ФЕДЕРАЛЬНОЕ АГЕНТСТВО ОБРАЗОВАНИЯ

ДИМИТРОВГРАДСКИЙ ИНСТИТУТ ТЕХНОЛОГИЙ,

УПРАВЛЕНИЯ И ДИЗАЙНА

Лабораторная работа №3
По курсу: "Базы данных"
Вариант №5

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Содержание

Задание

Цель работы: познакомиться с СУБД INTERBASE 7.0.
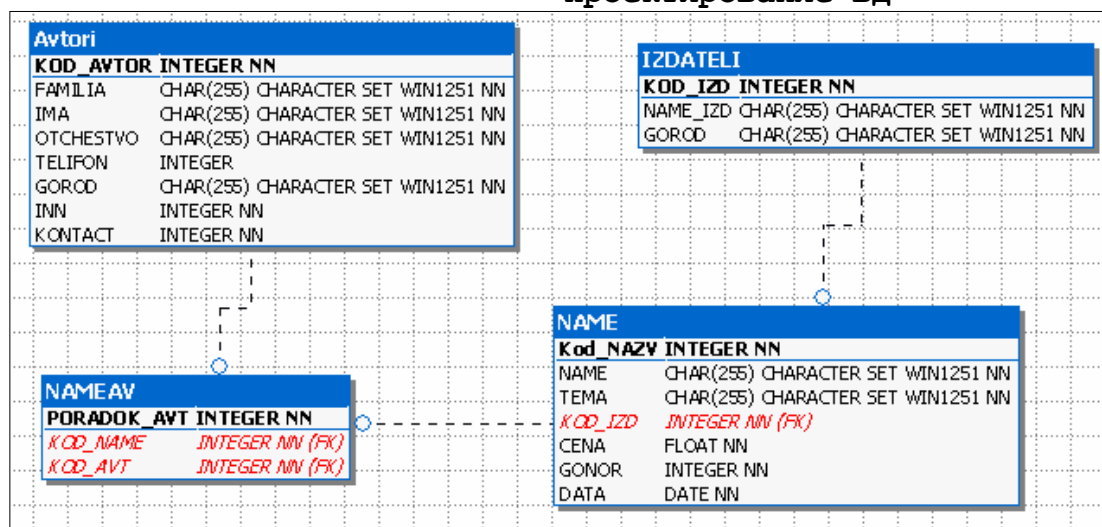
Задание:

Установить и настроить СУБД INTERBASE 7.0.

Создать базу данных, содержащую оговоренные данные. БД должна находиться минимум в третьей нормальной форме. Физическое расположение таблиц БД – строго оговоренный рабочий каталог. Спроектировать приложение при помощи Delphi или Builder, которое позволит выводить БД на экран в читаемом виде, добавление новых записей в таблицы, редактирование и удаление с помощью SQL-запросов. Реализовать возможность вывода любой таблицы на печать при помощи стандартных компонентов - отчетов.

При помощи SQL запросов реализовать выборку данных из таблиц по нескольким полям (на выбор), также реализовать сортировку данных при помощи SQL-запросов по возрастанию и убыванию по нескольким полям (на выбор).

После выполнения работы необходимо предоставить отчет, в котором должен быть описан порядок выполнения работы с пояснениями.

Проектирование БД

Создание таблиц в СУБД INTERBASE 7.0.

