**Отчет**

**Лабораторная работа №5**

**С дисциплины: «C#»**

**Тема: « ADO.NET** **»**

**Автор: Ярцев Д.А.**

**Группа: ИС61**

**Вариант №24**

24) Програмне забезпечення «Школа». Загальноосвітня школа, в якій навчаються **учні**, має **номер, назву, адресу**, **ПІБ директора**. У школах є певна кількість **класів**, котрі мають **назву, класного керівника, список учнів, певний перелік предметів**. Предмети викладаються вчителями, причому один вчитель може викладати декілька предметів, а однакові предмети можуть викладати різні вчителі. Предмети викладаються згідно з розкладом у кабінетах, котрі мають номер, назву, відповідне обладнання та розкладом класів. Предмети мають назву, кількість годин вивчення, список навчальних посібників.

**Задача**

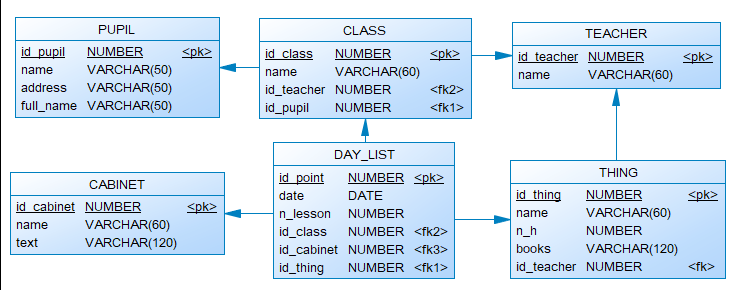
1. Разработать структуру данных для хранения согласно вариантов, приведенных ниже (можно предложить собственные варианты). В каждом из вариантов должно быть как минимум 3-4 таблицы.
2. Заполнить созданные таблицы данными в режиме редактирования. Учесть наличие FK
3. Реализовать добавление, удаление и обновление даннных
4. Реализовать вывод данных с помощью объектов классов DataAdapter и DataSet
5. Программа должна быть разработана в виде консольного приложения на языке C#.
6. Кратко описать архитектуру проекта
7. Построить диаграмму классов

**Ход работы**

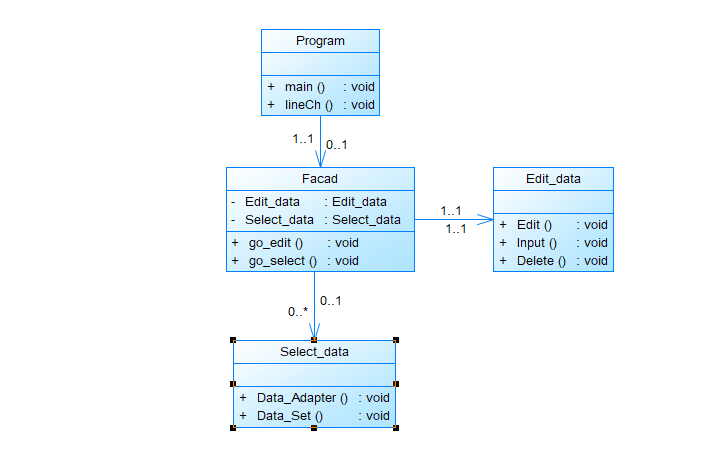
Общий алгоритм работы программы таков:

1. Открыть меню
2. Выбрать задачу
3. Выполнить выполнить задачу
4. Закрыть меню
5. Завершить программу

Составил схему данных, следующего вида:



А также составил диаграмму классов:



**Реализация: вывод**

lab\_5 Yarcev

================================================================================

Выберите действие:

1 - edit\_table

2 - select\_table

3 - exit

№ действия:2

--------------------------------------------------------------------------------

Выберите действие:

1 - select only

2 - select with where

№ действия:1

--------------------------------------------------------------------------------

Выберите таблицу:

1 - PUPIL

2 - CLASS

3 - TEACHER

4 - CABINET

5 - DAY\_LIST

6 - THING

№ таблицы:1

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[id\_pupil] [name] [address] [full\_name]

--------------------------------------------------------------------------------

[2] [name\_1] [address\_1] [full\_name\_1]

[3] [name\_2] [address\_2] [full\_name\_2]

[4] [name\_3] [address\_3] [full\_name\_3]

[6] [name\_5] [address\_5] [full\_name\_5]

[8] [name\_7] [address\_7] [full\_name\_7]

[9] [name\_8] [address\_8] [full\_name\_8]

[10] [name\_9] [address\_9] [full\_name\_9]

[11] [name\_10] [address\_10] [full\_name\_10]

