

## СЦЕНАРИЙ СОЗДАНИЯ БАЗЫ ДАННЫХ

```
USE [master];
GO
IF EXISTS (SELECT [name] FROM [master].[sys].[databases] WHERE [name] = N'[ПОСТАВЩИКИ И
ПРОДУКТЫ]')
    DROP DATABASE [ПОСТАВЩИКИ И ПРОДУКТЫ];
GO
CREATE DATABASE [ПОСТАВЩИКИ И ПРОДУКТЫ];
GO
USE [ПОСТАВЩИКИ И ПРОДУКТЫ];
GO
CREATE TABLE [dbo].[Suppliers](
    [SupplierID] [int] NOT NULL,
    [SupplierName] [nvarchar](50) NOT NULL,
    [Status] [int] NULL,
    [City] [nvarchar](20) NOT NULL,
CONSTRAINT [PK_Supplier] PRIMARY KEY ([SupplierID]),
CONSTRAINT [UK_Supplier] UNIQUE ([SupplierName]),
CONSTRAINT [CK_Status] CHECK ([Status] BETWEEN 0 AND 100)
);
GO
CREATE TABLE [dbo].[Products](
    [ProductID] [int] NOT NULL,
    [ProductName] [nvarchar](40) NOT NULL,
    [Color] [nvarchar](10) NULL,
    [Weight] [decimal](10,2) NULL,
    [Price] [money] NULL,
    [City] [nvarchar](20) NOT NULL,
CONSTRAINT [PK_Products] PRIMARY KEY ([ProductID]),
CONSTRAINT [CK_Weight] CHECK ([Weight] > 0.00),
CONSTRAINT [CK_Price] CHECK ([Price] >= 0.00)
);
GO
CREATE TABLE [dbo].[Shipments](
    [ShipmentID] [int] NOT NULL,
    [SupplierID] [int] NOT NULL,
    [ProductID] [int] NOT NULL,
    [Qty] [int] NOT NULL,
CONSTRAINT [PK_ShipmentID] PRIMARY KEY ([ShipmentID]),
CONSTRAINT [FK_Shipments_Suppliers] FOREIGN KEY([SupplierID]) REFERENCES [Suppliers]
([SupplierID]),
CONSTRAINT [FK_Shipments_Products] FOREIGN KEY([ProductID]) REFERENCES [Products]
([ProductID]),
CONSTRAINT [CK_Qty] CHECK ([Qty] > 0)
);
GO
```

## ЗАПОЛНЕНИЕ ТАБЛИЦЫ Suppliers

```
USE [ПОСТАВЩИКИ И ПРОДУКТЫ];
GO
BULK INSERT [ПОСТАВЩИКИ И ПРОДУКТЫ].[dbo].[Suppliers]
    FROM 'C:\Documents and Settings\Admin\Мои документы\ЛАБОРАТОРНЫЕ РАБОТЫ ПО
СИ\lab_crp#12\Входные данные в формате TXT\Suppliers.txt'
    WITH (
        CODEPAGE = 'ACP',
        DATAFILETYPE = 'char',
        FIELDTERMINATOR = '\t',
        ROWTERMINATOR = '\n'
    );
```

