

:

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:

:

2014.

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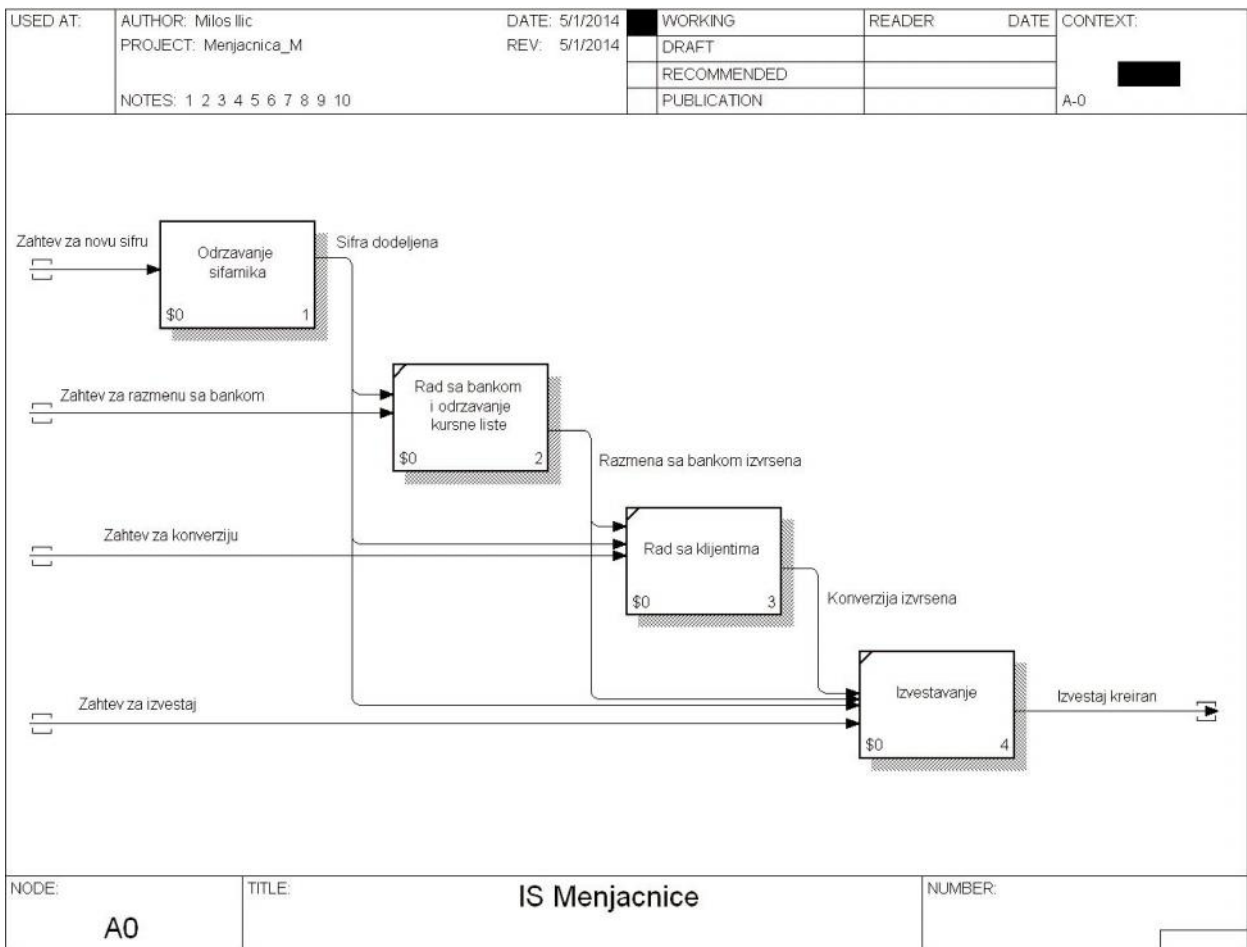
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2.

1:



NODE: A0	TITLE: IS Menjacnice	NUMBER:
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3.

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VALUTA_ID	VALUTA	OZNAKA_VALUTE
941	Srpski Dinar	RSD

APOEN_ID	VALUTA_ID	KOLICINA	OPIS_APOENA	IDENTIFIKACIJA	STAMPA_SERBROJA	AKTIVAN
61	978	10 10	eura	0	0	1

1 100 (jedinica_kursa_id),

JEDINICA_KURSA_ID	VALUTA_ID	KOLICINA	AKTIVNA
1	978	1	1

(drzava_id)

DRZAVA_ID	NAZIV_DRZAVE
1	Australija

(tip_transakcije_id)

TIP_TRANSAKCIJE_ID	OPIS_TRANSAKCIJE
1	kupovni

(banka_id)

BANKA_ID	NAZIV_BANKE
1	Vojvođanska banka

(vrsta_naloga_id)

VRSTA_NALOGA_ID	OPIS	KOEFICIJ...
1	Ulaz	1

(Kurs_id.)