[12] [name\_11] [address\_11] [full\_name\_11]

[13] [name\_12] [address\_12] [full\_name\_12]

[14] [name\_13] [address\_13] [full\_name\_13]

[15] [name\_14] [address\_14] [full\_name\_14]

[16] [name\_15] [address\_15] [full\_name\_15]

[17] [name\_16] [address\_16] [full\_name\_16]

[18] [name\_17] [address\_17] [full\_name\_17]

[19] [name\_18] [address\_18] [full\_name\_18]

[20] [name\_19] [address\_19] [full\_name\_19]

[21] [name\_20] [address\_20] [full\_name\_20]

[22] [name\_21] [address\_21] [full\_name\_21]

[23] [name\_22] [address\_22] [full\_name\_22]

[24] [name\_23] [address\_23] [full\_name\_23]

[25] [name\_24] [address\_24] [full\_name\_24]

[26] [name\_25] [address\_25] [full\_name\_25]

[27] [name\_26] [address\_26] [full\_name\_26]

[28] [name\_27] [address\_27] [full\_name\_27]

[29] [name\_28] [address\_28] [full\_name\_28]

[30] [name\_29] [address\_29] [full\_name\_29]

[31] [name\_30] [address\_30] [full\_name\_30]

[32] [name\_31] [address\_31] [full\_name\_31]

[33] [name\_32] [address\_32] [full\_name\_32]

[34] [name\_33] [address\_33] [full\_name\_33]

[35] [name\_34] [address\_34] [full\_name\_34]

[36] [name\_35] [address\_35] [full\_name\_35]

[37] [name\_36] [address\_36] [full\_name\_36]

[38] [name\_37] [address\_37] [full\_name\_37]

[39] [name\_38] [address\_38] [full\_name\_38]

[40] [name\_39] [address\_39] [full\_name\_39]

[41] [name\_40] [address\_40] [full\_name\_40]

[42] [name\_41] [address\_41] [full\_name\_41]

[43] [name\_42] [address\_42] [full\_name\_42]

[44] [name\_43] [address\_43] [full\_name\_43]

[45] [name\_44] [address\_44] [full\_name\_44]

[46] [name\_45] [address\_45] [full\_name\_45]

[47] [name\_46] [address\_46] [full\_name\_46]

[48] [name\_47] [address\_47] [full\_name\_47]

[49] [name\_48] [address\_48] [full\_name\_48]

[50] [name\_49] [address\_49] [full\_name\_49]

[51] [name\_50] [address\_50] [full\_name\_50]

[52] [name\_51] [address\_51] [full\_name\_51]

[53] [name\_52] [address\_52] [full\_name\_52]

[54] [name\_53] [address\_53] [full\_name\_53]

[55] [name\_54] [address\_54] [full\_name\_54]

[56] [name\_55] [address\_55] [full\_name\_55]

[57] [name\_56] [address\_56] [full\_name\_56]

[58] [name\_57] [address\_57] [full\_name\_57]

[59] [name\_58] [address\_58] [full\_name\_58]

[60] [name\_59] [address\_59] [full\_name\_59]

[61] [name\_60] [address\_60] [full\_name\_60]

[62] [name\_61] [address\_61] [full\_name\_61]

[63] [name\_62] [address\_62] [full\_name\_62]

[64] [name\_63] [address\_63] [full\_name\_63]

[65] [name\_64] [address\_64] [full\_name\_64]

[66] [name\_65] [address\_65] [full\_name\_65]

[67] [name\_66] [address\_66] [full\_name\_66]

[68] [name\_67] [address\_67] [full\_name\_67]

[69] [name\_68] [address\_68] [full\_name\_68]

[70] [name\_69] [address\_69] [full\_name\_69]

[71] [name\_70] [address\_70] [full\_name\_70]

[72] [name\_71] [address\_71] [full\_name\_71]

[73] [name\_72] [address\_72] [full\_name\_72]

[74] [name\_73] [address\_73] [full\_name\_73]

[75] [name\_74] [address\_74] [full\_name\_74]

[76] [name\_75] [address\_75] [full\_name\_75]

[77] [name\_76] [address\_76] [full\_name\_76]

[78] [name\_77] [address\_77] [full\_name\_77]

[79] [name\_78] [address\_78] [full\_name\_78]

[80] [name\_79] [address\_79] [full\_name\_79]

[81] [name\_80] [address\_80] [full\_name\_80]

[82] [name\_81] [address\_81] [full\_name\_81]

[83] [name\_82] [address\_82] [full\_name\_82]

[84] [name\_83] [address\_83] [full\_name\_83]