GO

## ЗАПОЛНЕНИЕ ТАБЛИЦЫ Products

```
USE [ПОСТАВЩИКИ И ПРОДУКТЫ];
GO
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (774, 'Mountain-100 Silver, 48', 'Silver', 9715.90, 3399.99, 'Pontiac');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (775, 'Mountain-100 Black, 38', 'Black', 9230.56, 3374.99, 'Novi');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (776, 'Mountain-100 Black, 42', 'Black', 9421.06, 3374.99, 'Southfield');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (785, 'Mountain-300 Black, 38', 'Black', 11498.51, 1079.99, 'Madison Heights');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (786, 'Mountain-300 Black, 40', 'Black', 11689.01, 1079.99, 'Westland');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (788, 'Mountain-300 Black, 48', 'Black', 11983.85, 1079.99, 'Southgate');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (789, 'Road-250 Red, 44', 'Red', 6699.52, 2443.35, 'Detroit');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (794, 'Road-250 Black, 48', 'Black', 6862.82, 2443.35, 'Saginaw');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (795, 'Road-250 Black, 52', 'Black', 6994.36, 2443.35, 'Saginaw');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (797, 'Road-550-W Yellow, 38', 'Yellow', 7869.79, 1120.49, 'Midland');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (801, 'Road-550-W Yellow, 48', 'Yellow', 8473.06, 1120.49, 'Holland');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (806, 'ML Headset', NULL, NULL, 102.29, 'Monroe');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (810, 'HL Mountain Handlebars', NULL, NULL, 120.27, 'Redford');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (825, 'HL Mountain Rear Wheel', 'Black', NULL, 327.22, 'Port Huron');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (826, 'LL Road Rear Wheel', 'Black', 1050.00, 112.57, 'Howell');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (832, 'ML Mountain Frame - Black, 48', 'Black', 1292.73, 348.76, 'Seattle');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (833, 'ML Road Frame-W - Yellow, 40', 'Yellow', 1006.97, 594.83, 'Renton');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (834, 'ML Road Frame-W - Yellow, 42', 'Yellow', 1025.11, 594.83,
'Bothell');
```

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INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (835, 'ML Road Frame-W - Yellow, 44', 'Yellow', 1043.26, 594.83, 'Kent');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (836, 'ML Road Frame-W - Yellow, 48', 'Yellow', 1061.40, 594.83,
'Puyallup');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (837, 'HL Road Frame - Black, 62', 'Black', 1043.26, 1431.50, 'Billings');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (838, 'HL Road Frame - Black, 44', 'Black', 961.61, 1431.50, 'Medford');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (839, 'HL Road Frame - Black, 48', 'Black', 979.75, 1431.50, 'Portland');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (840, 'HL Road Frame - Black, 52', 'Black', 997.90, 1431.50, 'North Bend');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (841, 'Men''s Sports Shorts, S', 'Black', NULL, 59.99, 'Portland');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (842, 'Touring-Panniers, Large', 'Grey', NULL, 125.00, 'Beaverton');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (843, 'Cable Lock', NULL, NULL, 25.00, 'Woodinville');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (844, 'Minipump', NULL, NULL, 19.99, 'Issaquah');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (845, 'Mountain Pump', NULL, NULL, 24.99, 'Idaho Falls');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (846, 'Taillights - Battery-Powered', NULL, NULL, 13.99, 'Redmond');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (847, 'Headlights - Dual-Beam', NULL, NULL, 34.99, 'Wenatchee');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (848, 'Headlights - Weatherproof', NULL, NULL, 44.99, 'Redmond');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (849, 'Men''s Sports Shorts, M', 'Black', NULL, 59.99, 'Seattle');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (850, 'Men''s Sports Shorts, L', 'Black', NULL, 59.99, 'Klamath Falls');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (851, 'Men''s Sports Shorts, XL', 'Black', NULL, 59.99, 'Troutdale');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (852, 'Women''s Tights, S', 'Black', NULL, 74.99, 'Clackamas');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (853, 'Women''s Tights, M', 'Black', NULL, 74.99, 'Milwaukie');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (854, 'Women''s Tights, L', 'Black', NULL, 74.99, 'Renton');