KURS_ID	DATUM	JEDINICA_KURSA_ID	TIP_TRANSAKCIJE_ID	IZNOS	MARGINA
1	18-APR-14	1	1	115.166	115.366

Kupac id.

KUPAC_ID	PASOS_LK	DOKUMENT_ID	PREZIME	IME	DRZAVA_ID
3p		1234567890	Perić	Pera	2

NALOG_ID	RB_STAVKE	SERIJSKI_BROJ	APOEN_ID	RB_NOVCANICE
41	1	A123456789	102	1

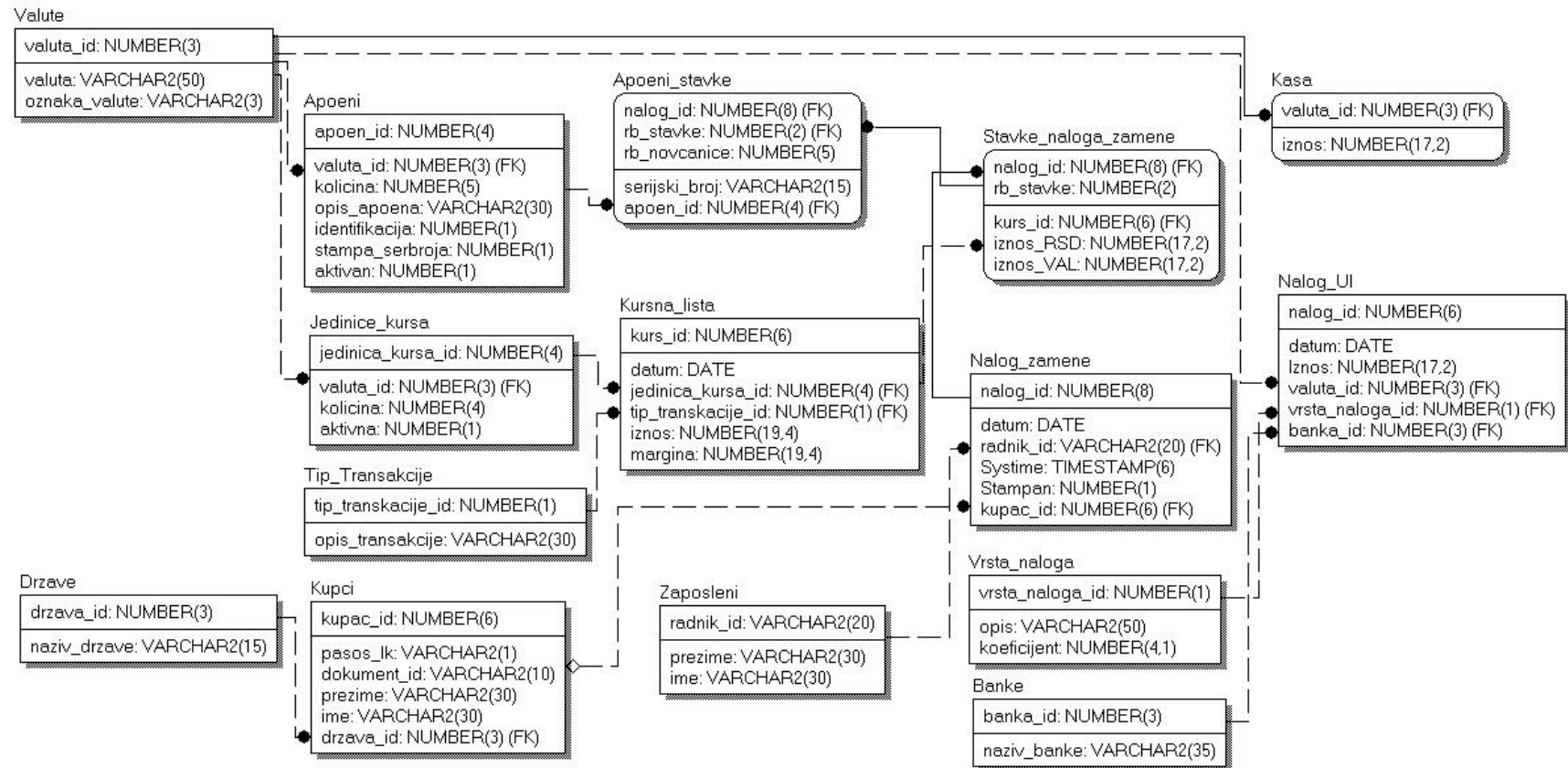
nalog id.

