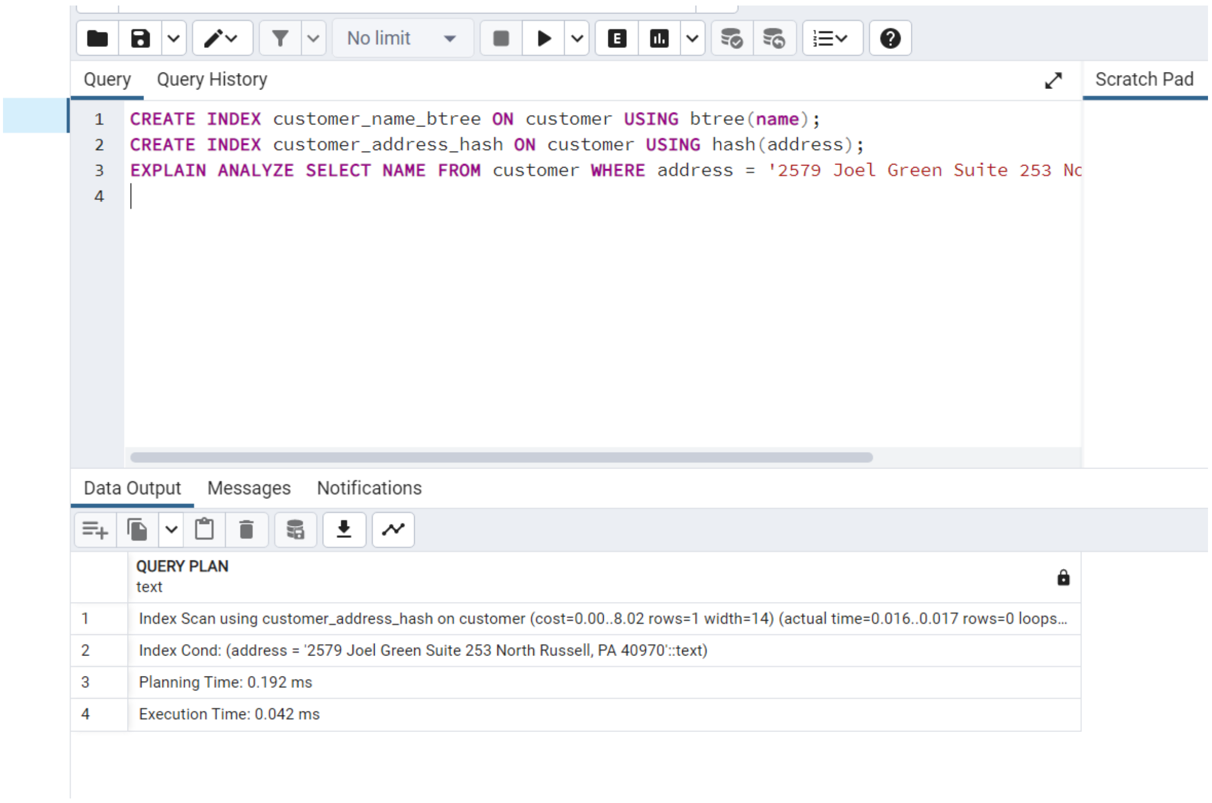


Query | Query History | Scratch

```
EXPLAIN ANALYZE SELECT NAME FROM customer WHERE address = '2579 Joel Green Suite 253 Nc
```

Data Output | Messages | Notifications

	QUERY PLAN text
1	Index Scan using customer_address_hash on customer (cost=0.00..8.02 rows=1 width=14) (actual time=0.030..0.030 rows=0 loops...
2	Index Cond: (address = '2579 Joel Green Suite 253 North Russell, PA 40970'::text)
3	Planning Time: 6.760 ms
4	Execution Time: 0.050 ms



Query | Query History | Scratch Pad

```
CREATE INDEX customer_name_btree ON customer USING btree(name);
CREATE INDEX customer_address_hash ON customer USING hash(address);
EXPLAIN ANALYZE SELECT NAME FROM customer WHERE address = '2579 Joel Green Suite 253 Nc
```

Data Output | Messages | Notifications

	QUERY PLAN text
1	Index Scan using customer_address_hash on customer (cost=0.00..8.02 rows=1 width=14) (actual time=0.016..0.017 rows=0 loops...
2	Index Cond: (address = '2579 Joel Green Suite 253 North Russell, PA 40970'::text)
3	Planning Time: 0.192 ms
4	Execution Time: 0.042 ms

adding indexes improved the performance of queries that use the indexed columns. In contrast, queries that do not use the indexed columns may not have a noticeable improvement in performance or may even be slower due to the additional overhead of maintaining the indexes.