Міністерство освіти і науки України
Національний університет «Львівська політехніка»
Інститут комп'ютерних наук та інформаційних технологій
Кафедра «Системи штучного інтелекту»

Лабораторна робота №13
З предмету: «Організація баз даних та знань»
Тема: "Рекламне агентство"

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CREATE INDEX information_about_agencyINDX4 ON information_about_agency (information_about_agency_id, events);

SHOW INDEX FROM information_about_agency;

| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| information_about_agency | 0 | PRIMARY | 1 | information_about_agency_id | A | 3 | NULL | NULL | | BTREE | |
| information_about_agency | 0 | Contacts_of_agency_id | 1 | Contacts_of_agency_id | A | 3 | NULL | NULL | | BTREE | |
| information_about_agency | 1 | information_about_agencyINDX3 | 1 | information_about_agency_id | A | 3 | NULL | NULL | | BTREE | |
| information_about_agency | 1 | information_about_agencyINDX3 | 2 | Events | A | 3 | NULL | NULL | | BTREE | |
| information_about_agency | 1 | information_about_agencyINDX4 | 1 | information_about_agency_id | A | 3 | NULL | NULL | | BTREE | |
| information_about_agency | 1 | information_about_agencyINDX4 | 2 | Events | A | 3 | NULL | NULL | | BTREE | |

CREATE UNIQUE INDEX mname_indx1 ON marketing_agency (information_about_agency_id, name);

SHOW INDEX FROM marketing_agency;

| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| marketing_agency | 0 | PRIMARY | 1 | marketing_agency_id | A | 5 | NULL | NULL | | BTREE | |
| marketing_agency | 0 | UQ_marketing_agency_version | 1 | name | A | 5 | NULL | NULL | | BTREE | |
| marketing_agency | 0 | mname_indx | 1 | information_about_agency_id | A | 3 | NULL | NULL | | BTREE | |
| marketing_agency | 0 | mname_indx | 2 | name | A | 5 | NULL | NULL | | BTREE | |
| marketing_agency | 0 | mname_indx1 | 1 | information_about_agency_id | A | 3 | NULL | NULL | | BTREE | |
| marketing_agency | 0 | mname_indx1 | 2 | name | A | 5 | NULL | NULL | | BTREE | |

EXPLAIN SELECT name_of_steps AS nos,

COUNT(marketing_agency.marketing_agency_id) AS amount

FROM ((information_about_agency INNER JOIN marketing_agency)

INNER JOIN categories) INNER JOIN steps

ON information_about_agency.events=name

AND information_about_agency.information_about_agency_id=marketing_agency.information_about_agency_id

AND marketing_agency.marketing_agency_id=categories.marketing_agency_id

AND categories.steps_id=steps.steps_id

WHERE categories.time_of_using BETWEEN '2020-05-20' AND '2021-08-20'

GROUP BY nos;

| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SIMPLE | categories | NULL | ALL | Categories_fk0,Categories_fk1 | NULL | NULL | NULL | 6 | 16.67 |
| 1 | SIMPLE | marketing_agency | NULL | eq_ref | PRIMARY,UQ_marketing_agency_version,mna... | PRIMARY | 4 | marketing_agency1.categories.marketing_agen... | 1 | 100.00 |
| 1 | SIMPLE | information_about_agency | NULL | eq_ref | PRIMARY,information_about_agencyINDX3,info... | PRIMARY | 4 | marketing_agency1.marketing_agency.informat... | 1 | 33.33 |
| 1 | SIMPLE | steps | NULL | eq_ref | PRIMARY | PRIMARY | 4 | marketing_agency1.categories.steps_id | 1 | 100.00 |

*EXPLAIN SELECT STRAIGHT_JOIN name_of_steps AS nos,*

*COUNT(marketing_agency.marketing_agency_id) AS amount*

*FROM ((information_about_agency INNER JOIN marketing_agency)*

*INNER JOIN categories) INNER JOIN steps*

*ON information_about_agency.events=name*

*AND*

*information_about_agency.information_about_agency_id=marketing_agency.information_about_agency_id*

*AND marketing_agency.marketing_agency_id=categories.marketing_agency_id*

*AND categories.steps_id=steps.steps_id*

*WHERE categories.time_of_using BETWEEN '2020-05-20' AND '2021-08-20'*

*GROUP BY nos;*

| | id | select_type | table | partitions | type | possible_keys | key | key_len | ref |
|---|---|---|---|---|---|---|---|---|---|
| ▶ | 1 | SIMPLE | information_about_agency | NULL | index | PRIMARY,information_about_agencyINDX3,info... | information_about_agencyINDX3 | 1026 | NULL |
| | 1 | SIMPLE | marketing_agency | NULL | eq_ref | PRIMARY,UQ_marketing_agency_version,mna... | UQ_marketing_agency_version | 130 | marketing_agency1.information_about_agency... |
| | 1 | SIMPLE | categories | NULL | ref | Categories_fk0,Categories_fk1 | Categories_fk0 | 4 | marketing_agency1.marketing_agency.marketi... |
| | 1 | SIMPLE | steps | NULL | eq_ref | PRIMARY | PRIMARY | 4 | marketing_agency1.categories.steps_id |

**Висновок**

**Допишу до 31 травня.**