[85] [name\_84] [address\_84] [full\_name\_84]

[86] [name\_85] [address\_85] [full\_name\_85]

[87] [name\_86] [address\_86] [full\_name\_86]

[88] [name\_87] [address\_87] [full\_name\_87]

[89] [name\_88] [address\_88] [full\_name\_88]

[90] [name\_89] [address\_89] [full\_name\_89]

[91] [name\_90] [address\_90] [full\_name\_90]

[92] [name\_91] [address\_91] [full\_name\_91]

[93] [name\_92] [address\_92] [full\_name\_92]

[94] [name\_93] [address\_93] [full\_name\_93]

[95] [name\_94] [address\_94] [full\_name\_94]

[96] [name\_95] [address\_95] [full\_name\_95]

[97] [name\_96] [address\_96] [full\_name\_96]

[98] [name\_97] [address\_97] [full\_name\_97]

[99] [name\_98] [address\_98] [full\_name\_98]

[100] [name\_99] [address\_99] [full\_name\_99]

[101] [name\_100] [address\_100] [full\_name\_100]

[102] [name\_101] [address\_101] [full\_name\_101]

[103] [name\_102] [address\_102] [full\_name\_102]

[104] [name\_103] [address\_103] [full\_name\_103]

[105] [name\_104] [address\_104] [full\_name\_104]

[106] [name\_105] [address\_105] [full\_name\_105]

[107] [name\_106] [address\_106] [full\_name\_106]

[108] [name\_107] [address\_107] [full\_name\_107]

[109] [name\_108] [address\_108] [full\_name\_108]

[110] [name\_109] [address\_109] [full\_name\_109]

[111] [name\_110] [address\_110] [full\_name\_110]

[112] [name\_111] [address\_111] [full\_name\_111]

[113] [name\_112] [address\_112] [full\_name\_112]

[114] [name\_113] [address\_113] [full\_name\_113]

[115] [name\_114] [address\_114] [full\_name\_114]

[116] [name\_115] [address\_115] [full\_name\_115]

[117] [name\_116] [address\_116] [full\_name\_116]

[118] [name\_117] [address\_117] [full\_name\_117]

[119] [name\_118] [address\_118] [full\_name\_118]

[120] [name\_119] [address\_119] [full\_name\_119]

[121] [name\_120] [address\_120] [full\_name\_120]

[122] [name\_121] [address\_121] [full\_name\_121]

[123] [name\_122] [address\_122] [full\_name\_122]

[124] [name\_123] [address\_123] [full\_name\_123]

[125] [name\_124] [address\_124] [full\_name\_124]

[126] [name\_125] [address\_125] [full\_name\_125]

[127] [name\_126] [address\_126] [full\_name\_126]

[128] [name\_127] [address\_127] [full\_name\_127]

[129] [name\_128] [address\_128] [full\_name\_128]

[130] [name\_129] [address\_129] [full\_name\_129]

[131] [name\_130] [address\_130] [full\_name\_130]

[132] [name\_131] [address\_131] [full\_name\_131]

[133] [name\_132] [address\_132] [full\_name\_132]

[134] [name\_133] [address\_133] [full\_name\_133]

[135] [name\_134] [address\_134] [full\_name\_134]

[136] [name\_135] [address\_135] [full\_name\_135]

[137] [name\_136] [address\_136] [full\_name\_136]

[138] [name\_137] [address\_137] [full\_name\_137]

[139] [name\_138] [address\_138] [full\_name\_138]

[140] [name\_139] [address\_139] [full\_name\_139]

[141] [name\_140] [address\_140] [full\_name\_140]

[142] [name\_141] [address\_141] [full\_name\_141]

[143] [name\_142] [address\_142] [full\_name\_142]

[144] [name\_143] [address\_143] [full\_name\_143]

[145] [name\_144] [address\_144] [full\_name\_144]

[146] [name\_145] [address\_145] [full\_name\_145]

[147] [name\_146] [address\_146] [full\_name\_146]

[148] [name\_147] [address\_147] [full\_name\_147]

[149] [name\_148] [address\_148] [full\_name\_148]

[150] [name\_149] [address\_149] [full\_name\_149]

[151] [name\_150] [address\_150] [full\_name\_150]

[152] [name\_151] [address\_151] [full\_name\_151]

[153] [name\_152] [address\_152] [full\_name\_152]

[154] [name\_153] [address\_153] [full\_name\_153]

[155] [name\_154] [address\_154] [full\_name\_154]

[156] [name\_155] [address\_155] [full\_name\_155]

[157] [name\_156] [address\_156] [full\_name\_156]

[158] [name\_157] [address\_157] [full\_name\_157]

