LAB2:

TASK_1_1:

```
/*
    Вывести на экран среднее значение почасовой ставки для каждого сотрудника
*/
select emp.BusinessEntityID, emp.JobTitle, AVG(payHistory.Rate) as AvarageRate   from HumanResources.Employee as emp
inner join HumanResources.EmployeePayHistory as payHistory on payHistory.BusinessEntityID = emp.BusinessEntityID
GROUP BY emp.[BusinessEntityID], emp.[JobTitle];
GO
```

100 %

Results | Messages

	BusinessEntityID	JobTitle	AvarageRate
1	1	Chief Executive Officer	125.50
2	2	Vice President of Engineering	63.4615
3	3	Engineering Manager	43.2692
4	4	Senior Tool Designer	20.7287
5	5	Design Engineer	32.6923
6	6	Design Engineer	32.6923
7	7	Research and Development Manager	50.4808
8	8	Research and Development Engineer	40.8654
9	9	Research and Development Engineer	40.8654
10	10	Research and Development Manager	42.4808
11	11	Senior Tool Designer	28.8462
12	12	Tool Designer	25.00
13	13	Tool Designer	25.00
14	14	Senior Design Engineer	36.0577
15	15	Design Engineer	32.6923
16	16	Marketing Manager	30.0833
17	17	Marketing Assistant	13.4615

Query executed successfully. | DESKTOP-Q3NSEDU\SQLEXPRESS ... | DESKTOP-Q3NSEDU\dimak ... | AdventureWorks2012 | 00:00:00 | 290 rows

TASK_1_2:

```
/*
    Вывести на экран историю почасовых ставок сотрудников с информацией для отчета как показано в примере.
    Если ставка меньше или равна 50 вывести ‘less or equal 50’; больше 50, но меньше или равна 100 – вывести ‘more than 50 but less or equal 100’;
    если ставка больше 100 вывести ‘more than 100’.
*/
select emp.BusinessEntityID, emp.JobTitle, payHistory.Rate,
    CASE
        WHEN payHistory.Rate <= 50
            THEN 'less or equal 50'
        WHEN payHistory.Rate > 50 and payHistory.Rate <= 100
            THEN 'more than 50 but less or equal 100'
        WHEN payHistory.Rate > 100
            THEN 'more than 100'
        END
        AS RateReport from HumanResources.Employee as emp
inner join HumanResources.EmployeePayHistory as payHistory on payHistory.BusinessEntityID = emp.BusinessEntityID ;
GO
```

%

Results | Messages

BusinessEntityID	JobTitle	Rate	RateReport
1	Chief Executive Officer	125.50	more than 100
2	Vice President of Engineering	63.4615	more than 50 but less or equal 100
3	Engineering Manager	43.2692	less or equal 50
4	Senior Tool Designer	8.62	less or equal 50
4	Senior Tool Designer	23.72	less or equal 50
4	Senior Tool Designer	29.8462	less or equal 50
5	Design Engineer	32.6923	less or equal 50
6	Design Engineer	32.6923	less or equal 50
7	Research and Development Manager	50.4808	more than 50 but less or equal 100
8	Research and Development Engineer	40.8654	less or equal 50
9	Research and Development Engineer	40.8654	less or equal 50
10	Research and Development Manager	42.4808	less or equal 50
11	Senior Tool Designer	28.8462	less or equal 50
12	Tool Designer	25.00	less or equal 50
13	Tool Designer	25.00	less or equal 50
14	Senior Design Engineer	36.0577	less or equal 50
15	Design Engineer	32.6923	less or equal 50

uery executed successfully. | DESKTOP-Q3NSEDU\SQLEXPRESS ... | DESKTOP-Q3NSEDU\dimak ... | AdventureWorks2012 | 00:00:00 | 316 rows

TASK_1_3:

```sql
use AdventureWorks2012
go

/*
    Вычислить максимальную почасовую ставку работающих в настоящий момент сотрудников в каждом отделе.
    Вывести на экран названия отделов, в которых максимальная почасовая ставка больше 60.
    Отсортировать результат по значению максимальной ставки.
*/
select  Name, MAX(Rate) as MaxRate from HumanResources.Department as dep
inner join HumanResources.EmployeeDepartmentHistory as depHistory on depHistory.DepartmentID = dep.DepartmentID AND ([EndDate] IS NULL)
inner join HumanResources.Employee as emp on emp.BusinessEntityID = depHistory.BusinessEntityID
inner join HumanResources.EmployeePayHistory as payHistory on emp.BusinessEntityID = payHistory.BusinessEntityID and rate > 60
GROUP BY dep.Name
ORDER BY MaxRate;
GO
```