```
DROP TABLE NAMEAV;
DROP TABLE NAME;
DROP TABLE Avtori;
DROP TABLE IZDATELI;
CREATE TABLE Avtori
(
        KOD_AVTOR           INTEGER NOT NULL,
        FAMILIA             CHAR(255) CHARACTER SET WIN1251 NOT NULL,
        IMA                 CHAR(255) CHARACTER SET WIN1251 NOT NULL,
        OTCHESTVO           CHAR(255) CHARACTER SET WIN1251 NOT NULL,
        TELIFON             INTEGER,
        GOROD               CHAR(255) CHARACTER SET WIN1251 NOT NULL,
        INN                 INTEGER NOT NULL,
        KONTACT             INTEGER NOT NULL
);
ALTER TABLE Avtori
        ADD CONSTRAINT PK_1 PRIMARY KEY (KOD_AVTOR);
CREATE TABLE IZDATELI
(
        KOD_IZD             INTEGER NOT NULL,
        NAME_IZD            CHAR(255) CHARACTER SET WIN1251 NOT NULL,
        GOROD               CHAR(255) CHARACTER SET WIN1251 NOT NULL
);
ALTER TABLE IZDATELI
        ADD CONSTRAINT PK_4 PRIMARY KEY (KOD_IZD);
CREATE TABLE NAME
(
        Kod_NAZV            INTEGER NOT NULL,
        NAME                CHAR(255) CHARACTER SET WIN1251 NOT NULL,
        TEMA                CHAR(255) CHARACTER SET WIN1251 NOT NULL,
        KOD_IZD             INTEGER NOT NULL,
        CENA                FLOAT NOT NULL,
        GONOR               INTEGER NOT NULL,
        DATA                DATE NOT NULL
);
ALTER TABLE NAME
        ADD CONSTRAINT PK_2 PRIMARY KEY (Kod_NAZV);
ALTER TABLE NAME ADD CONSTRAINT FK_1
```

```
        FOREIGN KEY (KOD_IZD) REFERENCES IZDATELI;
CREATE TABLE NAMEAV
(
        PORADOK_AVT          INTEGER NOT NULL,
        KOD_NAME             INTEGER NOT NULL,
        KOD_AVT              INTEGER NOT NULL
);
ALTER TABLE NAMEAV
        ADD CONSTRAINT PK_3 PRIMARY KEY (PORADOK_AVT);
ALTER TABLE NAMEAV ADD CONSTRAINT FK_2
        FOREIGN KEY (KOD_AVT) REFERENCES Avtori;
ALTER TABLE NAMEAV ADD CONSTRAINT FK_3
        FOREIGN KEY (KOD_NAME) REFERENCES NAME;
CREATE PROCEDURE GET_KOD_AVT
RETURNS (I INTEGER)
AS
BEGIN
 SELECT max(KOD_AVTOR) FROM AVTORI INTO :I;
 SUSPEND;
END
CREATE PROCEDURE GET_KOD_IZD
RETURNS (I INTEGER)
AS
BEGIN
 SELECT max(KOD_IZD) FROM IZDATELI INTO :I;
 SUSPEND;
END
CREATE PROCEDURE GET_KOD_NAME
RETURNS (I INTEGER)
AS
BEGIN
 SELECT max(KOD_NAZV) FROM NAME INTO :I;
 SUSPEND;
END
CREATE PROCEDURE GET_KOD_AV
RETURNS (I INTEGER)
AS
BEGIN
 SELECT max(PORADOK_AVT) FROM NAMEAV INTO :I;
 SUSPEND;
END
```

Реализация алгоритма на DELPHI

```
UNIT UNIT1;

INTERFACE

USES
  WINDOWS, MESSAGES, SYSUTILS, VARIANTS, CLASSES, GRAPHICS, CONTROLS, FORMS,
  DIALOGS, COMCTRLS, DB, ADODB, STDCTRLS, GRIDS, DBGRIDS, FRXCLASS,
  FRXDBSET, IBQUERY, IBCUSTOMDATASET, IBTABLE, IBDATABASE, IBSTOREDPROC;

TYPE
  TFORM1 = CLASS(TFORM)
    GROUPBOX1: TGROUPBOX;
    PAGECONTROL1: TPAGECONTROL;
    TABSHEET1: TTABSHEET;
    TABSHEET2: TTABSHEET;
    TABSHEET3: TTABSHEET;
    DBGRID1: TDBGRID;
    LABEL1: TLABEL;
    LABEL2: TLABEL;
    DBGRID2: TDBGRID;
    DBGRID3: TDBGRID;
    DBGRID4: TDBGRID;
