

VYSOKÉ UČENÍ TECHNICKÉ V BRNĚ

FAKULTA INFORMAČNÍCH TECHNOLOGIÍ

Realitná kancelária

Dokumentácia temporálnych dotazov
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1 Príklady temporálnych dotazov

1.1 Select

Dotaz na nájdenie všetkých nehnuteľností, ktoré nemajú aktuálne vlastníka.

TSQL2

```
SELECT P.id_property From property P where p.id_property NOT IN(
VALIDTIME SELECT PR.id_property
FROM property PR LEFT OUTER JOIN owner O ON (PR.id_property=O.id_property)
);
```

SQL

```
SELECT P.id_property FROM property P where p.id_property IN(
SELECT DISTINCT PR.id_property
FROM property PR LEFT OUTER JOIN owner O ON (PR.id_property=O.id_property)
WHERE (CURRENT_DATE NOT BETWEEN O.valid_from AND O.valid_to AND
CURRENT_DATE NOT BETWEEN O.valid_from AND O.valid_to) OR
O.id_owner IS NULL)
);
```

1.2 Select

Dotaz na nájdenie priemernej ceny zvolenej nehnuteľnosti v sledovanom období.

TSQL2

```
VALIDTIME PERIOD[2010/1/1-2017-8-1] SELECT ROUND(AVG(PP.price),0) AS AvgPrice
FROM property_price PP RIGHT JOIN property P ON(PP.id_property=P.id_property)
WHERE P.id_property=1
GROUP BY PP.id_property;
```

SQL

```
SELECT ROUND(AVG(PP.price),0) AS AvgPrice
FROM property_price PP RIGHT JOIN property P ON(PP.id_property=P.id_property)
WHERE
( P.id_property=1 AND (PP.valid_from >= TO_DATE('2010-1-1','yyyy-mm-dd') )
AND (PP.valid_to <= TO_DATE('2017-8-1','yyyy-mm-dd')) ) OR
( P.id_property=1 AND
((TO_DATE('2010-1-1','yyyy-mm-dd') BETWEEN PP.valid_from AND PP.valid_to) OR
(TO_DATE('2017-8-1','yyyy-mm-dd') BETWEEN PP.valid_from AND PP.valid_to)))
GROUP BY PP.id_property;
```

1.3 Select

Dotaz na nájdenie celkovej doby vlastníctva nehnuteľností danej osoby v sledovanom období.

TSQL2

```
VALIDTIME PERIOD[2010/1/1-2017-11-25] SELECT CAST(VALID(P) AS INTERVAL DAY)
AS DurationInDays
FROM owner O RIGHT JOIN person P ON(O.id_owner=P.id_person)
WHERE P.id_person=9
GROUP BY P.id_person;
```

SQL

```
SELECT nvl(SUM(trunc( (CASE when O.valid_to > TO_DATE('2017-11-25','yyyy-mm-dd')
THEN TO_DATE('2017-11-25','yyyy-mm-dd')
ELSE O.valid_to END)-(CASE WHEN O.valid_from < TO_DATE('2010-1-1','yyyy-mm-dd')
THEN TO_DATE('2010-1-1','yyyy-mm-dd') ELSE O.valid_from END) )), 0)
AS DurationInDays
FROM owner O RIGHT JOIN person P ON(O.id_owner=P.id_person) WHERE
( P.id_person=9 AND (O.valid_from >= TO_DATE('2010-1-1','yyyy-mm-dd') ) AND
(O.valid_to <= TO_DATE('2017-11-25','yyyy-mm-dd')) ) OR( P.id_person=9 AND
( (TO_DATE('2010-1-1','yyyy-mm-dd') BETWEEN O.valid_from AND O.valid_to) OR
(TO_DATE('2017-11-25','yyyy-mm-dd') BETWEEN O.valid_from AND O.valid_to)))
GROUP BY P.id_person;
```

1.4 Update

Aktualizácia buď ceny alebo vlastníka danej nehnuteľnosti v určitom období. Podrobná implementácia procedúry, ktorá aktualizuje temporálne dáta v určitom období, sa nachádza v adresári *db/database-init-temporal.sql*.

TSQL2

```
VALIDTIME PERIOD[2016/11/6-2017/11/15]
UPDATE property_price SET property_price.price=1100000
WHERE property_price.id_property=1;
```

```
VALIDTIME PERIOD[2016/11/6-2017/11/15]
UPDATE owner SET owner.id_owner=2
WHERE owner.id_property=1;
```

SQL

```
CALL temporal_update('property_price',1,1100000,
    TO_DATE('2016-11-6','yyyy-mm-dd'), TO_DATE('2017-11-15','yyyy-mm-dd'));
CALL temporal_update('owner',1,2,
    TO_DATE('2016-11-6','yyyy-mm-dd'), TO_DATE('2017-11-15','yyyy-mm-dd'));
```

1.5 Delete

Zmazanie buď ceny alebo vlastníka danej nehnuteľnosti v určitom období. Podrobná implementácia procedúry, ktorá zmaže temporálne dáta v určitom období, sa nachádza v adresári *db/database-init_temporal.sql*.

TSQL2

```
VALIDTIME PERIOD[2017/8/1-2017/11/6]
DELETE FROM property_price
WHERE property_price.id_property=1;
```

```
VALIDTIME PERIOD[2017/8/1-2017/11/6]
DELETE FROM owner
WHERE owner.id_property=1;
```

SQL

```
CALL temporal_delete('property_price',1,
    TO_DATE('2017-8-1','yyyy-mm-dd'), TO_DATE('2017-11-6','yyyy-mm-dd'));
CALL temporal_delete('owner',1,
    TO_DATE('2017-8-1','yyyy-mm-dd'), TO_DATE('2017-11-6','yyyy-mm-dd'));
```