NALOG_ID	DATUM	RADNIK_ID	KUPAC_ID	SYSTIME	STAMPAN
42	27-APR-14	menjacnica	(null)	02-MAR-14 06.17.20.646570000 PM	0

: nalog_id rb_stavke.

NALOG_ID	RB_STAVKE	KURS_ID	IZNOS_RSD	IZNOS_VAL
61	1	4	2500	29.9

NALOG_ID	DATUM	IZNOS	VALUTA_ID	VRSTA_NALOGA_ID	BANKA_ID
1	05-MAY-14	4600	941	1	1



4.

() : racle DB Server 10g R2
Red Hat Enterprise Linux- 4 (: RHEL4) 32-
.NET Visual Studio - C#
windows .
Oracle
1521, RHEL4
, Windows ()
Oracle 12.1 instant client,
tnsnames.ora 3.
SQLDeveloper,
Microsoft Visual Studio 2010.

```
tnsnames.ora* x
# tnsnames.ora Network Configuration File
# Generated by Oracle configuration tools.

STUDENT =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.140.241)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = STUDENT)
    )
  )
)

EXTPROC_CONNECTION_DATA =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC1))
    )
    (CONNECT_DATA =
      (SID = PLSExtProc)
      (PRESENTATION = RO)
    )
  )
)
```

3 - tnsnames.ora

- #
- (VMWare) RHEL4 racle
3.

4.1.

(),

4

APOENISEKVENCA

apoen_id Apoeni.

: apoen_id, jedinica_kursa_id, kupac_id, kurs_id, nalog_id, rb_stavke :
, - , - , - , - ,
- - - . - - ,

```
CREATE SEQUENCE "MENJACNICA"."APOENISEKVENCA"  
MINVALUE 1 MAXVALUE 99999999999999999999999999999999  
INCREMENT BY 1 START WITH 1;
```

4 – menjacnica.apoenisekvenca

(stored procedures)

5

6 (:select seq_kursnalista.nextval into p_kurs_id from dual),
kupac_id e
seq_kupci,
kupac_id

```
create or replace procedure sp_insert_kursna_lista(  
p datum Kursna_lista.datum%type,  
p_jedinica_kursa_id jedinica_kursa.jedinica_kursa_id%type,  
p_tip_transakcije_id Kursna_lista.tip_transakcije_id%type,  
p_iznos Kursna_lista.iznos%type,  
p_margina Kursna_lista.margina%type,  
p_kurs_id out Kursna_lista.kurs_id%type)  
is  
begin  
select seq_kursnalista.nextval into p_kurs_id from dual;  
insert into Kursna_lista(kurs_id, datum, jedinica_kursa_id, tip_transakcije_id, iznos, margina)  
values ( p_kurs_id, p_datum, p_jedinica_kursa_id, p_tip_transakcije_id, p_iznos, p_margina);  
commit;  
EXCEPTION  
WHEN DUP_VAL_ON_INDEX THEN  
raise_application_error(-20205, 'Greška: dupli ključ!');  
WHEN OTHERS THEN  
raise_application_error(-20205, 'Greška u obradi!');  
end sp_insert_kursna_lista;
```

5 – sp_insert_kursna_lista

```

create or replace trigger trg_ins_kupci
before insert
on kupci
for each row
declare
    lp_kupac_id kupci.kupac_id%type;
begin
    select seq_kupci.nextval into lp_kupac_id from dual;
    :new.kupac_id := lp_kupac_id;
end;

```

```

create or replace procedure sp_insert_kupci(
    p_pasos_lk kupci.pasos_lk%type,
    p_dokument_id kupci.dokument_id%type,
    p_prezime kupci.prezime%type,
    p_ime kupci.ime%type,
    p_drzava_id kupci.drzava_id%type,
    p_kupac_id out kupci.kupac_id%type)
is
begin
    insert into Kupci(pasos lk, dokument id, prezime, ime, drzava id)
    values (p_pasos_lk, p_dokument_id, p_prezime, p_ime, p_drzava_id);

    select seq_kupci.currval into p_kupac_id from dual;

commit;
EXCEPTION
    WHEN DUP VAL ON INDEX THEN
        raise_application_error(-20205, 'Greška: dupli ključ!');
    WHEN OTHERS THEN
        raise_application_error(-20205, 'Greška u obradi!');
end sp_insert_kupci;