    LABEL3: TLABEL;
    LABEL4: TLABEL;
    BUTTON2: TBUTTON;
    LABEL5: TLABEL;
    EDIT1: TEDIT;
    BUTTON5: TBUTTON;
    PAGECONTROL2: TPAGECONTROL;
    TABSHEET4: TTABSHEET;
    TABSHEET5: TTABSHEET;
    TABSHEET6: TTABSHEET;
    TABSHEET7: TTABSHEET;
    DATASOURCE1: TDATASOURCE;
    DATASOURCE2: TDATASOURCE;
    DATASOURCE3: TDATASOURCE;
    DATASOURCE4: TDATASOURCE;
    FRXDBDATASET1: TFRXDBDATASET;
    LABEL6: TLABEL;
    EDIT2: TEDIT;
    LABEL7: TLABEL;
    LABEL8: TLABEL;
    LABEL9: TLABEL;
    LABEL10: TLABEL;
    LABEL11: TLABEL;
    LABEL12: TLABEL;
    BUTTON1: TBUTTON;
    COMBOBOX1: TCOMBOBOX;
    EDIT3: TEDIT;
    EDIT4: TEDIT;
    EDIT5: TEDIT;
    EDIT6: TEDIT;
    EDIT7: TEDIT;
```

```
      LABEL13: TLABEL;
      COMBOBOX2: TCOMBOBOX;
      BUTTON3: TBUTTON;
      LABEL14: TLABEL;
      EDIT8: TEDIT;
      LABEL15: TLABEL;
      EDIT9: TEDIT;
      BUTTON4: TBUTTON;
      LABEL16: TLABEL;
      COMBOBOX3: TCOMBOBOX;
      BUTTON6: TBUTTON;
      LABEL17: TLABEL;
      LABEL18: TLABEL;
      LABEL19: TLABEL;
      LABEL20: TLABEL;
      LABEL21: TLABEL;
      LABEL22: TLABEL;
      COMBOBOX4: TCOMBOBOX;
      EDIT10: TEDIT;
      EDIT11: TEDIT;
      EDIT12: TEDIT;
      EDIT13: TEDIT;
      EDIT14: TEDIT;
      BUTTON7: TBUTTON;
      LABEL23: TLABEL;
      COMBOBOX5: TCOMBOBOX;
      BUTTON8: TBUTTON;
      LABEL24: TLABEL;
      LABEL25: TLABEL;
      COMBOBOX6: TCOMBOBOX;
      COMBOBOX7: TCOMBOBOX;
      BUTTON9: TBUTTON;
      TABSHEET8: TTABSHEET;
      DBGRID5: TDBGRID;
      DBGRID6: TDBGRID;
      DBGRID7: TDBGRID;
      DBGRID8: TDBGRID;
      LABEL26: TLABEL;
      LABEL27: TLABEL;
      LABEL28: TLABEL;
      LABEL29: TLABEL;
      DATASOURCE5: TDATASOURCE;
      DATASOURCE6: TDATASOURCE;
      DATASOURCE7: TDATASOURCE;
      DATASOURCE8: TDATASOURCE;
      IBDATABASE1: TIBDATABASE;
      IBTRANSACTION1: TIBTRANSACTION;
      IBTABLE1: TIBTABLE;
      IBTABLE2: TIBTABLE;
      IBTABLE3: TIBTABLE;
      IBTABLE4: TIBTABLE;
      IBQUERY1: TIBQUERY;
      IBTABLE5: TIBTABLE;
      IBTABLE6: TIBTABLE;
      IBTABLE7: TIBTABLE;
      IBTABLE8: TIBTABLE;
      IBQUERY2: TIBQUERY;
      IBQUERY3: TIBQUERY;
      IBQUERY4: TIBQUERY;
      IBQUERY5: TIBQUERY;
      IBQUERY6: TIBQUERY;
      IBSTOREDPROC1: TIBSTOREDPROC;
      FRXREPORT1: TFRXREPORT;
      PROCEDURE BUTTON5CLICK(SENDER: TOBJECT);
      PROCEDURE BUTTON2CLICK(SENDER: TOBJECT);
      PROCEDURE BUTTON1CLICK(SENDER: TOBJECT);
      PROCEDURE BUTTON3CLICK(SENDER: TOBJECT);
      PROCEDURE COMBOBOX2ENTER(SENDER: TOBJECT);
      PROCEDURE BUTTON4CLICK(SENDER: TOBJECT);
      PROCEDURE COMBOBOX3ENTER(SENDER: TOBJECT);
      PROCEDURE BUTTON6CLICK(SENDER: TOBJECT);
      PROCEDURE COMBOBOX4ENTER(SENDER: TOBJECT);
      PROCEDURE COMBOBOX5ENTER(SENDER: TOBJECT);
      PROCEDURE BUTTON7CLICK(SENDER: TOBJECT);
      PROCEDURE BUTTON8CLICK(SENDER: TOBJECT);
      PROCEDURE BUTTON9CLICK(SENDER: TOBJECT);