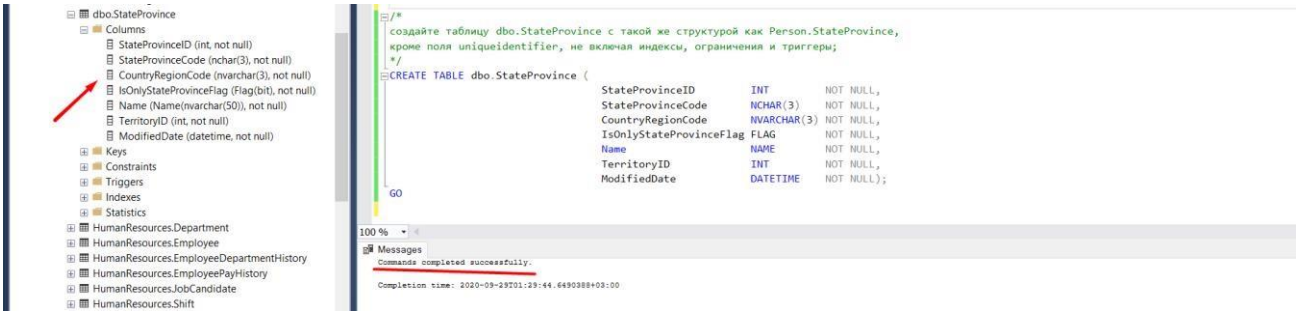
100 %

Results | Messages

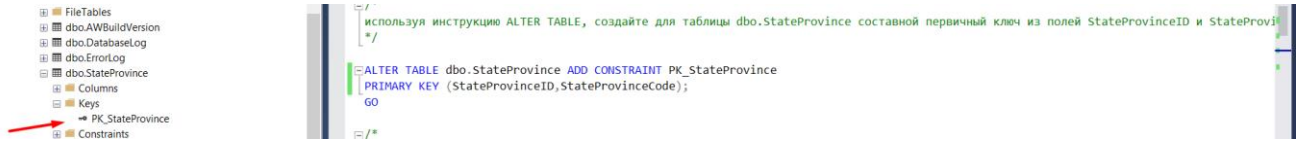
	Name	MaxRate
1	Engineering	63.4615
2	Sales	72.1154
3	Production	84.1346
4	Executive	125.50

Query executed successfully. | DESKTOP-Q3NSEDU\SQLEXPRESS ... | DESKTOP-Q3NSEDU\dimak ... | AdventureWorks2012 | 00:00:00 | 4 rows

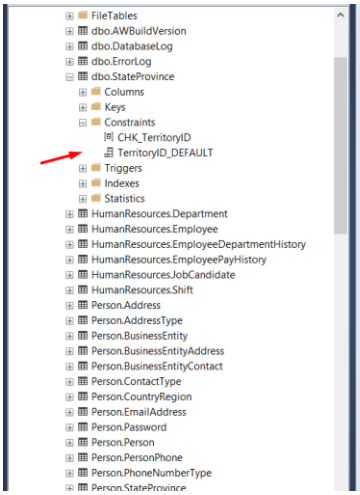
Task_2_a:



Task_2_b:



