|  |  |
| --- | --- |
| ***Создание таблиц*** | ***Наполнение таблиц*** |
| CREATE TABLE devices(  device\_id INTEGER NOT NULL,  device\_type\_id INTEGER,  parent\_device\_id INTEGER,  device\_name VARCHAR,  setup\_date DATE,  warehouse\_id INTEGER)  PRIMARY KEY (device\_id),  FOREIGN KEY (device\_type\_id) REFERENCES device\_types (device\_type\_id),  FOREIGN KEY (warehouse\_id) REFERENCES warehouses (warehouse\_id ); | INSERT INTO devices  VALUES(123,15,NULL,’ коммутатор D-Link на ленина, 1’,’01.02.2018’),(…………)…….; |
| CREATE TABLE device\_types(  device\_type\_id INTEGER NOT NULL,  device\_class\_id INTEGER,  device\_type\_name VARCHAR,  device\_cost INTEGER),  PRIMARY KEY (device\_type\_id),  FOREIGN KEY (device\_class\_id) REFERENCES device\_classes (device\_class\_id); | INSERT INTO device\_types  VALUES(15,7,NULL,’ коммутатор D-Link’,10200),(…………)…….; |
| CREATE TABLE warehouses(  warehouse\_id INTEGER NOT NULL,  warehouse\_name VARCHAR),  PRIMARY KEY (warehouse\_id); | INSERT INTO warehouses  VALUES(22,’ ленина, 1’),(…………)…….; |
| CREATE TABLE device\_classes(  device\_class\_id INTEGER NOT NULL,  device\_class\_name VARCHAR),  PRIMARY KEY (device\_class\_id); | INSERT INTO device\_classes  VALUES(7,’ коммутатор’),(…………)…….; |

1) Вывести оборудование, которое поставлено до 01.09.2018

|  |  |  |
| --- | --- | --- |
| device\_id | device\_name | setup\_date |

SELECT device\_id,device\_name,setup\_date

FROM devices

WHERE setup\_date <'01.09.2018'

2) Вывести все маршрутизаторы, стоящие на сети.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| device\_type\_name | device\_name | device\_cost | setup\_date | warehouse\_name |

SELECT device\_type\_name,device\_name,device\_cost,setup\_date,warehouse\_name

FROM devices d

JOIN device\_types dt

ON dt.device\_type\_id=d.device\_type\_id

JOIN warehouses w

ON w.warehouse\_id=d.warehouse\_id

WHERE device\_type\_name LIKE 'маршрутизатор%'

3) Вывести устройства из класса "Маршрутизатор", стоящие на складе "ленина, 1"

|  |  |
| --- | --- |
| device\_id | device\_name |

SELECT d.device\_id,d.device\_name

FROM devices d

JOIN warehouses w

ON d.warehouse\_id=w.warehouse\_id

WHERE w.warehouse\_name='ленина, 1'  
4) Подсчитать общую стоимость оборудования, стоящего на сети.

SELECT SUM(device\_cost) AS SUM

FROM device\_types dt

JOIN devices d

ON d.device\_type\_id=dt.device\_type\_id

5) Рассчитать стоимость всего оборудования на сети в разрезе классов

|  |  |
| --- | --- |
| device\_class\_name | Общая стоимость |

SELECT dc.device\_class\_name,SUM(device\_cost) AS Общая\_стоимость

FROM device\_types dt

JOIN device\_classes dc

ON dc.device\_class\_id=dt.device\_class\_id

JOIN devices d

ON d.device\_type\_id=dt.device\_type\_id

GROUP BY device\_class\_name

6) Вывести иерархическую структуру устройств

|  |  |
| --- | --- |
| device\_name | LEVEL |

SELECT d.device\_name,

CASE

WHEN (d.parent\_device\_id is null)

THEN 1

WHEN (d.parent\_device\_id >ANY(SELECT device\_id FROM devices) )

THEN 3

ELSE 2

END device\_level

FROM devices d

7)Вывести склады, которые были пустыми до 01.06.2018

|  |  |
| --- | --- |
| warehouse\_id | warehouse\_name |

SELECT w.warehouse\_id,w.warehouse\_name

FROM warehouses w

JOIN devices d

ON d.warehouse\_id=w.warehouse\_id

WHERE d.setup\_date> '01.06.2018'

8)Вывести устройства в формате

|  |  |  |  |
| --- | --- | --- | --- |
| device\_id | device\_name | setup\_date | Is\_kmu |

поле Is\_kmu имеет значение 1 если устройство из класса коммутатор, иначе 0

SELECT d.device\_id,d.device\_name,d.setup\_date,

CASE

WHEN dc.device\_class\_name='коммутатор'

THEN 1

ELSE 0

END Is\_kmu

FROM device\_classes dc

JOIN device\_types dt

ON dt.device\_class\_id=dc.device\_class\_id

JOIN devices d

ON d.device\_type\_id=dt.device\_type\_id