

Лабораторная работа №3

Кононенко Дмитро
КИТ-118В

1. Базой даних для даної лабораторної роботи було обрано звичайну схему “Shops”. Вхід до контролеру бази даних(рис. 1):

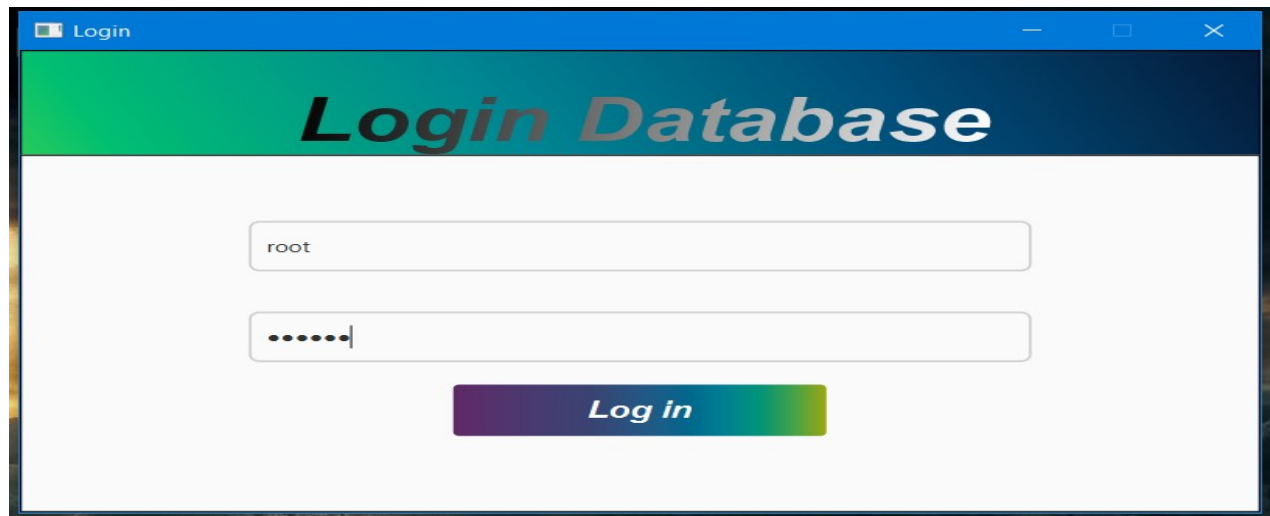
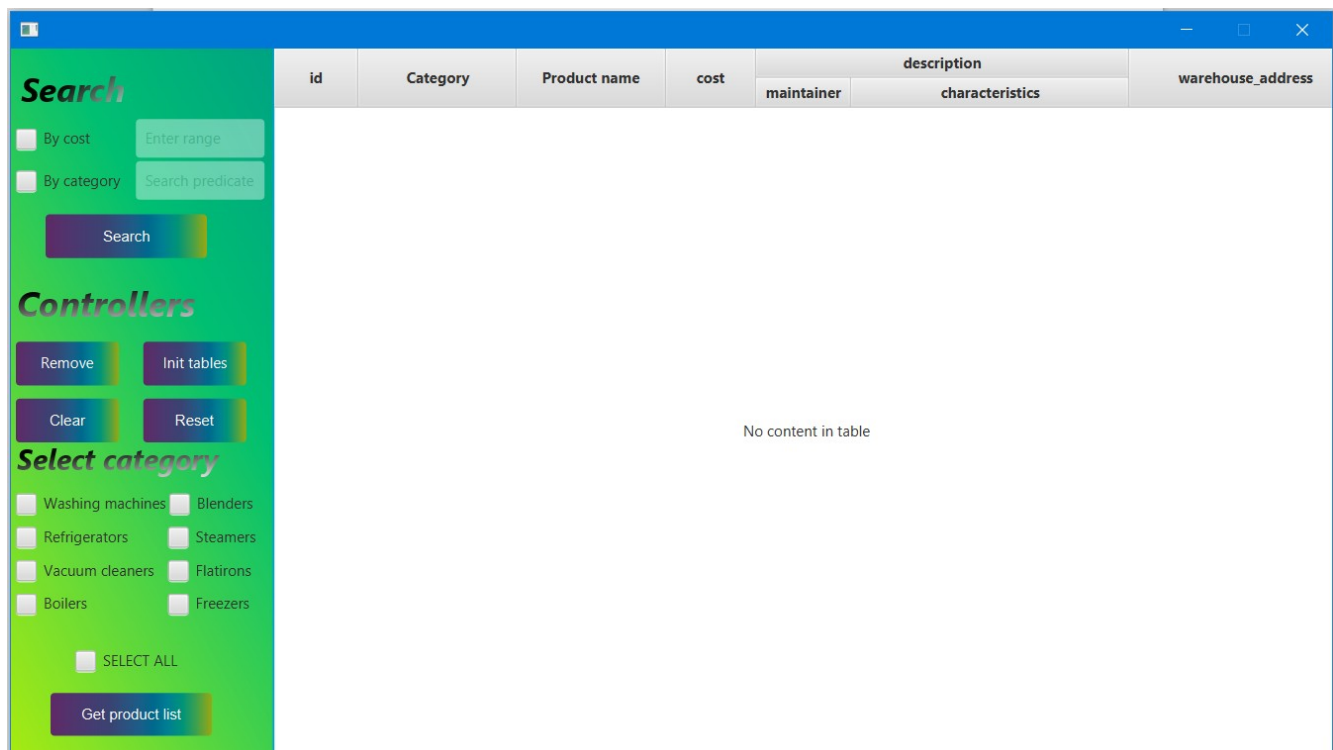