[159] [name\_158] [address\_158] [full\_name\_158]

[160] [name\_159] [address\_159] [full\_name\_159]

[161] [name\_160] [address\_160] [full\_name\_160]

[162] [name\_161] [address\_161] [full\_name\_161]

[163] [name\_162] [address\_162] [full\_name\_162]

[164] [name\_163] [address\_163] [full\_name\_163]

[165] [name\_164] [address\_164] [full\_name\_164]

[166] [name\_165] [address\_165] [full\_name\_165]

[167] [name\_166] [address\_166] [full\_name\_166]

[168] [name\_167] [address\_167] [full\_name\_167]

[169] [name\_168] [address\_168] [full\_name\_168]

[170] [name\_169] [address\_169] [full\_name\_169]

[171] [name\_170] [address\_170] [full\_name\_170]

[172] [name\_171] [address\_171] [full\_name\_171]

[173] [name\_172] [address\_172] [full\_name\_172]

[174] [name\_173] [address\_173] [full\_name\_173]

[175] [name\_174] [address\_174] [full\_name\_174]

[176] [name\_175] [address\_175] [full\_name\_175]

[177] [name\_176] [address\_176] [full\_name\_176]

[178] [name\_177] [address\_177] [full\_name\_177]

[179] [name\_178] [address\_178] [full\_name\_178]

[180] [name\_179] [address\_179] [full\_name\_179]

[181] [name\_180] [address\_180] [full\_name\_180]

[182] [name\_181] [address\_181] [full\_name\_181]

[183] [name\_182] [address\_182] [full\_name\_182]

[184] [name\_183] [address\_183] [full\_name\_183]

[185] [name\_184] [address\_184] [full\_name\_184]

[186] [name\_185] [address\_185] [full\_name\_185]

[187] [name\_186] [address\_186] [full\_name\_186]

[188] [name\_187] [address\_187] [full\_name\_187]

[189] [name\_188] [address\_188] [full\_name\_188]

[190] [name\_189] [address\_189] [full\_name\_189]

[191] [name\_190] [address\_190] [full\_name\_190]

[192] [name\_191] [address\_191] [full\_name\_191]

[193] [name\_192] [address\_192] [full\_name\_192]

[194] [name\_193] [address\_193] [full\_name\_193]

[195] [name\_194] [address\_194] [full\_name\_194]

[196] [name\_195] [address\_195] [full\_name\_195]

[197] [name\_196] [address\_196] [full\_name\_196]

[198] [name\_197] [address\_197] [full\_name\_197]

[199] [name\_198] [address\_198] [full\_name\_198]

[200] [name\_199] [address\_199] [full\_name\_199]

[201] [name\_200] [address\_200] [full\_name\_200]

[202] [name\_201] [address\_201] [full\_name\_201]

[203] [name\_202] [address\_202] [full\_name\_202]

[204] [name\_203] [address\_203] [full\_name\_203]

[205] [name\_204] [address\_204] [full\_name\_204]

[206] [name\_205] [address\_205] [full\_name\_205]

[207] [name\_206] [address\_206] [full\_name\_206]

[208] [name\_207] [address\_207] [full\_name\_207]

[209] [name\_208] [address\_208] [full\_name\_208]

[210] [name\_209] [address\_209] [full\_name\_209]

[211] [name\_210] [address\_210] [full\_name\_210]

[212] [name\_211] [address\_211] [full\_name\_211]

[213] [name\_212] [address\_212] [full\_name\_212]

[214] [name\_213] [address\_213] [full\_name\_213]

[215] [name\_214] [address\_214] [full\_name\_214]

[216] [name\_215] [address\_215] [full\_name\_215]

[217] [name\_216] [address\_216] [full\_name\_216]

[218] [name\_217] [address\_217] [full\_name\_217]

[219] [name\_218] [address\_218] [full\_name\_218]

[220] [name\_219] [address\_219] [full\_name\_219]

[221] [name\_220] [address\_220] [full\_name\_220]

[222] [name\_221] [address\_221] [full\_name\_221]

[223] [name\_222] [address\_222] [full\_name\_222]

[224] [name\_223] [address\_223] [full\_name\_223]

[225] [name\_224] [address\_224] [full\_name\_224]

[226] [name\_225] [address\_225] [full\_name\_225]

[227] [name\_226] [address\_226] [full\_name\_226]

[228] [name\_227] [address\_227] [full\_name\_227]

[229] [name\_228] [address\_228] [full\_name\_228]

[230] [name\_229] [address\_229] [full\_name\_229]

[231] [name\_230] [address\_230] [full\_name\_230]