      PROCEDURE COMBOBOX6ENTER(SENDER: TOBJECT);
      PROCEDURE COMBOBOX7ENTER(SENDER: TOBJECT);
      PROCEDURE FORMCREATE(SENDER: TOBJECT);
    PUBLIC
      PROCEDURE COMBO(Q: TIBQUERY;C: TCOMBOBOX; S: ANSISTRING;S1: ANSISTRING);
      PROCEDURE REFRESH;
      FUNCTION  SQL(S: ANSISTRING; S1: ANSISTRING): INTEGER;
    END;

VAR
  FORM1: TFORM1;

IMPLEMENTATION

{$R *.DFM}
///////////////////////OBNOVLENIE/////////////////////////////////////////////
PROCEDURE TFORM1.REFRESH;
BEGIN
  FORM1.IBTABLE1.ACTIVE:=FALSE;
  FORM1.IBTABLE2.ACTIVE:=FALSE;
  FORM1.IBTABLE3.ACTIVE:=FALSE;
  FORM1.IBTABLE4.ACTIVE:=FALSE;
  FORM1.IBTABLE5.ACTIVE:=FALSE;
  FORM1.IBTABLE6.ACTIVE:=FALSE;
  FORM1.IBTABLE7.ACTIVE:=FALSE;
  FORM1.IBTABLE8.ACTIVE:=FALSE;
  FORM1.IBTABLE1.ACTIVE:=TRUE;
  FORM1.IBTABLE2.ACTIVE:=TRUE;
  FORM1.IBTABLE3.ACTIVE:=TRUE;
  FORM1.IBTABLE4.ACTIVE:=TRUE;
  FORM1.IBTABLE5.ACTIVE:=TRUE;
  FORM1.IBTABLE6.ACTIVE:=TRUE;
  FORM1.IBTABLE7.ACTIVE:=TRUE;
  FORM1.IBTABLE8.ACTIVE:=TRUE;
END;
/////////////////////////////////////////////////////////////////////////////
```

```
FUNCTION TFORM1.SQL(S: ANSISTRING;S1: ANSISTRING): INTEGER;
BEGIN
  FORM1.IBQUERY3.SQL.CLEAR;
  FORM1.IBQUERY3.SQL.ADD('SELECT * FROM '+S);
  FORM1.IBQUERY3.ACTIVE:=FALSE;
  FORM1.IBQUERY3.ACTIVE:=TRUE;
  IF FORM1.IBQUERY3.RECORDCOUNT=0 THEN SQL:=1
    ELSE
      BEGIN
        FORM1.IBSTOREDPROC1.STOREDPROCNAME:=S1;
        FORM1.IBSTOREDPROC1.PARAMS.CLEAR;
        FORM1.IBSTOREDPROC1.PARAMS.ADD;
        FORM1.IBSTOREDPROC1.PARAMS[0].DATATYPE:=FTINTEGER;
        FORM1.IBSTOREDPROC1.PARAMS[0].PARAMTYPE:=PTOUTPUT;
        FORM1.IBSTOREDPROC1.EXECPROC;
        SQL:=FORM1.IBSTOREDPROC1.PARAMS[0].VALUE+1;
      END;
END;
/////////////////////////////////////////////////////////////////////////////
////////////////SOEDINENIE S BD//////////////////////////////////////////////
/////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.BUTTON5CLICK(SENDER: TOBJECT);
BEGIN
TRY
 IF EDIT1.TEXT='' THEN EXIT;
 FORM1.IBDATABASE1.CONNECTED:=FALSE;
 FORM1.IBTRANSACTION1.ACTIVE:=FALSE;
 FORM1.IBDATABASE1.DATABASENAME:=EDIT1.TEXT;
 FORM1.IBDATABASE1.PARAMS.ADD('USER_NAME=SYSDBA');
 FORM1.IBDATABASE1.PARAMS.ADD('PASSWORD=MASTERKEY');
 FORM1.IBDATABASE1.LOGINPROMPT:=FALSE;
 FORM1.IBDATABASE1.CONNECTED:=TRUE;
 FORM1.IBTRANSACTION1.ACTIVE:=TRUE;
 FORM1.IBTABLE1.TABLENAME:='NAMEAV';
 FORM1.IBTABLE2.TABLENAME:='AVTORI';
 FORM1.IBTABLE3.TABLENAME:='NAME';
 FORM1.IBTABLE4.TABLENAME:='IZDATELI';
 FORM1.IBTABLE5.TABLENAME:='AVTORI';
 FORM1.IBTABLE6.TABLENAME:='IZDATELI';
 FORM1.IBTABLE7.TABLENAME:='NAME';
 FORM1.IBTABLE8.TABLENAME:='NAMEAV';
 TRY
  FORM1.IBTABLE1.ACTIVE:=TRUE;
  FORM1.IBTABLE2.ACTIVE:=TRUE;
  FORM1.IBTABLE3.ACTIVE:=TRUE;
  FORM1.IBTABLE4.ACTIVE:=TRUE;
  FORM1.IBTABLE5.ACTIVE:=TRUE;
  FORM1.IBTABLE6.ACTIVE:=TRUE;
  FORM1.IBTABLE7.ACTIVE:=TRUE;
  FORM1.IBTABLE8.ACTIVE:=TRUE;
  ///////////////////////////