```

	6-	trg_ins_kupci	sp_insert_kupci	
	INSERT			5
6	INSERT	6	kupac_id	
		,		5
		,		
		.		
		.		(INSERT)
		.	(UPDATE), i	(DELETE)
	7 8			

```

create or replace procedure sp_update_valute (
  p_valuta_id valute.valuta_id%TYPE,
  p_valuta VALUTE.VALUTA%type,
  p_oznaka valute VALUTE.OZNAKA VALUTE%TYPE)
is
begin
  update valute
  set valuta = p_valuta,
      oznaka_valute=p_oznaka_valute
  where valuta_id=p_valuta_id;
  commit;
EXCEPTION
  WHEN DUP_VAL_ON_INDEX THEN
    raise_application_error(-20205, 'Greška: dupli ključ!');
  WHEN OTHERS THEN
    raise_application_error(-20205, 'Greška u obradi!');
end sp_update_valute;

```

7 - sp_update_valute

```

create or replace procedure sp_delete_stavku_naloga_zamene (
p_nalog_id Stavke_Naloga_Zamene.nalog_id%type,
p_rb_stavke Stavke_Naloga_Zamene.rb_stavke%type)
is
begin
  delete from stavke_naloga_zamene
  where rb_stavke=p_rb_stavke AND nalog_id = p_nalog_id;
  update stavke_naloga_zamene
  set rb_stavke = rb_stavke-1
  where nalog_id = p_nalog_id AND rb_stavke > p_rb_stavke;
  commit;
EXCEPTION
  WHEN DUP_VAL_ON_INDEX THEN
  begin
    raise_application_error(-20205, 'Greška: dupli ključ!');
    rollback;
  END;
  WHEN OTHERS THEN
  BEGIN
    raise_application_error(-20205, 'Greška u obradi!');
    rollback;
  END;
end sp_delete_stavku_naloga_zamene;

```

8 - sp_delete_stavku_naloga_zamene

(packages).

9.
(Package body).

```

create or replace package pkg_queries
as
type t_cursor is REF CURSOR;
procedure sp_get_valute (p_valute_set out t_cursor);
procedure sp_get_valuta (p_valuta_id in VALUTE.VALUTA_ID%type, p_valuta_set out t_cursor);
procedure sp_get_kupci (p_kupac_id in kupci.kupac_id%type, p_prezime in KUPCI.PREZIME%type,
p_dokument_id in KUPCI.DOKUMENT_ID%type, p_kupci_set out t_cursor);
procedure sp_get_apoeni (p_apoen_id in apoeni.apoen_id%type, p_valuta_id in Valute.valuta_id%type,
p_kolicina in Apoeni.kolicina%type, p_apoeni_set out t_cursor);

procedure sp_get_kupci (p_kupac_id in kupci.kupac_id%type, p_prezime in KUPCI.PREZIME%type,
p_dokument_id in KUPCI.DOKUMENT_ID%type, p_kupci_set out t_cursor)
as
begin
open p_kupci_set for
select k.*, d.NAZIV_DRZAVE, case when k.pasos_lk = 'p' then 'pasos' else 'licna' end as pasos_licna
from kupci k inner join drzave d on k.DRZAVA_ID = d.drzava_id
where (p_dokument_id is NULL OR k.dokument_id like p_dokument_id || '%') AND
(p_prezime is NULL OR k.prezime like p_prezime || '%') AND
(p_kupac_id is NULL OR k.kupac_id = p_kupac_id);
end sp_get_kupci;

```

9: pkg_queries Package Body sp_get_kupci

```

INSERT, UPDATE DELETE.
(
(
100 , ( 100
10 10000
trgStavkeInsert
(insert)

```

4.2.

```

(
(print preview)

```

4.2.1

SQL
System.Data.OracleClient.

```
using System.Data.OracleClient;
```

OracleConnection, OracleCommand OracleDataAdapter.


```

create or replace TRIGGER trgStavkeInsert
BEFORE INSERT
  ON STAVKE_NALOGA_ZAMENE
  FOR EACH ROW
DECLARE
  lTipTr NUMBER;
  lValuta_id NUMBER;
  lIznosRSD NUMBER;
  lIznosVAL NUMBER;
BEGIN
  SELECT kl.tip_transakcije_id, jk.valuta_id into lTipTr, lValuta_id
  FROM kursna_lista kl, jedinice_kursa jk
  WHERE kl.jedinica_kursa_id = jk.jedinica_kursa_id AND
        kl.kurs_id = :new.kurs_id;

  SELECT iznos into lIznosRSD
  FROM kasa
  WHERE valuta_id = 941;

  SELECT iznos into lIznosVAL
  FROM kasa
  WHERE valuta_id = lValuta_id;

  if lTipTr = 1 then --kupovina - RSD se smanjuju, VAL se povecava
    if lIznosRSD >= :new.iznos_RSD then
      UPDATE kasa SET iznos = iznos - :new.iznos_RSD WHERE valuta_id = 941;
      UPDATE kasa SET iznos = iznos + :new.iznos_VAL WHERE valuta_id = lValuta_id;
    else
      raise_application_error(-20205, 'Nema dovoljno Dinara za kupovinu deviza!');
    end if;
  else -- prodaja - smanjuju se devize a povecavaju dinari
    if lIznosVAL >= :new.iznos_VAL then
      UPDATE kasa SET iznos = iznos + :new.iznos_RSD WHERE valuta_id = 941;
      UPDATE kasa SET iznos = iznos - :new.iznos_VAL WHERE valuta_id = lValuta_id;
    else
      raise_application_error(-20205, 'Nema dovoljno Deviza za prodaju!');
    end if;
  end if ;
END;