Рис. 1

2. Після входу ми бачимо головну частину програми(рис. 2):



id	Category	Product name	cost	description		warehouse_address
				maintainer	characteristics	
No content in table						

Рис. 2

Як можна побачити з категорії база заповнена побутовою технікою(холодильники, праски и тд...)

3. Виводимо данні з бази даних у таблицю(рис. 3)

id	Category	Product name	cost	description		warehouse_address
				maintainer	characteristics	
1	Refrigerators	BOSCH KGN	15899.0	Turkey	Volume: 400 Type: Dual chamber	Kharkiv,Horodovikova st., 45 Kiev, Beregova st., 23
2	Washing machines	LG F0J5N	11999.0	China	Volume: 6kg Spin speed: 1000sp/min	Kharkiv,Horodovikova st., 45 Kiev, Beregova st., 23
3	Vacuum cleaners	BOSCH BGS2U	2999.0	Poland	Type: dry Weight: 4.7 Power: 2000BT	Kharkiv,Horodovikova st., 45
4	Vacuum cleaners	ROWENTA X-Trem	5000.0	France	Type: dry Power: 750BT	Poltava, Zhovtneva st., 74A
5	Steamers	HOBBS MaxiCook	1999.0	China	Functions: Delayed start, Fast steam	Kharkiv,Horodovikova st., 45
6	Steamers	TEFAL VC	1200.0	China	Functions: Auto power off	Lviv, Derevyanko st., 42
7	Blenders	Philips Avance HR36	3999.0	China	Power: 1400BT Glass capacity: 2000	Kiev, Beregova st., 23 Lviv, Derevyanko st., 42
8	Blenders	TEFAL HB877D	1999.0	China	Power: 1000BT Glass capacity: 800	Kharkiv,Horodovikova st., 45 Lviv, Derevyanko st., 42
9	Flatirons	PHILIPS Azur GC49	2499.0	Indonesia	Type: steam Material: Pottery	Kiev, Beregova st., 23
10	Boilers	Octopus HW C2-301	55132.0	Sweden	Volume: 300	Kiev, Beregova st., 23
11	Freezers	LIEBHERR SIGN	40999.0	Germany	Volume: 300kg Functions: No Frost	Kiev, Beregova st., 23
12	Washing machines	SAMSUNG WW90	22999.0	China	Spin speed: 1400sp/min	Poltava, Zhovtneva st., 74A
13	Refrigerators	TOSHIBA GR-RF	44999.0	Germany	Type: Multi-door Functions: No Frost	Kharkiv,Horodovikova st., 45 Poltava, Zhovtneva st., 74A
14	Boilers	Gorenje VLG	33628.0	Slovenia	Volume: 283.7 Type: Hidden("dry")	Kharkiv,Horodovikova st., 45
15	Flatirons	BOSCH TDI	2599.0	Germany	Type: steam Material: Aluminum	Kharkiv,Horodovikova st., 45