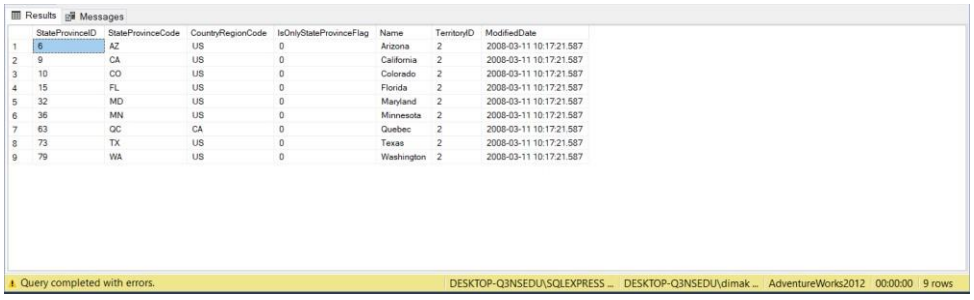
Task_2_c-d:




```
/*
 используя инструкцию ALTER TABLE, создайте для таблицы dbo.StateProvince ограничение для поля TerritoryID,
 чтобы значение поля могло содержать только четные цифры;
*/

CREATE FUNCTION dbo.EvenDigits (@digit int)
 RETURNS int
 AS
 BEGIN
   DECLARE @result int
    WHILE @digit <> 0
     BEGIN
         SET @result = @digit % 10;
         IF @result % 2 <> 0
            RETURN 0;
         SET @digit = (@digit - @result) / 10;
     END;
     RETURN 1
 END;
 GO

ALTER TABLE dbo.StateProvince ADD CONSTRAINT CHK_TerritoryID
CHECK (dbo.EvenDigits([TerritoryID]) = 1)
 GO
/*
 используя инструкцию ALTER TABLE, создайте для таблицы dbo.StateProvince ограничение DEFAULT для поля TerritoryID, задайте значение п
*/
ALTER TABLE dbo.StateProvince ADD CONSTRAINT TerritoryID_DEFAULT
DEFAULT 2 FOR TerritoryID;

/*
```

Task_2_e:

```
INSERT INTO dbo.StateProvince(
      StateProvinceID,
      StateProvinceCode,
      CountryRegionCode,
      IsOnlyStateProvinceFlag,
      Name,
      ModifiedDate
)
SELECT
        StateProvinceID,
        StateProvinceCode,
        CountryRegionCode,
        IsOnlyStateProvinceFlag,
        Name,
        ModifiedDate
FROM
(SELECT
        stateProvince.StateProvinceID,
        stateProvince.StateProvinceCode,
        stateProvince.CountryRegionCode,
        stateProvince.IsOnlyStateProvinceFlag,
        stateProvince.Name,
        stateProvince.ModifiedDate,
        address.AddressID AS AddressID,
        MAX(address.AddressID) OVER (PARTITION BY stateProvince.StateProvinceID, stateProvince.StateProvinceCode) as MaxAddressID
FROM  Person.StateProvince AS stateProvince
INNER JOIN Person.Address AS address
    ON stateProvince.StateProvinceID = address.StateProvinceID
INNER JOIN Person.BusinessEntityAddress AS bussines
    ON address.AddressID = bussines.AddressID
INNER JOIN Person.AddressType AS addresType
    ON addresType.AddressTypeID = bussines.AddressTypeID
    WHERE addresType.Name = 'Shipping') as province
WHERE province.MaxAddressID = province.AddressID;
 GO
```



Results | Messages

	StateProvinceID	StateProvinceCode	CountryRegionCode	IsOnlyStateProvinceFlag	Name	TerritoryID	ModifiedDate
1	6	AZ	US	0	Arizona	2	2008-03-11 10:17:21.587
2	9	CA	US	0	California	2	2008-03-11 10:17:21.587
3	10	CO	US	0	Colorado	2	2008-03-11 10:17:21.587
4	15	FL	US	0	Florida	2	2008-03-11 10:17:21.587
5	32	MD	US	0	Maryland	2	2008-03-11 10:17:21.587
6	36	MN	US	0	Minnesota	2	2008-03-11 10:17:21.587
7	63	QC	CA	0	Quebec	2	2008-03-11 10:17:21.587
8	73	TX	US	0	Texas	2	2008-03-11 10:17:21.587
9	79	WA	US	0	Washington	2	2008-03-11 10:17:21.587

Query completed with errors. | DESKTOP-Q3NSEDU\SQLEXPRESS ... | DESKTOP-Q3NSEDU\dimak ... | AdventureWorks2012 | 00:00:00 | 9 rows

Task_2_f:


```
go

/*
 измените тип поля IsOnlyStateProvinceFlag на smallint, разрешите добавление null значений.
*/

ALTER TABLE dbo.StateProvince
    ALTER COLUMN IsOnlyStateProvinceFlag SMALLINT
```