

# Extra Assignment 1

## Exercise 1

QUERY	INDEXES	elapsed time	total cost
EXPLAIN ANALYZE SELECT * FROM customers WHERE (review LIKE 'A%') ORDER BY name;	CREATE EXTENSION btree_gist; CREATE EXTENSION pg_trgm; CREATE EXTENSION btree_gin; CREATE INDEX customers_name_index_hash ON customers USING hash(name); CREATE INDEX customers_name_index_gist ON customers USING gist(id); CREATE INDEX customers_name_index_gin ON customers USING gin(review); CREATE INDEX customers_name_index_brin ON customers USING brin(address);	0.64577 0072937 0117/5.3 9154005 0506592 sec	36592.0 6..43466 .78 / 40550.8 2..47425 .53

## Exercise 2

(1)

### QUERY:

```
SELECT products.name, products.type, products.price, sales.discount , (products.price * (100 -
sales.discount)/100) FROM customers
join purchases on customers.id = purchases.customer_id
join purchases_products_list on purchases.id = purchases_products_list.purchases_id
join products on purchases_products_list.product_id = products.id
join sales on products.type = sales.type
where customers.id = 45384
```

**cost=39066.87..41750.78**

**cost=3067.01..41694.98**

### OUTPUT:

```
[('Site best next cell.', 19, 879, 74, 228), ('Site best next cell.', 19, 879, 26, 650), ('See employee busines', 9, 766, 15, 651), ('See employee busines', 9, 766, 2, 750), ('See emusines', 9, 766, 75, 191)]
```

(2)

### QUERY:

```
SELECT customers.name, SUM(products.price), SUM(products.price * (100 - sales.discount)/100)
FROM customers
```

```
join purchases on customers.id = purchases.customer_id
join purchases_products_list on purchases.id = purchases_products_list.purchases_id
join products on purchases_products_list.product_id = products.id
join sales on products.type = sales.type
```

group by customers.name

**cost=118973.83..152517.26**

**cost=48040.64..54347.12**

### OUTPUT:

In attached file

### INDEXES:

CREATE INDEX on products(type)

"CREATE INDEX on sales(type)