ΒΑΣΕΙΣ ΔΕΔΟΜΕΝΩΝ

Παραδοτέο 3. Υλοποίηση του Σχεσιακού μοντέλου και της Λειτουργικότητας

Νικήτας Μενούνος ΤΛ20412

Θέμα 1^{ο} :

```
1. SELECT id
     FROM USER
     WHERE ((gender = 'A' OR gender='B')
            AND age>30)
               OR (gender='C' AND age<30);

2. SELECT EXTRACT(YEAR FROM date) AS
     order_year,SUM(cost) AS total_cost
     FROM order_
     GROUP BY EXTRACT(YEAR FROM date),
          user_id;

 3.  SELECT id
     FROM USER
     WHERE name IS NOT NULL ;
```

```
4. SELECT id
     FROM products
          WHERE price >=
              (SELECT price
               FROM products
               ORDER BY price DESC
               LIMIT 1  OFFSET 4);

5. SELECT store_id
     FROM product
     GROUP BY store_id
     ORDER BY SUM(avail_amount) LIMIT 1 ;

6. SELECT prod_id
     FROM product
ORDER BY COUNT(order_id) LIMIT 1 ;

7. SELECT prod_id
     FROM orde_prod
     GROUP BY prod_id
     ORDER BY SUM(num) LIMIT 1 ;
```

```
8. SELECT name
     FROM USER
     WHERE age = 30  OR age =40 ;

9. SELECT AVG(price)
     FROM product
     GROUP BY store_id
     HAVING AVG(price)>100;

10. SELECT DISTINCT user.id
     FROM (USER INNER JOIN user_cat
               ON user.id = usercat.user_id)
          INNER JOIN categories
          ON user_cat.cat_id = categories.id
     WHERE ((categories.name LIKE 'E%'
     OR categories.name LIKE 'K%')
     AND categories.name LIKE '%TV%')
      AND categories.name NOT  LIKE '%LED%';

11. SELECT user_id
     FROM order_
     WHERE MAX(COUNT(id))
     GROUP BY user_id ;
```

```
12. SELECT user_id
     FROM order_
     WHERE MAX(SUM(cost))
     GROUP BY user_id ;


13. SELECT id
     FROM USER
     WHERE NOT EXISTS
         (SELECT id FROM categories
          WHERE NOT EXISTS
              (SELECT cat_id
               FROM user_cat
               WHERE user_id = user.id
               AND user_cat = categories.id));


14. SELECT id
     FROM USER
     WHERE NOT EXISTS
          (SELECT 1 FROM order_
               WHERE user_id = user.id);
```

```
15. SELECT user_id
      FROM order_
           WHERE COUNT(user_id) = 1 ;

16. SELECT user_id
      FROM order_
           WHERE COUNT(user_id) > 1 ;

17. SELECT DISTINCT user_id
      FROM order_
      WHERE date=2015
             AND date=2020 ;

18. SELECT user_id, id
      FROM order_ AS o LEFT JOIN order_ AS u
                 ON o.user_id= u.id;
```

ΘΕΜΑ 2ο:

```
1. SELECT id
      FROM USER
      WHERE age BETWEEN 10 AND 30;
```

σ(age>10 και age<30)(π(id)(USER))

2.
```sql
SELECT name,age
      FROM USER
      WHERE(age BETWEEN 10 AND 40) ;
```

σ(age>10 και age<40)(π(id)(USER))

3.
```sql
SELECT store_id, id
      FROM product
      GROUP BY store_id ;
```

store_id G store_id , id (product)

4.
```sql
SELECT name, id
      FROM store INNER JOIN product
      ON product.store_id = store.id
            WHERE product. avail_amount >0
                  AND product.price <100;
```

π(name, id)(σ(product.avail_amount > 0 AND product.price < 100)
(store ⋈ (product.store_id = store.id)))

5.
```sql
SELECT AVG(age)
      FROM USER
      GROUP BY gender;
```

gender G AVG(age) (user)