Рис. 3

4. Обираємо декілька товарів на видалення(рис. 4):

id	Category	Product name	cost	description		warehouse_address
				maintainer	characteristics	
1	Refrigerators	BOSCH KGN	15899.0	Turkey	Volume: 400 Type: Dual chamber	Kharkiv,Horodovikova st., 45 Kiev, Beregova st., 23
2	Washing machines	LG F0J5N	11999.0	China	Volume: 6kg Spin speed: 1000sp/min	Kharkiv,Horodovikova st., 45 Kiev, Beregova st., 23
3	Vacuum cleaners	BOSCH BGS2U	2999.0	Poland	Type: dry Weight: 4.7 Power: 2000BT	Kharkiv,Horodovikova st., 45
4	Vacuum cleaners	ROWENTA X-Trem	5000.0	France	Type: dry Power: 750BT	Poltava, Zhovtneva st., 74A
5	Steamers	HOBBS MaxiCook	1999.0	China	Functions: Delayed start, Fast steam	Kharkiv,Horodovikova st., 45
6	Steamers	TEFAL VC	1200.0	China	Functions: Auto power off	Lviv, Derevyanko st., 42
7	Blenders	Philips Avance HR36	3999.0	China	Power: 1400BT Glass capacity: 2000	Kiev, Beregova st., 23 Lviv, Derevyanko st., 42
8	Blenders	TEFAL HB877D	1999.0	China	Power: 1000BT Glass capacity: 800	Kharkiv,Horodovikova st., 45 Lviv, Derevyanko st., 42
9	Flatirons	PHILIPS Azur GC49	2499.0	Indonesia	Type: steam Material: Pottery	Kiev, Beregova st., 23
10	Boilers	Octopus HW C2-301	55132.0	Sweden	Volume: 300	Kiev, Beregova st., 23
11	Freezers	LIEBHERR SIGN	40999.0	Germany	Volume: 300kg Functions: No Frost	Kiev, Beregova st., 23
12	Washing machines	SAMSUNG WW90	22999.0	China	Spin speed: 1400sp/min	Poltava, Zhovtneva st., 74A
13	Refrigerators	TOSHIBA GR-RF	44999.0	Germany	Type: Multi-door Functions: No Frost	Kharkiv,Horodovikova st., 45 Poltava, Zhovtneva st., 74A
14	Boilers	Gorenje VLG	33628.0	Slovenia	Volume: 283.7 Type: Hidden("dry")	Kharkiv,Horodovikova st., 45
15	Flatirons	BOSCH TDI	2599.0	Germany	Type: steam Material: Aluminum	Kharkiv,Horodovikova st., 45

Рис. 4

5. Отримуємо підтвердження на видалення(рис. 5)

Search

☐ By cost

Enter range

☐ By category

Search predicate

Search

Controllers

Remove

Init tables

Clear

Reset

Select category

☒ Washing machines

☒ Blenders

☒ Refrigerators

☒ Steamers

☒ Vacuum cleaners

☒ Flatirons

☒ Boilers

☒ Freezers

☒ SELECT ALL

Get product list

id	Category	Product name	cost	maintainer	description		warehouse_address
						characteristics	
1	Refrigerators	BOSCH KGN	15899.0	Turkey	Volume: 400	Type: Dual chamber	Kharkiv,Horodovikova st., 45 Kiev, Beregova st., 23
2	Washing machines	LG F0J5N	11999.0	China	Volume: 6kg	Spin speed: 1000sp/min	Kharkiv,Horodovikova st., 45 Kiev, Beregova st., 23
3	Vacuum cleaners	BOSCH BGS2U	2999.0	Poland	Type: dry	Weight: 4.7 Power: 2000BT	Kharkiv,Horodovikova st., 45
4	Vacuum cleaners	ROWENTA X-Trem	5000.0	France	Type: dry	Power: 750BT	Poltava, Zhovtneva st., 74A
5	Steamers	HOBBS MaxiCook	1999.0	China	Functions: Delayed start, Fast steam		Kharkiv,Horodovikova st., 45
6	Steamers	TEFAL VC	1200.0	China	Functions: Auto power off		Lviv, Derevyanko st., 42
7	Blenders	Philips Avance HR36	3999.0	China	Power: 1400BT	Glass capacity: 2000	Kiev, Beregova st., 23 Lviv, Derevyanko st., 42
8	Blenders	TEFAL HB877D	1999.0	China	Power: 1400BT	Glass capacity: 2000	Kiev, Beregova st., 23 Lviv, Derevyanko st., 42
9	Flatirons	PHILIPS Azur GC49	2499.0	Indonesia	Type: steam	Material: Pottery	Kiev, Beregova st., 23
10	Boilers	Octopus HW C2-301	55132.0	Sweden	Volume: 300		Kiev, Beregova st., 23
11	Freezers	LIEBHERR SIGN	40999.0	Germany	Volume: 300kg	Functions: No Frost	Kiev, Beregova st., 23
12	Washing machines	SAMSUNG WW90	22999.0	China	Spin speed: 1400sp/min		Poltava, Zhovtneva st., 74A
13	Refrigerators	TOSHIBA GR-RF	44999.0	Germany	Type: Multi-door	Functions: No Frost	Kharkiv,Horodovikova st., 45 Poltava, Zhovtneva st., 74A
14	Boilers	Gorenje VLG	33628.0	Slovenia	Volume: 283.7	Type: Hidden("dry")	Kharkiv,Horodovikova st., 45
15	Flatirons	BOSCH TDI	2599.0	Germany	Type: steam	Material: Aluminum	Kharkiv,Horodovikova st., 45