[232] [name\_231] [address\_231] [full\_name\_231]

[233] [name\_232] [address\_232] [full\_name\_232]

[234] [name\_233] [address\_233] [full\_name\_233]

[235] [name\_234] [address\_234] [full\_name\_234]

[236] [name\_235] [address\_235] [full\_name\_235]

[237] [name\_236] [address\_236] [full\_name\_236]

[238] [name\_237] [address\_237] [full\_name\_237]

[239] [name\_238] [address\_238] [full\_name\_238]

[240] [name\_239] [address\_239] [full\_name\_239]

[241] [name\_240] [address\_240] [full\_name\_240]

[242] [name\_241] [address\_241] [full\_name\_241]

[243] [name\_242] [address\_242] [full\_name\_242]

[244] [name\_243] [address\_243] [full\_name\_243]

[245] [name\_244] [address\_244] [full\_name\_244]

[246] [name\_245] [address\_245] [full\_name\_245]

[247] [name\_246] [address\_246] [full\_name\_246]

[248] [name\_247] [address\_247] [full\_name\_247]

[249] [name\_248] [address\_248] [full\_name\_248]

[250] [name\_249] [address\_249] [full\_name\_249]

[251] [name\_250] [address\_250] [full\_name\_250]

[252] [name\_251] [address\_251] [full\_name\_251]

[253] [name\_252] [address\_252] [full\_name\_252]

[254] [name\_253] [address\_253] [full\_name\_253]

[255] [name\_254] [address\_254] [full\_name\_254]

[256] [name\_255] [address\_255] [full\_name\_255]

[257] [name\_256] [address\_256] [full\_name\_256]

[258] [name\_257] [address\_257] [full\_name\_257]

[259] [name\_258] [address\_258] [full\_name\_258]

[260] [name\_259] [address\_259] [full\_name\_259]

[261] [name\_260] [address\_260] [full\_name\_260]

[262] [name\_261] [address\_261] [full\_name\_261]

[263] [name\_262] [address\_262] [full\_name\_262]

[264] [name\_263] [address\_263] [full\_name\_263]

[265] [name\_264] [address\_264] [full\_name\_264]

[266] [name\_265] [address\_265] [full\_name\_265]

[267] [name\_266] [address\_266] [full\_name\_266]

[268] [Sophy] [street 11] [full\_name]

================================================================================

Выберите действие:

1 - edit\_table

2 - select\_table

3 - exit

№ действия:2

--------------------------------------------------------------------------------

Выберите действие:

1 - select only

2 - select with where

№ действия:2

--------------------------------------------------------------------------------

Выберите таблицу:

1 - PUPIL

2 - CLASS

3 - TEACHER

4 - CABINET

5 - DAY\_LIST

6 - THING

№ таблицы:1

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[id\_pupil] [name] [address] [full\_name]

--------------------------------------------------------------------------------

Введите условие: where id\_pupil = 1

--------------------------------------------------------------------------------

================================================================================

Выберите действие:

1 - edit\_table

2 - select\_table

3 - exit

№ действия:1

--------------------------------------------------------------------------------

Выберите действие:

1 - add

2 - delete

3 - update

№ действия:1

--------------------------------------------------------------------------------

Выберите таблицу:

1 - PUPIL

2 - CLASS

3 - TEACHER

4 - CABINET

5 - DAY\_LIST

6 - THING

№ таблицы:1

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[id\_pupil] [name] [address] [full\_name]

insert into PUPIL values( 269,'V','V','V'

);

--------------------------------------------------------------------------------

Complete!

================================================================================

Выберите действие:

1 - edit\_table

2 - select\_table

3 - exit

№ действия:2

--------------------------------------------------------------------------------

Выберите действие:

1 - select only

2 - select with where

№ действия:2

--------------------------------------------------------------------------------

Выберите таблицу:

1 - PUPIL

2 - CLASS

3 - TEACHER

4 - CABINET

5 - DAY\_LIST

6 - THING

№ таблицы:1

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[id\_pupil] [name] [address] [full\_name]

--------------------------------------------------------------------------------

Введите условие: where id\_pupil = 269

--------------------------------------------------------------------------------

[269] [V] [V] [V]

================================================================================

Выберите действие:

1 - edit\_table

2 - select\_table

3 - exit

№ действия:1

--------------------------------------------------------------------------------

Выберите действие:

1 - add

2 - delete

3 - update

№ действия:3

--------------------------------------------------------------------------------

Выберите таблицу:

1 - PUPIL

2 - CLASS

3 - TEACHER

4 - CABINET

5 - DAY\_LIST

6 - THING

№ таблицы:1

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[id\_pupil] [name] [address] [full\_name]

update PUPIL set name = 'C'

where id\_pupil = 269

--------------------------------------------------------------------------------

--------------------------------------------------------------------------------

UPDATE PUPIL SET name = 'C' WHERE id\_pupil = 269

--------------------------------------------------------------------------------

Complete!