  BUTTON1.ENABLED:=TRUE;
  BUTTON2.ENABLED:=TRUE;
  BUTTON3.ENABLED:=TRUE;
  BUTTON4.ENABLED:=TRUE;
  BUTTON6.ENABLED:=TRUE;
  BUTTON7.ENABLED:=TRUE;
  BUTTON8.ENABLED:=TRUE;
  BUTTON9.ENABLED:=TRUE;
  COMBOBOX1.ENABLED:=TRUE;
  COMBOBOX2.ENABLED:=TRUE;
  COMBOBOX3.ENABLED:=TRUE;
  COMBOBOX4.ENABLED:=TRUE;
  COMBOBOX5.ENABLED:=TRUE;
  COMBOBOX6.ENABLED:=TRUE;
  COMBOBOX7.ENABLED:=TRUE;
 EXCEPT END;
EXCEPT
  SHOWMESSAGE('NE MOGU SOEDINITSA S BD!');
  BUTTON1.ENABLED:=FALSE;
  BUTTON2.ENABLED:=FALSE;
  BUTTON3.ENABLED:=FALSE;
  BUTTON4.ENABLED:=FALSE;
  BUTTON6.ENABLED:=FALSE;
  BUTTON7.ENABLED:=FALSE;
  BUTTON8.ENABLED:=FALSE;
  BUTTON9.ENABLED:=FALSE;
  COMBOBOX1.ENABLED:=FALSE;
  COMBOBOX2.ENABLED:=FALSE;
  COMBOBOX3.ENABLED:=FALSE;
  COMBOBOX4.ENABLED:=FALSE;
  COMBOBOX5.ENABLED:=FALSE;
  COMBOBOX6.ENABLED:=FALSE;
  COMBOBOX7.ENABLED:=FALSE;
END;
END;
////////////////////////////////OTCHET////////////////////////////////////////
PROCEDURE TFORM1.BUTTON2CLICK(SENDER: TOBJECT);
BEGIN
 FORM1.IBTRANSACTION1.COMMIT;
 FORM1.FRXREPORT1.LOADFROMFILE('O1.FR3',TRUE);
 FORM1.FRXREPORT1.SHOWREPORT(TRUE);
END;
/////////////////////////////////////////////////////////////////////////////
////////////////DOBAVLENIE AVTOROV////////////////////////////////////////////
/////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.BUTTON1CLICK(SENDER: TOBJECT);
VAR I:INTEGER;
BEGIN
  IF (EDIT2.TEXT='')OR(EDIT3.TEXT='')OR(EDIT4.TEXT='')OR(EDIT5.TEXT='')
   OR(EDIT6.TEXT='')OR(EDIT7.TEXT='')OR(COMBOBOX1.TEXT='')
    THEN EXIT;
  FORM1.IBQUERY2.PARAMS[0].VALUE:=FORM1.SQL('AVTORI','GET_KOD_AVT');
  FORM1.IBQUERY2.PARAMS[1].VALUE:=EDIT2.TEXT;
  FORM1.IBQUERY2.PARAMS[2].VALUE:=EDIT3.TEXT;
  FORM1.IBQUERY2.PARAMS[3].VALUE:=EDIT4.TEXT;
  FORM1.IBQUERY2.PARAMS[4].VALUE:=STRTOINT(EDIT5.TEXT);
  FORM1.IBQUERY2.PARAMS[5].VALUE:=EDIT6.TEXT;
  FORM1.IBQUERY2.PARAMS[6].VALUE:=STRTOINT(EDIT7.TEXT);
  FORM1.IBQUERY2.PARAMS[7].VALUE:=STRTOINT(COMBOBOX1.TEXT);
  FORM1.IBQUERY2.EXECSQL;
  ///////////////////////////
```

```
  SHOWMESSAGE('OK!');
  EDIT2.TEXT:='';
  EDIT3.TEXT:='';
  EDIT4.TEXT:='';
  EDIT5.TEXT:='';
  EDIT6.TEXT:='';
  EDIT7.TEXT:='';
  COMBOBOX1.TEXT:='';
  REFRESH;
END;
//////////////////////////////////////////////////////////////////////////////
//////////UDALENIE PO KODU AVTORA////////////////////////////////////////////
//////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.BUTTON3CLICK(SENDER: TOBJECT);
BEGIN
  IF COMBOBOX2.TEXT='' THEN EXIT;
  ////////////////UDALENIE V NAME////////////////////////////////////////////
  FORM1.IBQUERY3.SQL.CLEAR;
  FORM1.IBQUERY3.SQL.ADD('DELETE FROM NAME WHERE KOD_NAZV IN (SELECT KOD_NAME FROM NAMEAV WHERE KOD_AVT=:I1)');
  FORM1.IBQUERY3.PARAMS.CLEAR;
  FORM1.IBQUERY3.PARAMS.ADD;
  FORM1.IBQUERY3.PARAMS[0].DATATYPE:=FTINTEGER;
  FORM1.IBQUERY3.PARAMS[0].PARAMTYPE:=PTINPUT;
  FORM1.IBQUERY3.PARAMS[0].VALUE:=STRTOINT(FORM1.COMBOBOX2.TEXT);
  FORM1.IBQUERY3.EXECSQL;