```

10 - trgStavkeInsert

Oracleconnection

DB

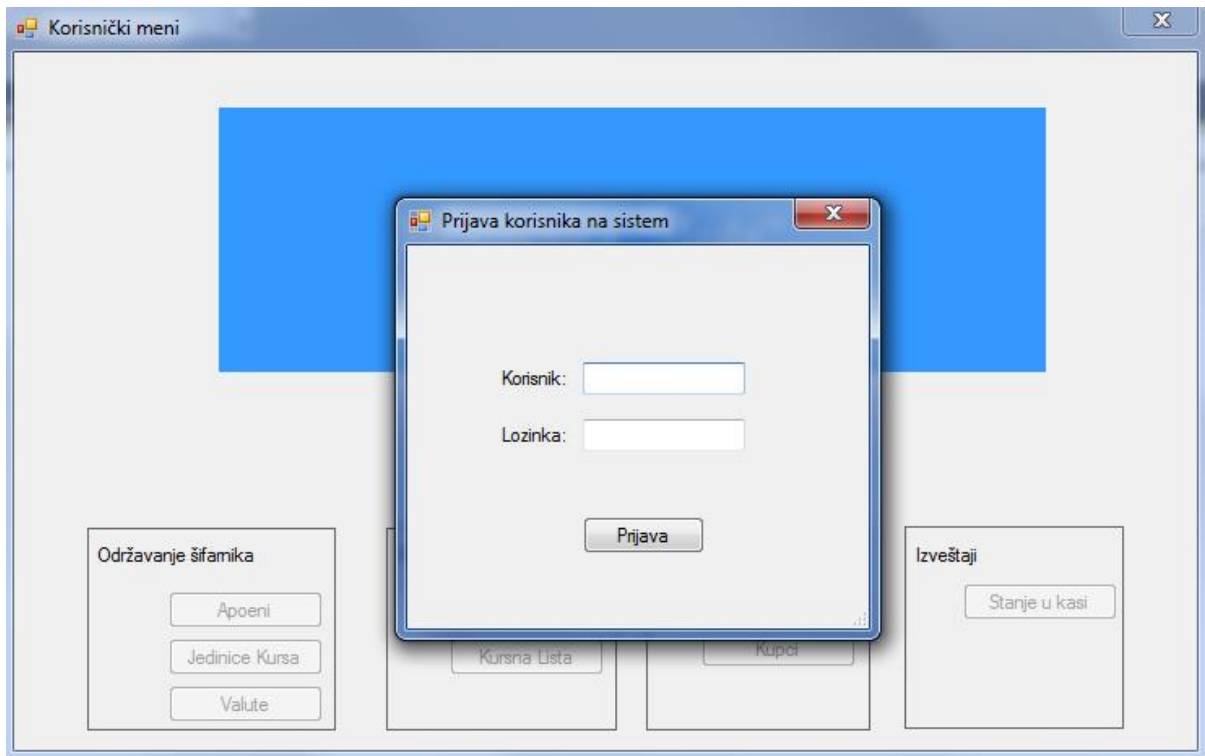
ConnectionString, username password.

ConnectionString

, 11

12

ConnectionString.



11 –

```
private void Prijava_Click(object sender, EventArgs e)
{
    OracleConnection conn = new OracleConnection();
    strConnection = "Data Source=STUDENT;Persist Security Info=True;User ID="
        + txtusername.Text + ";Password=" + txtpassword.Text + ";Unicode=True";
    conn.ConnectionString = strConnection;
    try
    {
        conn.Open();
        conn.Close();
        bConnSuccess = true;
        this.Close();
    }
    catch (Exception ex)
    {
        MessageBox.Show(ex.Message, "Greska", MessageBoxButtons.OK, MessageBoxIcon.Error);
    }
    finally
    {
        if (conn.State == ConnectionState.Open)
            conn.Close();
        conn = null;
    }
}
```

12 –

ConnectionString-

OracleCommand. SQL DB
 OracleCommand
 (SQL

cmd.Parameters.Add

13.