================================================================================

Выберите действие:

1 - edit\_table

2 - select\_table

3 - exit

№ действия:2

--------------------------------------------------------------------------------

Выберите действие:

1 - select only

2 - select with where

№ действия:2

--------------------------------------------------------------------------------

Выберите таблицу:

1 - PUPIL

2 - CLASS

3 - TEACHER

4 - CABINET

5 - DAY\_LIST

6 - THING

№ таблицы:1

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[id\_pupil] [name] [address] [full\_name]

--------------------------------------------------------------------------------

Введите условие: where id\_pupil = 269

--------------------------------------------------------------------------------

[269] [C] [V] [V]

================================================================================

Выберите действие:

1 - edit\_table

2 - select\_table

3 - exit

№ действия:1

--------------------------------------------------------------------------------

Выберите действие:

1 - add

2 - delete

3 - update

№ действия:2

--------------------------------------------------------------------------------

Выберите таблицу:

1 - PUPIL

2 - CLASS

3 - TEACHER

4 - CABINET

5 - DAY\_LIST

6 - THING

№ таблицы:1

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[id\_pupil] [name] [address] [full\_name]

delete from PUPIL where id\_pupil = 269

--------------------------------------------------------------------------------

Complete!

================================================================================

Выберите действие:

1 - edit\_table

2 - select\_table

3 - exit

№ действия:2

--------------------------------------------------------------------------------

Выберите действие:

1 - select only

2 - select with where

№ действия:2

--------------------------------------------------------------------------------

Выберите таблицу:

1 - PUPIL

2 - CLASS

3 - TEACHER

4 - CABINET

5 - DAY\_LIST

6 - THING

№ таблицы:1

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[id\_pupil] [name] [address] [full\_name]

--------------------------------------------------------------------------------

Введите условие: where id\_pupil = 269

--------------------------------------------------------------------------------

================================================================================

Выберите действие:

1 - edit\_table

2 - select\_table

3 - exit

№ действия:3

--------------------------------------------------------------------------------

================================================================================

Program is ending...

# **Реализация: код**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Data;

using System.Data.SqlClient;

using System.Data.OleDb;

using System.Data.Common;

namespace LAB5

{

class Program

{

public static OleDbConnection Conn;

public static string ConnStr = @"Provider=Microsoft.Jet.OLEDB.4.0;Data Source='C:\Users\dimay\Desktop\с#\_5\База данных11.mdb';";

public static List<string> Tables = new List<string>(){

"PUPIL",

"CLASS",

"TEACHER",

"CABINET",

"DAY\_LIST",

"THING"

};

static void lineCh(char s)

{

for (int i = 0; i < 80; i++)

Console.Write(s);

Console.WriteLine();

}

public static DataSet1 data\_set;

public static void Fill()

{

Program.data\_set = new DataSet1();

DataSet1TableAdapters.TableAdapterManager adapters = new DataSet1TableAdapters.TableAdapterManager();

//заполняем константы

for (int i = 0; i < 6; i++)

switch (i)

{

case 1:

DataSet1TableAdapters.PUPILTableAdapter ad = new DataSet1TableAdapters.PUPILTableAdapter();

ad.Fill(Program.data\_set.PUPIL);

break;

case 2:

DataSet1TableAdapters.CLASSTableAdapter c = new DataSet1TableAdapters.CLASSTableAdapter();

c.Fill(Program.data\_set.CLASS);

break;

case 3:

DataSet1TableAdapters.TEACHERTableAdapter a1 = new DataSet1TableAdapters.TEACHERTableAdapter();

a1.Fill(Program.data\_set.TEACHER);

break;

case 4:

DataSet1TableAdapters.CABINETTableAdapter a2 = new DataSet1TableAdapters.CABINETTableAdapter();

a2.Fill(Program.data\_set.CABINET);

break;

case 5:

DataSet1TableAdapters.DAY\_LISTTableAdapter a3 = new DataSet1TableAdapters.DAY\_LISTTableAdapter();

a3.Fill(Program.data\_set.DAY\_LIST);

break;

case 6:

DataSet1TableAdapters.THINGTableAdapter a4 = new DataSet1TableAdapters.THINGTableAdapter();

a4.Fill(Program.data\_set.THING);

break;

}

}

public static void Update(DataSet1 dataset)