  ////////////////UDALENIE V NAMEAVT//////////////////////////////////////////
  FORM1.IBQUERY3.SQL.CLEAR;
  FORM1.IBQUERY3.SQL.ADD('DELETE FROM NAMEAV WHERE KOD_AVT=:I1');
  FORM1.IBQUERY3.PARAMS.CLEAR;
  FORM1.IBQUERY3.PARAMS.ADD;
  FORM1.IBQUERY3.PARAMS[0].DATATYPE:=FTINTEGER;
  FORM1.IBQUERY3.PARAMS[0].PARAMTYPE:=PTINPUT;
  FORM1.IBQUERY3.PARAMS[0].VALUE:=STRTOINT(FORM1.COMBOBOX2.TEXT);
  FORM1.IBQUERY3.EXECSQL;
  ////////////////UDALENIE V AVTORI///////////////////////////////////////////
  FORM1.IBQUERY3.SQL.CLEAR;
  FORM1.IBQUERY3.SQL.ADD('DELETE FROM AVTORI WHERE KOD_AVTOR=:I1');
  FORM1.IBQUERY3.PARAMS.CLEAR;
  FORM1.IBQUERY3.PARAMS.ADD;
  FORM1.IBQUERY3.PARAMS[0].DATATYPE:=FTINTEGER;
  FORM1.IBQUERY3.PARAMS[0].PARAMTYPE:=PTINPUT;
  FORM1.IBQUERY3.PARAMS[0].VALUE:=STRTOINT(FORM1.COMBOBOX2.TEXT);
  FORM1.IBQUERY3.EXECSQL;
  /////////////////////////////
  SHOWMESSAGE('OK!');
  COMBOBOX2.TEXT:='';
  REFRESH;
END;
//////////////////DOPOLNITELNAA PROCEDURA/////////////////////////////////////
PROCEDURE TFORM1.COMBO(Q: TIBQUERY;C: TCOMBOBOX; S: ANSISTRING; S1: ANSISTRING);
BEGIN
  C.CLEAR();
  Q.ACTIVE:=FALSE;
  Q.SQL.CLEAR();
  Q.SQL.ADD(S);
  Q.ACTIVE:=TRUE;
  Q.FIRST();
  WHILE (Q.EOF=FALSE) DO
   BEGIN
     C.ITEMS.ADD(Q.FIELDBYNAME(S1).VALUE);
     Q.NEXT();
   END;
END;
//////////////////////////////////////////////////////////////////////////////
//////////AVTOMATICHESKOE ZAPOLNENIE POLEY COMBOBOX///////////////////////////
//////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.COMBOBOX2ENTER(SENDER: TOBJECT);
BEGIN
 FORM1.COMBO(FORM1.IBQUERY3,FORM1.COMBOBOX2,
               'SELECT KOD_AVTOR FROM AVTORI',
               'KOD_AVTOR');
END;
//////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.COMBOBOX3ENTER(SENDER: TOBJECT);
BEGIN
 FORM1.COMBO(FORM1.IBQUERY3,FORM1.COMBOBOX3,
               'SELECT KOD_IZD FROM IZDATELI',
               'KOD_IZD');
END;
//////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.COMBOBOX4ENTER(SENDER: TOBJECT);
BEGIN
 FORM1.COMBO(FORM1.IBQUERY3,FORM1.COMBOBOX4,
               'SELECT KOD_IZD FROM IZDATELI',
               'KOD_IZD');
END;
//////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.COMBOBOX5ENTER(SENDER: TOBJECT);
BEGIN
 FORM1.COMBO(FORM1.IBQUERY3,FORM1.COMBOBOX5,
               'SELECT KOD_NAZV FROM NAME',
               'KOD_NAZV');
END;
//////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.COMBOBOX6ENTER(SENDER: TOBJECT);
BEGIN
  FORM1.COMBO(FORM1.IBQUERY3,FORM1.COMBOBOX6,
               'SELECT KOD_AVTOR FROM AVTORI',
               'KOD_AVTOR');
END;
//////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.COMBOBOX7ENTER(SENDER: TOBJECT);
BEGIN
  FORM1.COMBO(FORM1.IBQUERY3,FORM1.COMBOBOX7,
               'SELECT KOD_NAZV FROM NAME',
               'KOD_NAZV');
END;
//////////////////////////////////////////////////////////////////////////////
/////////////////////////DOBAVLENIE IZDATELSTV////////////////////////////////