" "

cmd.CommandText

cmd.ExecuteNonQuery().

```
private void btnSnimi_Click(object sender, EventArgs e)
{
    bool bProvera = ProveriPolja();
    if (!bProvera)
    {
        return;
    }
    OracleConnection conn = new OracleConnection();
    OracleCommand cmd = new OracleCommand();

    string strCommand;
    if (bNovi)
        strCommand = "sp_insert_valute";
    else
        strCommand = "sp_update_valute";

    cmd.Connection = conn;
    cmd.CommandType = CommandType.StoredProcedure;
    cmd.CommandText = strCommand;

    OracleParameter p_valuta_id = cmd.Parameters.Add("p_valuta_id", OracleType.Number,3);
    p_valuta_id.Value = txtValutaID.Text;
    OracleParameter p_valuta = cmd.Parameters.Add("p_valuta", OracleType.VarChar,50);
    p_valuta.Value = txtValuta.Text;
    OracleParameter p_oznaka_valute = cmd.Parameters.Add("p_oznaka_valute", OracleType.VarChar,3);
    p_oznaka_valute.Value = txtOznakaValute.Text;

    conn.ConnectionString = strConnection;

    try
    {
        conn.Open();
        cmd.ExecuteNonQuery();
        MessageBox.Show("Podaci su uspesno sacuvani", "Potvrda", MessageBoxButtons.OK, MessageBoxIcon.Information);
        bNovi = false;
        UcitajGrid();
    }
    catch (Exception ex)
    {
        MessageBox.Show(ex.Message, "Greska", MessageBoxButtons.OK, MessageBoxIcon.Error);
    }
    finally
    {
        if (conn.State == ConnectionState.Open)
            conn.Close();
    }
}
```

13 –

OracleDataAdapter
DataSet.

SQL

DataSet

DB

DataSet

DataGridView

ComboBox.
Combobox

UcitajGrid UcitajValute

DataGridView
14 15.


```

private void UcitajGrid()
{
    OracleConnection conn = new OracleConnection();
    OracleCommand cmd = new OracleCommand();
    OracleDataAdapter da = new OracleDataAdapter();

    string strCommand= "pkg_queries.sp_get_kurs";

    conn.ConnectionString = strConnection;
    cmd.Connection = conn;
    cmd.CommandType = CommandType.StoredProcedure;
    cmd.CommandText = strCommand;

    OracleParameter p_datum = cmd.Parameters.Add("p_datum", OracleType.DateTime);
    if (cbDateTime.Checked == true)
        p_datum.Value = dtp_datum.Value.Date;
    else
        p_datum.Value = DBNull.Value;

    OracleParameter p_jedinica_kursa_id = cmd.Parameters.Add("p_jedinica_kursa_id", OracleType.Number, 4);
    if (comboJediniceKursa.Text == "")
        p_jedinica_kursa_id.Value = DBNull.Value;
    else
        p_jedinica_kursa_id.Value = comboJediniceKursa.SelectedValue;

    OracleParameter p_tip_transakcije_id = cmd.Parameters.Add("p_tip_transakcije_id", OracleType.Number, 1);
    if (comboTransakcija.Text == "")
        p_tip_transakcije_id.Value = DBNull.Value;
    else
    {
        if (comboTransakcija.Text == "Kupovni")
            p_tip_transakcije_id.Value = 1;
        else
            p_tip_transakcije_id.Value = 2;
    }

    OracleParameter p_kurs_set = cmd.Parameters.Add("p_kurs_set", OracleType.Cursor);
    p_kurs_set.Direction = ParameterDirection.Output;
    da.SelectCommand = cmd;

    try
    {
        conn.Open();
        if (ds.Tables.Contains("Kursna_Lista"))
            ds.Tables["Kursna_Lista"].Clear();
        da.Fill(ds, "Kursna_Lista");
        dgvKursnaLista.DataSource = ds;
        dgvKursnaLista.DataMember = "Kursna_Lista";
    }
    catch (Exception ex)
    {
        MessageBox.Show(ex.Message, "Greska", MessageBoxButtons.OK, MessageBoxIcon.Error);
    }
    finally
    {
        if (conn.State == ConnectionState.Open)
            conn.Close();
        da = null;
        cmd = null;
    }
}