{

DataSet1TableAdapters.TableAdapterManager adapters = new DataSet1TableAdapters.TableAdapterManager();

//заполняем константы

adapters.UpdateAll(dataset);

}

static void Main(string[] args)

{

Program.Conn = new OleDbConnection(Program.ConnStr);

Program.Fill();

Console.WriteLine("lab\_5 Yarcev");

lineCh('=');

//управляющий алгоритм

{

Facad link\_f = new Facad();

int i = 0;

bool key = true;

while (key)

{

bool key\_input = true;

while (key\_input)

{

key\_input = false;

Console.WriteLine(" Выберите действие:");

Console.WriteLine(" 1 - edit\_table");

Console.WriteLine(" 2 - select\_table");

Console.WriteLine(" 3 - exit");

Console.Write(" № действия:");

i = Int32.Parse(Console.ReadLine());

if (i < 1 || i > 4)

{

Console.WriteLine(" Не верно, повторите ввод.");

key\_input = true;

}

}

lineCh('-');

switch (i)

{

case 1: link\_f.go\_edit(); break;

case 2: link\_f.go\_select(); break;

case 3: key = false; break;

}

lineCh('=');

}

}

Console.WriteLine("Program is ending...");

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace LAB5

{

/// <summary>

/// управляющий блок

/// </summary>

class Facad

{

public Edit\_data link\_e;

public Select\_data link\_s;

public void go\_edit()

{

link\_e = new Edit\_data();

link\_e = null;

}

public void go\_select()

{

link\_s = new Select\_data();

link\_s = null;

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Data.OleDb;

using System.Threading.Tasks;

using System.Data;

using System.Data.SqlClient;

using System.Data.Common;

namespace LAB5

{

class Select\_data

{

public OleDbConnection Conn;

static void lineCh(char s)

{

for (int i = 0; i < 80; i++)

Console.Write(s);

Console.WriteLine();

}

public Select\_data()

{

//заполняем значения атрибутов

this.Conn = this.Conn = Program.Conn;

//действие

int i = 0;

//таблица

int j = 0;

//выбираем действие

{

bool key = true;

while (key)

{

key = false;

Console.WriteLine(" Выберите действие:");

Console.WriteLine(" 1 - select only");

Console.WriteLine(" 2 - select with where");

Console.Write(" № действия:");

i = Int32.Parse(Console.ReadLine());

if (i < 1 || i > 2)

{

Console.WriteLine(" Не верно, повторите ввод.");

key = true;

}

}

}

lineCh('-');

//выбираем таблицу

{

bool key = true;

while (key)

{

key = false;

Console.WriteLine(" Выберите таблицу:");

Console.WriteLine(" 1 - PUPIL");

Console.WriteLine(" 2 - CLASS");

Console.WriteLine(" 3 - TEACHER");

Console.WriteLine(" 4 - CABINET");

Console.WriteLine(" 5 - DAY\_LIST");

Console.WriteLine(" 6 - THING");

Console.Write(" № таблицы:");

j = Int32.Parse(Console.ReadLine());

if (j < 1 || j > 6)

{

Console.WriteLine(" Не верно, повторите ввод.");

key = true;

}

}

}

//вызываем действие, предаем знание о № таблицы

lineCh('\_');

switch (i)

{

case 1: selectOnly(j); break;

case 2: selectWhere(j); break;

}

}

public void selectOnly(int i)

{

try

{

Conn.Open();

//Console.WriteLine(new string('-',40));

// Console.WriteLine(Conn.State);

}

catch (Exception ex)

{

Console.WriteLine(ex.Message);

}

finally

{

DataSet ds = new DataSet();

string commStr = "SELECT \* FROM "+

Program.Tables[i]+";";

OleDbDataAdapter adapter = new OleDbDataAdapter(commStr, Program.ConnStr);

adapter.MissingSchemaAction = System.Data.MissingSchemaAction.AddWithKey;

adapter.Fill(ds);

DataTable table = ds.Tables[0];

foreach (DataColumn column in table.Columns)

{

Console.Write("[" + column.ColumnName + "] ");

}

Console.WriteLine("\n"+new string('-',80));

foreach (DataRow row in table.Rows)

{

foreach (DataColumn column in table.Columns)

{

Console.Write("[" + row[column]+"] ");

}

Console.WriteLine();

}

//------------------------------------

Conn.Close();

//Console.WriteLine(Conn.State);

}

}

public void selectWhere(int i)

{

try

{

Conn.Open();

//Console.WriteLine(new string('-',40));

// Console.WriteLine(Conn.State);

}

catch (Exception ex)

{

Console.WriteLine(ex.Message);