//////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.BUTTON4CLICK(SENDER: TOBJECT);
BEGIN
```

```
    IF (EDIT8.TEXT='')OR(EDIT9.TEXT='') THEN EXIT;
    FORM1.IBQUERY4.PARAMS[0].VALUE:=FORM1.SQL('IZDATELI','GET_KOD_IZD');
    FORM1.IBQUERY4.PARAMS[1].VALUE:=EDIT8.TEXT;
    FORM1.IBQUERY4.PARAMS[2].VALUE:=EDIT9.TEXT;
    FORM1.IBQUERY4.EXECSQL;
    /////////////////////////
    SHOWMESSAGE('OK!');
    EDIT8.TEXT:='';
    EDIT9.TEXT:='';
    REFRESH;
END;
////////////////////////////////////////////////////////////////////////////
/////////////////////////////UDALENIE IZDATELSTV//////////////////////////////
////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.BUTTON6CLICK(SENDER: TOBJECT);
BEGIN
    IF COMBOBOX3.TEXT='' THEN EXIT;
    ////////////////UDALENIE V NAMEAVT///////////////////////////////////////////
    FORM1.IBQUERY3.SQL.CLEAR;
    FORM1.IBQUERY3.SQL.ADD('DELETE FROM NAMEAV WHERE KOD_NAME IN (SELECT KOD_NAZV FROM NAME WHERE KOD_IZD=:I1)');
    FORM1.IBQUERY3.PARAMS.CLEAR;
    FORM1.IBQUERY3.PARAMS.ADD;
    FORM1.IBQUERY3.PARAMS[0].DATATYPE:=FTINTEGER;
    FORM1.IBQUERY3.PARAMS[0].PARAMTYPE:=PTINPUT;
    FORM1.IBQUERY3.PARAMS[0].VALUE:=STRTOINT(FORM1.COMBOBOX3.TEXT);
    FORM1.IBQUERY3.EXECSQL;
    ////////////////UDALENIE V NAME////////////////////////////////////////////
    FORM1.IBQUERY3.SQL.CLEAR;
    FORM1.IBQUERY3.SQL.ADD('DELETE FROM NAME WHERE KOD_IZD=:I1');
    FORM1.IBQUERY3.PARAMS.CLEAR;
    FORM1.IBQUERY3.PARAMS.ADD;
    FORM1.IBQUERY3.PARAMS[0].DATATYPE:=FTINTEGER;
    FORM1.IBQUERY3.PARAMS[0].PARAMTYPE:=PTINPUT;
    FORM1.IBQUERY3.PARAMS[0].VALUE:=STRTOINT(FORM1.COMBOBOX3.TEXT);
    FORM1.IBQUERY3.EXECSQL;
    //////////////UDALENIE V IZDATELI//////////////////////////////////////////
    FORM1.IBQUERY3.SQL.CLEAR;
    FORM1.IBQUERY3.SQL.ADD('DELETE FROM IZDATELI WHERE KOD_IZD=:I1');
    FORM1.IBQUERY3.PARAMS.CLEAR;
    FORM1.IBQUERY3.PARAMS.ADD;
    FORM1.IBQUERY3.PARAMS[0].DATATYPE:=FTINTEGER;
    FORM1.IBQUERY3.PARAMS[0].PARAMTYPE:=PTINPUT;
    FORM1.IBQUERY3.PARAMS[0].VALUE:=STRTOINT(FORM1.COMBOBOX3.TEXT);
    FORM1.IBQUERY3.EXECSQL;
    /////////////////////////
    SHOWMESSAGE('OK!');
    COMBOBOX3.TEXT:='';
    REFRESH;
END;
////////////////////////////////////////////////////////////////////////////
/////////////////////DOBAVLENIE NOVOI KNIGI///////////////////////////////////
////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.BUTTON7CLICK(SENDER: TOBJECT);
BEGIN
    IF (EDIT10.TEXT='')OR(EDIT11.TEXT='')OR(EDIT12.TEXT='')OR(EDIT13.TEXT='')
     OR(EDIT14.TEXT='')OR(COMBOBOX4.TEXT='')
      THEN EXIT;
    FORM1.IBQUERY5.PARAMS[0].VALUE:=FORM1.SQL('NAME','GET_KOD_NAME');
    FORM1.IBQUERY5.PARAMS[1].VALUE:=EDIT10.TEXT;
    FORM1.IBQUERY5.PARAMS[2].VALUE:=EDIT11.TEXT;
    FORM1.IBQUERY5.PARAMS[3].VALUE:=STRTOINT(COMBOBOX4.TEXT);
    FORM1.IBQUERY5.PARAMS[4].VALUE:=STRTOFLOAT(EDIT12.TEXT);