```

14 –

DataGridView

UcitajGrid (

),

. UcitajJediniceKursa, UcitajDrzave, UcitajValute ' .
Oracle

DataGridView
DB

```
DataSet Oracle t_cursor  
"Output"  
da.Fill(ds, "Naziv Tabele");  
DataSet.  
da  
DataSet-  
DataAdapter ds  
14  
Oracle  
OracleParameter).
```

```
private void UcitajValute()  
{  
    OracleConnection conn = new OracleConnection();  
    OracleCommand cmd = new OracleCommand();  
    OracleDataAdapter da = new OracleDataAdapter();  
  
    string strCommand;  
  
    strCommand = "pkg_queries.sp_get_valute";  
  
    conn.ConnectionString = strConnection;  
    cmd.Connection = conn;  
    cmd.CommandType = CommandType.StoredProcedure;  
    cmd.CommandText = strCommand;  
    da.SelectCommand = cmd;  
  
    OracleParameter p_cursor = cmd.Parameters.Add("p_valute_set", OracleType.Cursor);  
    p_cursor.Direction = ParameterDirection.Output;  
  
    if (ds.Tables.Contains("Valute"))  
        ds.Tables["Valute"].Clear();  
  
    try  
    {  
        conn.Open();  
        da.Fill(ds, "Valute");  
        comboValuta.DisplayMember = "Valuta";  
        comboValuta.ValueMember = "Valuta_id";  
        comboValuta.DataSource = ds.Tables["Valute"];  
    }  
    catch (Exception ex)  
    {  
        MessageBox.Show(ex.Message, "Greska", MessageBoxButtons.OK, MessageBoxIcon.Error);  
    }  
    finally  
    {  
        if (conn.State == ConnectionState.Open)  
            conn.Close();  
        da = null;  
        cmd = null;  
        conn = null;  
    }  
}
```

15 –

DisplayMember
ValueMember

Insert Update

: 1)

2) Master-Detail

16

DataGridView

CurrentCellChanged

ID Apoena	Id Valute	Količina	Opis apoena	Identifikacija?	Štampa ser.broja?	Aktivan?
61	978	10	10 eura	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
41	978	1	1 euro	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42	978	2	2 eura	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
101	840	1	1 dolar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
102	840	10	10 dolara	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

16 –

()

17

Master-Detail

frmNalozi

()

Naloz i Stavke

Nalog ID: 62 Datum: 4/18/2014

Klijent: Lukić Nenad

Tip Transakcije: Prodaja

Korisnik: menjacnica

Vreme: 3/3/2014 10:30:58 AM

Nalog štampan

Novi
Snimi
Traži...
Štampa...

	RB_STAVKE	KURS_ID	OZNAKA_VALUTE	IZNOS_KURS	MARGINA	KOLICINA	IZN
	1	4	USD	83.7072	83.4072	1	250
▶	2	2	EUR	115.8590	115.6590	1	250
*							

17 – Master Detail



frmStavke
18.

Stavke Naloga

Nalog broj: 62 Datum: 4/18/2014

Rb. stavke: 2

Tip transakcije: Prodaja

Valuta: EUR

Iznos Valuta: 21.58

Iznos RSD: 2500

Kurs: 115.85 RSD

Margina: 115.6590 RSD

Izracunaj

Registruj Novcanice Snimi

18 –

frmNaloz i
frmStavke

frmStavke

:

```

public frmStavkeVer2(string strConn, string strNalog,
                    string strRB, string strTipTrans,
                    int kursID, string strMargina,
                    DateTime datum1, string iznosRSD,
                    string iznosVal, bool bNovi1)
{
    InitializeComponent();
}

```

frmNalozi

```

frmStavkeVer2 frm = new OracleApp.forme.frmStavkeVer2(strConnection, strNalog, strRB,
    strTipTr, kursID, strMargina, dtDatum, iznosRSD, iznosVal, false);
var result = frm.ShowDialog();

```



sp_delete_stavku_naloga_zamene

19

1.