Confirm changes?

YesNo

Рис. 5

6. Елементи видаленні з бази даних(рис. 6) та результат в базі (рис. 7)

1	Refrigerators	BOSCH KGN	15899.0	Turkey	Volume: 400 Type: Dual chamber	Kharkiv,Horodovikova st., 45 Kiev, Beregova st., 23
2	Washing machines	LG F0J5N	11999.0	China	Volume: 6kg Spin speed: 1000sp/min	Kharkiv,Horodovikova st., 45 Kiev, Beregova st., 23
3	Vacuum cleaners	BOSCH BGS2U	2999.0	Poland	Type: dry Weight: 4.7 Power: 2000BT	Kharkiv,Horodovikova st., 45
4	Vacuum cleaners	ROWENTA X-Trem	5000.0	France	Type: dry Power: 750BT	Poltava, Zhovtneva st., 74A
6	Steamers	TEFAL VC	1200.0	China	Functions: Auto power off	Lviv, Derevyanko st., 42
7	Blenders	Philips Avance HR36	3999.0	China	Power: 1400BT Glass capacity: 2000	Kiev, Beregova st., 23 Lviv, Derevyanko st., 42
9	Flatirons	PHILIPS Azur GC49	2499.0	Indonesia	Type: steam Material: Pottery	Kiev, Beregova st., 23
10	Boilers	Octopus HW C2-301	55132.0	Sweden	Volume: 300	Kiev, Beregova st., 23
11	Freezers	LIEBHERR SIGN	40999.0	Germany	Volume: 300kg Functions: No Frost	Kiev, Beregova st., 23
12	Washing machines	SAMSUNG WW90	22999.0	China	Spin speed: 1400sp/min	Poltava, Zhovtneva st., 74A
13	Refrigerators	TOSHIBA GR-RF	44999.0	Germany	Type: Multi-door Functions: No Frost	Kharkiv,Horodovikova st., 45 Poltava, Zhovtneva st., 74A
14	Boilers	Gorenje VLG	33628.0	Slovenia	Volume: 283.7 Type: Hidden("dry")	Kharkiv,Horodovikova st., 45

Рис. 6

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211 • select * FROM products;
212
213
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product_id	name	cost	category_id
1	BOSCH KGN	15899	2
2	LG F0J5N	11999	1
3	BOSCH BGS2U	2999	3
4	ROWENTA X-Trem	5000	3
6	TEFAL VC	1200	4
7	Philips Avance HR36	3999	5
9	PHILIPS Azur GC49	2499	6
10	Octopus HW C2-301	55132	7
11	LIEBHERR SIGN	40999	8
12	SAMSUNG WW90	22999	1
13	TOSHIBA GR-RF	44999	2
14	Gorenje VLG	33628	7
NULL	NULL	NULL	NULL

Рис. 7

7. Змінюємо назву елемента(рис. 8) та (рис. 9)

12	Washing machines	SAMSUNG WW90	22999.0	China	Spin speed: 1400sp/min	Poltava, Zhovtneva st., 74A
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Рис. 8

12	Washing machines	SAMSUNG W85G	22999.0	China	Spin speed: 1400sp/min	Poltava, Zhovtneva st., 74A
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Рис. 9

Перевіряємо данні в базі(рис. 10):

product_id	name	cost	category_id
1	BOSCH KGN	15899	2
2	LG F0J5N	11999	1
3	BOSCH BGS2U	2999	3
4	ROWENTA X-Trem	5000	3
6	TEFAL VC	1200	4
7	Philips Avance HR36	3999	5
9	PHILIPS Azur GC49	2499	6
10	Octopus HW C2-301	55132	7
11	LIEBHERR SIGN	40999	8
12	SAMSUNG W85G	22999	1
13	TOSHIBA GR-RF	44999	2
14	Gorenje VLG	33628	7
NULL	NULL	NULL	NULL