    FORM1.IBQUERY5.PARAMS[5].VALUE:=STRTOINT(EDIT13.TEXT);
    FORM1.IBQUERY5.PARAMS[6].VALUE:=STRTODATE(EDIT14.TEXT);
    FORM1.IBQUERY5.EXECSQL;
    /////////////////////////
    SHOWMESSAGE('OK!');
    EDIT10.TEXT:='';
    EDIT11.TEXT:='';
    EDIT12.TEXT:='';
    EDIT13.TEXT:='';
    EDIT6.TEXT:='';
    EDIT14.TEXT:='';
    COMBOBOX4.TEXT:='';
    REFRESH;
END;
////////////////////////////////////////////////////////////////////////////
/////////////////////////////UDALENIE KNIGI///////////////////////////////////
////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.BUTTON8CLICK(SENDER: TOBJECT);
BEGIN
    IF COMBOBOX5.TEXT='' THEN EXIT;
    ////////////////UDALENIE V NAMEAVT///////////////////////////////////////////
    FORM1.IBQUERY3.SQL.CLEAR;
    FORM1.IBQUERY3.SQL.ADD('DELETE FROM NAMEAV WHERE KOD_NAME=:I');
    FORM1.IBQUERY3.PARAMS.CLEAR;
    FORM1.IBQUERY3.PARAMS.ADD;
    FORM1.IBQUERY3.PARAMS[0].DATATYPE:=FTINTEGER;
    FORM1.IBQUERY3.PARAMS[0].PARAMTYPE:=PTINPUT;
    FORM1.IBQUERY3.PARAMS[0].VALUE:=STRTOINT(FORM1.COMBOBOX5.TEXT);
    FORM1.IBQUERY3.EXECSQL;
    //////////////UDALENIE V NAME/////////////////////////////////////////////
    FORM1.IBQUERY3.SQL.CLEAR;
    FORM1.IBQUERY3.SQL.ADD('DELETE FROM NAME WHERE KOD_NAZV=:I1');
    FORM1.IBQUERY3.PARAMS.CLEAR;
    FORM1.IBQUERY3.PARAMS.ADD;
    FORM1.IBQUERY3.PARAMS[0].DATATYPE:=FTINTEGER;
    FORM1.IBQUERY3.PARAMS[0].PARAMTYPE:=PTINPUT;
    FORM1.IBQUERY3.PARAMS[0].VALUE:=STRTOINT(FORM1.COMBOBOX5.TEXT);
    FORM1.IBQUERY3.EXECSQL;
    /////////////////////////
    SHOWMESSAGE('OK!');
    COMBOBOX5.TEXT:='';
    REFRESH;
END;
////////////////////////////////////////////////////////////////////////////
/////////////////////DOBAVLENIE NAMEAV////////////////////////////////////////
////////////////////////////////////////////////////////////////////////////
PROCEDURE TFORM1.BUTTON9CLICK(SENDER: TOBJECT);
BEGIN
    IF (COMBOBOX6.TEXT='')OR(COMBOBOX7.TEXT='') THEN EXIT;
    FORM1.IBQUERY6.PARAMS[0].VALUE:=FORM1.SQL('NAMEAV','GET_KOD_AV');
```

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  FORM1.IBQUERY6.PARAMS[1].VALUE:=STRTOINT(COMBOBOX6.TEXT);
  FORM1.IBQUERY6.PARAMS[2].VALUE:=STRTOINT(COMBOBOX7.TEXT);
  FORM1.IBQUERY6.EXECSQL;
  /////////////////////////
  SHOWMESSAGE('OK!');
  COMBOBOX6.TEXT:='';
  COMBOBOX7.TEXT:='';
  REFRESH;
END;
/////////////////////////END/////////////////////////////////////////////////
PROCEDURE TFORM1.FORMCREATE(SENDER: TOBJECT);
BEGIN
  FORM1.LEFT:=153;
  FORM1.TOP:=83;
  BUTTON1.ENABLED:=FALSE;
  BUTTON2.ENABLED:=FALSE;
  BUTTON3.ENABLED:=FALSE;
  BUTTON4.ENABLED:=FALSE;
  BUTTON6.ENABLED:=FALSE;
  BUTTON7.ENABLED:=FALSE;
  BUTTON8.ENABLED:=FALSE;
  BUTTON9.ENABLED:=FALSE;
  COMBOBOX1.ENABLED:=FALSE;
  COMBOBOX2.ENABLED:=FALSE;
  COMBOBOX3.ENABLED:=FALSE;
  COMBOBOX4.ENABLED:=FALSE;
  COMBOBOX5.ENABLED:=FALSE;
  COMBOBOX6.ENABLED:=FALSE;
  COMBOBOX7.ENABLED:=FALSE;
END;
END.
```