# **Exercise 1**

# First example:

#### Without indexes:



### With b\_tree id index:



### With hash index:



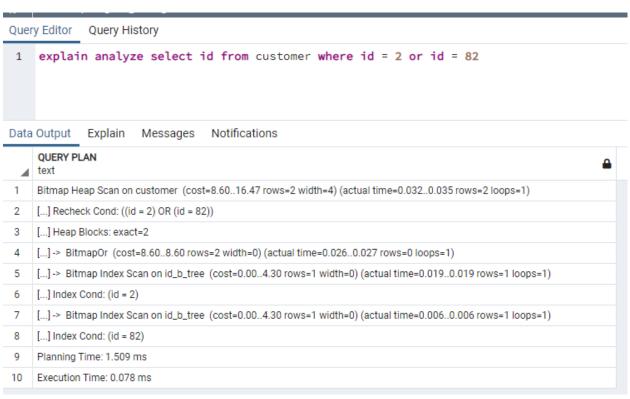
Therefore,

The cost the same for each case.

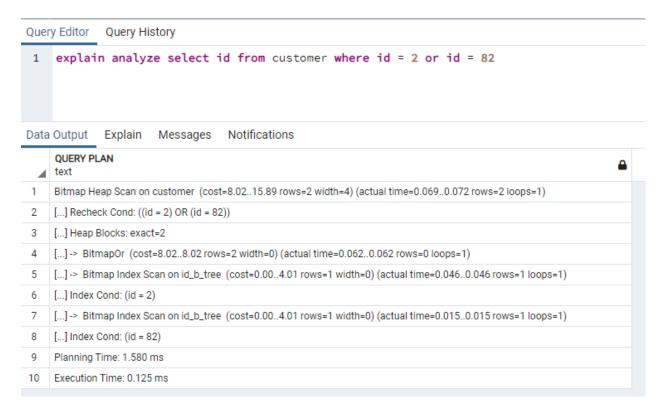
# Second example:



# With b\_tree id index:



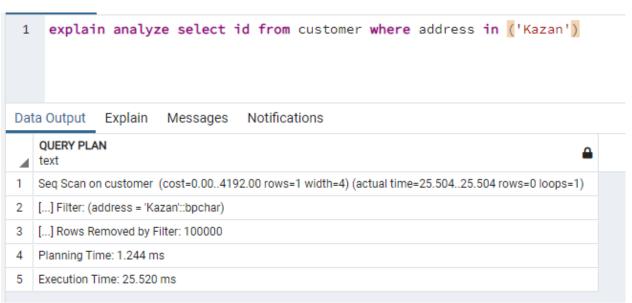
#### With hash index:



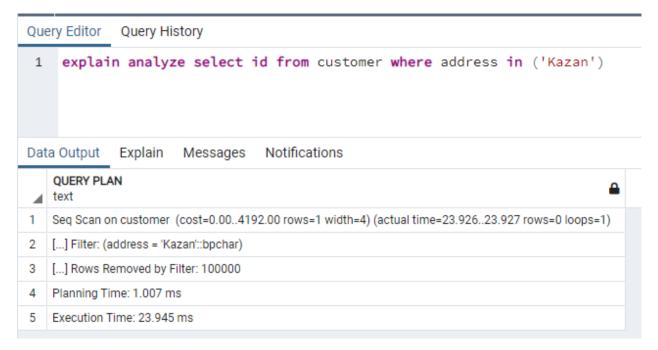
### Therefore,

The cost with hash index less then without any index and with b\_tree index

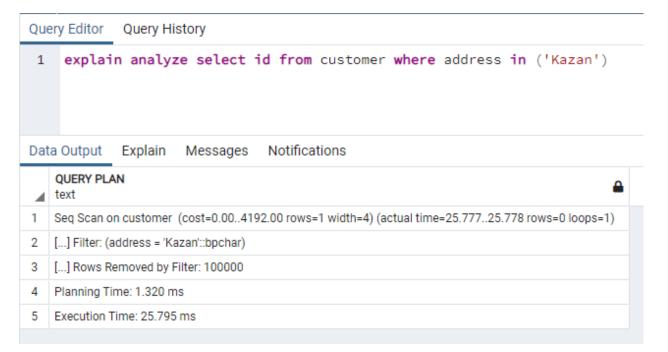
# Third example:



With b tree id index:



### With hash index:



Therefore,

The cost the same for each case.