Рис. 10

8. Пошук за одним із критеріїв(рис. 11):

Search

☒ By cost

☐ By category

Controllers

id	Category	Product name	cost	description		warehouse_address
				maintainer	characteristics	
1	Refrigerators	BOSCH KGN	15899.0	Turkey	Volume: 400 Type: Dual chamber	Kiev, Beregova st., 23 Kharkiv, Horodovikova st., 45
2	Washing machines	LG F0J5N	11999.0	China	Volume: 6kg Spin speed: 1000sp/min	Kiev, Beregova st., 23 Kharkiv, Horodovikova st., 45
3	Vacuum cleaners	BOSCH BGS2U	2999.0	Poland	Type: dry Weight: 4.7 Power: 2000BT	Kharkiv, Horodovikova st., 45
4	Vacuum cleaners	ROWENTA X-Trem	5000.0	France	Type: dry Power: 750BT	Poltava, Zhovtneva st., 74A
6	Steamers	TEFAL VC	1200.0	China	Functions: Auto power off	Lviv, Derevyanko st., 42
7	Blenders	Philips Avance HR36	3999.0	China	Power: 1400BT Glass capacity: 2000	Kiev, Beregova st., 23 Lviv, Derevyanko st., 42
9	Flatirons	PHILIPS Azur GC49	2499.0	Indonesia	Type: steam Material: Pottery	Kiev, Beregova st., 23
12	Washing machines	SAMSUNG W85G	22999.0	China	Spin speed: 1400sp/min	Poltava, Zhovtneva st., 74A

Рис. 11

9. Пошук за двома критеріями(рис. 12):

Search

☒ By cost

☒ By category

3	Vacuum cleaners	BOSCH BGS2U	2999.0	Poland	Type: dry Weight: 4.7 Power: 2000BT	Kharkiv, Horodovikova st., 45
4	Vacuum cleaners	ROWENTA X-Trem	5000.0	France	Type: dry Power: 750BT	Poltava, Zhovtneva st., 74A

Рис. 12

10. Запит з вибіркою з декількох таблиць Розробка запиту з вибіркою з декількох таблиць і візуальне уявлення результату(рис. 13):

```
sql: "SELECT products.product_id,\n" +\n"      category_name,\n" +\n"      name,\n" +\n"      cost,\n" +\n"      maintainer,\n" +\n"      characteristics,\n" +\n"      GROUP_CONCAT(s.address\n" +\n"                    SEPARATOR '\n ' ) AS addresses\n" +\n"FROM products\n" +\n"      LEFT JOIN categories ON products.category_id = categories.category_id\n" +\n"      LEFT JOIN description d ON products.product_id = d.product_id\n" +\n"      LEFT JOIN shops_has_products shp ON products.product_id = shp.product_id\n" +\n"      LEFT JOIN shops s ON shp.shop_id = s.shop_id\n" +\n"WHERE category_name IN (?,?,?,?,?,?)\n" +\n"GROUP BY products.product_id)) {"
```

(рис. 13)

В програмі він має вигляд(рис. 14):

☒ Washing machines

☒ Blenders

☒ Refrigerators

☒ Steamers

☒ Vacuum cleaners

☒ Flatirons

☒ Boilers

☒ Freezers

☒ SELECT ALL

Рис. 14

11. Пошук за текстовим в усіх полях(рис.15)

Search

☐ By cost

Enter range

☐ By category

Search predicate

☒ By text

BOSCH

id	Category	Product name	cost	description		warehouse_address
				maintainer	characteristics	
1	Refrigerators	BOSCH KGN	15899.0	Turkey	Volume: 400 Type: Dual chamber	Kiev, Khreshchatyk st., 23 Kharkiv,Pushkinska st., 67
3	Vacuum cleaners	BOSCH BGS2U	2999.0	Poland	Type: dry Weight: 4.7 Power: 2000BT	Kharkiv,Pushkinska st., 67
15	Flatirons	BOSCH TDI	2599.0	Germany	Type: steam Material: Aluminum	Kharkiv,Pushkinska st., 67

Рис.15

12. Пошук за усіма критеріями(рис. 16)

Search

☒ By cost

1000-10000

☒ By category

Flatirons

☒ By text

BOSCH

id	Category	Product name	cost	description		warehouse_address
				maintainer	characteristics	
15	Flatirons	BOSCH TDI	2599.0	Germany	Type: steam Material: Aluminum	Kharkiv,Pushkinska st., 67

Рис. 16