}

finally

{

DataSet ds = new DataSet();

string commStr = "SELECT \* FROM " +

Program.Tables[i] + ";";

OleDbDataAdapter adapter = new OleDbDataAdapter(commStr, Program.ConnStr);

adapter.MissingSchemaAction = System.Data.MissingSchemaAction.AddWithKey;

adapter.Fill(ds);

DataTable table = ds.Tables[0];

foreach (DataColumn column in table.Columns)

{

Console.Write("[" + column.ColumnName + "] ");

}

Console.WriteLine("\n" + new string('-', 80));

Console.Write(" Введите условие: where ");

string where = Console.ReadLine();

DataRow[] findrows = table.Select(where);

Console.WriteLine("" + new string('-', 80));

foreach (DataRow row in findrows)

{

foreach (DataColumn column in table.Columns)

{

Console.Write("[" + row[column] + "] ");

}

Console.WriteLine();

}

//------------------------------------

Conn.Close();

//Console.WriteLine(Conn.State);

}

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Data;

using System.Data.SqlClient;

using System.Data.OleDb;

using System.Data.Common;

namespace LAB5

{

class Program

{

public static OleDbConnection Conn;

public static string ConnStr = @"Provider=Microsoft.Jet.OLEDB.4.0;Data Source='C:\Users\dimay\Desktop\с#\_5\База данных11.mdb';";

public static List<string> Tables = new List<string>(){

"PUPIL",

"CLASS",

"TEACHER",

"CABINET",

"DAY\_LIST",

"THING"

};

static void lineCh(char s)

{

for (int i = 0; i < 80; i++)

Console.Write(s);

Console.WriteLine();

}

public static DataSet1 data\_set;

public static void Fill()

{

Program.data\_set = new DataSet1();

DataSet1TableAdapters.TableAdapterManager adapters = new DataSet1TableAdapters.TableAdapterManager();

//заполняем константы

for (int i = 0; i < 6; i++)

switch (i)

{

case 1:

DataSet1TableAdapters.PUPILTableAdapter ad = new DataSet1TableAdapters.PUPILTableAdapter();

ad.Fill(Program.data\_set.PUPIL);

break;

case 2:

DataSet1TableAdapters.CLASSTableAdapter c = new DataSet1TableAdapters.CLASSTableAdapter();

c.Fill(Program.data\_set.CLASS);

break;

case 3:

DataSet1TableAdapters.TEACHERTableAdapter a1 = new DataSet1TableAdapters.TEACHERTableAdapter();

a1.Fill(Program.data\_set.TEACHER);

break;

case 4:

DataSet1TableAdapters.CABINETTableAdapter a2 = new DataSet1TableAdapters.CABINETTableAdapter();

a2.Fill(Program.data\_set.CABINET);

break;

case 5:

DataSet1TableAdapters.DAY\_LISTTableAdapter a3 = new DataSet1TableAdapters.DAY\_LISTTableAdapter();

a3.Fill(Program.data\_set.DAY\_LIST);

break;

case 6:

DataSet1TableAdapters.THINGTableAdapter a4 = new DataSet1TableAdapters.THINGTableAdapter();

a4.Fill(Program.data\_set.THING);

break;

}

}

public static void Update(DataSet1 dataset)

{

DataSet1TableAdapters.TableAdapterManager adapters = new DataSet1TableAdapters.TableAdapterManager();

//заполняем константы

adapters.UpdateAll(dataset);

}

static void Main(string[] args)

{

Program.Conn = new OleDbConnection(Program.ConnStr);

Program.Fill();

Console.WriteLine("lab\_5 Yarcev");

lineCh('=');

//управляющий алгоритм

{

Facad link\_f = new Facad();

int i = 0;

bool key = true;

while (key)

{

bool key\_input = true;

while (key\_input)

{

key\_input = false;

Console.WriteLine(" Выберите действие:");

Console.WriteLine(" 1 - edit\_table");

Console.WriteLine(" 2 - select\_table");

Console.WriteLine(" 3 - exit");

Console.Write(" № действия:");

i = Int32.Parse(Console.ReadLine());

if (i < 1 || i > 4)

{

Console.WriteLine(" Не верно, повторите ввод.");

key\_input = true;

}

}

lineCh('-');

switch (i)

{

case 1: link\_f.go\_edit(); break;

case 2: link\_f.go\_select(); break;

case 3: key = false; break;

}

lineCh('=');

}

}

Console.WriteLine("Program is ending...");

Console.ReadLine();

}

}

}

# **Вивод:**

Ця технологія доволі сильно пришвидшує написання программ для роботи з базами даних.