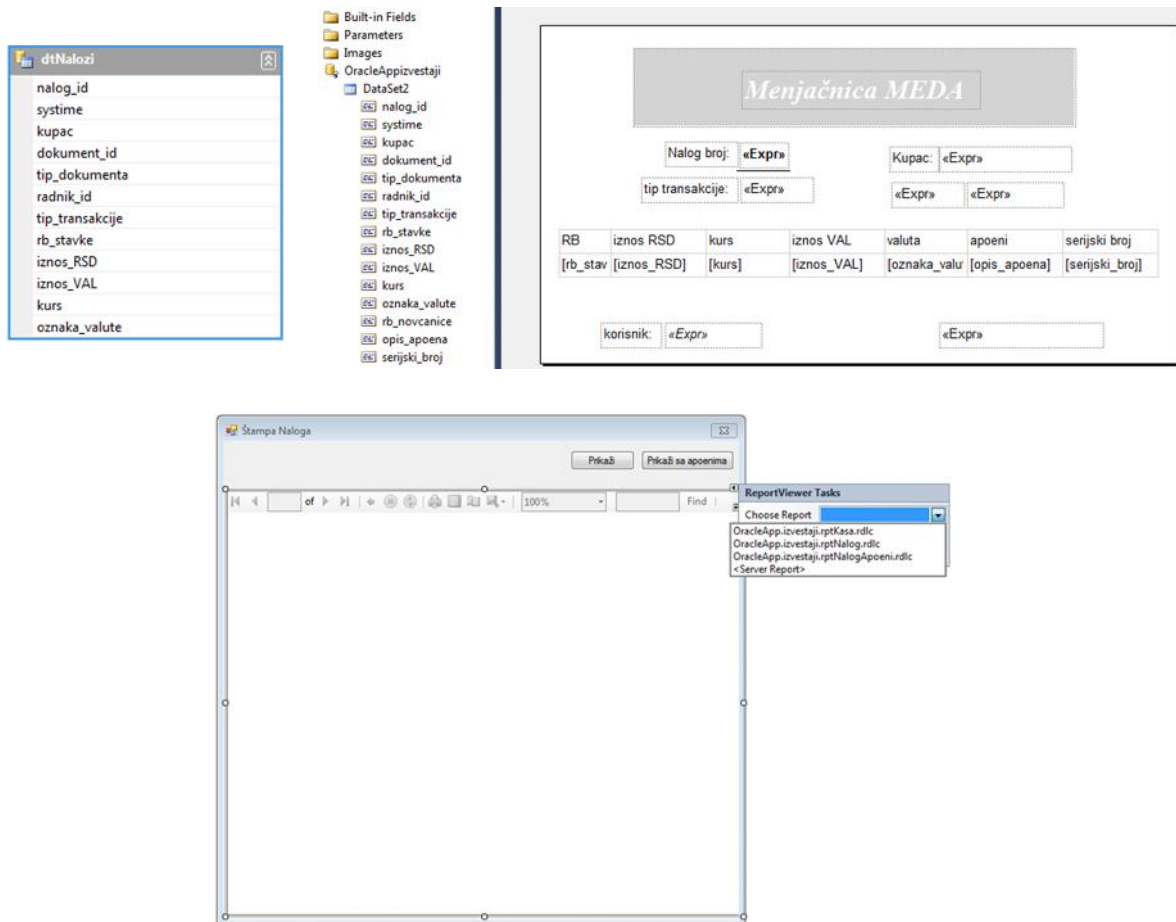
19 –

4.2.2

.rdlc

report client definition
DataSet.

- 1) (20), DataSet-y
- 2) DataSet-a (20),
- 3) ReportViewer (20),
- 4) (20).



```
private void btnPrikazi_Click(object sender, EventArgs e)
{
    this.rptv.LocalReport.DataSources.Clear();
    rptv.Reset();
    rptv.LocalReport.ReportEmbeddedResource = "OracleApp.izvestaji.rptNalog.rdlc";
    rds = new ReportDataSource();
    rds.Name = "DataSet1";
    rds.Value = ds.Tables["dtNalozi"];
    this.rptv.LocalReport.DataSources.Add(rds);
    this.rptv.RefreshReport();
}

```


21.

The screenshot shows a window titled "Štampa Naloga" (Print Receipt) with a close button in the top right corner. Below the title bar are two buttons: "Prikaži" (Show) and "Prikaži sa apoenima" (Show with notes). A toolbar contains navigation icons, a page indicator "1 of 1", a zoom level of "100%", and a "Find" search box. The main content area features a grey header with the text "Menjačnica MEDA" in a stylized font. Below this, transaction details are displayed: "Nalog broj: 62" (Receipt number: 62), "Kupac: Lukić Nenad" (Customer: Lukić Nenad), "tip transakcije: Prodaja" (Transaction type: Sale), and "I.karta 102938475F" (Card number: 102938475F). A table with 7 columns follows: "RB", "iznos RSD", "kurs", "iznos VAL", "valuta", "apoeni", and "serijski broj". The table contains two rows of data. The first row (RB 1) shows a sale of 2,500.00 RSD at a rate of 83.6120, equivalent to 29.90 USD. It lists two notes: "10 dolara" with serial number AS234255 and "10 dolara" with serial number A456644. The second row (RB 2) shows a sale of 2,500.00 RSD at a rate of 115.8480, equivalent to 21.58 EUR. At the bottom, the user "korisnik: menjacnica" and the timestamp "3/3/2014 10:30:58 AM" are visible. A scrollbar is at the bottom of the window.

RB	iznos RSD	kurs	iznos VAL	valuta	apoeni	serijski broj
1	2,500.00	83.6120	29.90	USD	10 dolara	AS234255
					10 dolara	A456644
2	2,500.00	115.8480	21.58	EUR		

21 – (Print Preview)



: Excel, PDF, Word.

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- ,
- .

user-friendly

Oracle
– windows

: 1)

2)

3)

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