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INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (855, 'Men's Bib-Shorts, S', 'Multi', NULL, 89.99, 'Port Orchard');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (856, 'Men's Bib-Shorts, M', 'Multi', NULL, 89.99, 'Shelton');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (857, 'Men's Bib-Shorts, L', 'Multi', NULL, 89.99, 'Longview');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (858, 'Half-Finger Gloves, S', 'Black', NULL, 24.49, 'Lynnwood');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (859, 'Half-Finger Gloves, M', 'Black', NULL, 24.49, 'Seattle');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (860, 'Half-Finger Gloves, L', 'Black', NULL, 24.49, 'Puyallup');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (861, 'Full-Finger Gloves, S', 'Black', NULL, 37.99, 'Bellevue');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (862, 'Full-Finger Gloves, M', 'Black', NULL, 37.99, 'Washougal');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (863, 'Full-Finger Gloves, L', 'Black', NULL, 37.99, 'Tacoma');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (864, 'Classic Vest, S', 'Blue', NULL, 63.50, 'Renton');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (865, 'Classic Vest, M', 'Blue', NULL, 63.50, 'Bellingham');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (866, 'Classic Vest, L', 'Blue', NULL, 63.50, 'Puyallup');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (867, 'Women's Mountain Shorts, S', 'Black', NULL, 69.99, 'Everett');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (868, 'Women's Mountain Shorts, M', 'Black', NULL, 69.99, 'Bothell');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (869, 'Women's Mountain Shorts, L', 'Black', NULL, 69.99, 'Kent');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (870, 'Water Bottle - 30 oz.', NULL, NULL, 4.99, 'Ellensburg');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (871, 'Mountain Bottle Cage', NULL, NULL, 9.99, 'Everett');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (872, 'Road Bottle Cage', NULL, NULL, 8.99, 'Sequim');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (873, 'Patch Kit/8 Patches', NULL, NULL, 2.29, 'Spokane');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (874, 'Racing Socks, M', 'White', NULL, 8.99, 'Portland');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])

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VALUES (875, 'Racing Socks, L', 'White', NULL, 8.99, 'Cheyenne');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (876, 'Hitch Rack - 4-Bike', NULL, NULL, 120.00, 'Seattle');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (877, 'Bike Wash - Dissolver', NULL, NULL, 7.95, 'Sandpoint');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (878, 'Fender Set - Mountain', NULL, NULL, 21.98, 'Spokane');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (879, 'All-Purpose Bike Stand', NULL, NULL, 159.00, 'Union Gap');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (880, 'Hydration Pack - 70 oz.', 'Silver', NULL, 54.99, 'Lacey');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (881, 'Short-Sleeve Classic Jersey, S', 'Yellow', NULL, 53.99, 'Missoula');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (882, 'Short-Sleeve Classic Jersey, M', 'Yellow', NULL, 53.99, 'Medford');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (883, 'Short-Sleeve Classic Jersey, L', 'Yellow', NULL, 53.99, 'Albany');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (884, 'Short-Sleeve Classic Jersey, XL', 'Yellow', NULL, 53.99, 'Chehalis');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (885, 'HL Touring Frame - Yellow, 60', 'Yellow', 1397.06, 1003.91,
'Kennewick');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (886, 'LL Touring Frame - Yellow, 62', 'Yellow', 1451.49, 333.42, 'Salem');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (887, 'HL Touring Frame - Yellow, 46', 'Yellow', 1342.63, 1003.91,
'Lewiston');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (888, 'HL Touring Frame - Yellow, 50', 'Yellow', 1360.77, 1003.91, 'Kelso');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (889, 'HL Touring Frame - Yellow, 54', 'Yellow', 1378.91, 1003.91, 'Casper');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (890, 'HL Touring Frame - Blue, 46', 'Blue', 1342.63, 1003.91, 'Great Falls');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (891, 'HL Touring Frame - Blue, 50', 'Blue', 1360.77, 1003.91, 'Kirkland');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (892, 'HL Touring Frame - Blue, 54', 'Blue', 1378.91, 1003.91, 'Cheyenne');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (893, 'HL Touring Frame - Blue, 60', 'Blue', 1397.06, 1003.91, 'Rock Springs');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (894, 'Rear Derailleur', 'Silver', 215.00, 121.46, 'Tacoma');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])

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VALUES (895, 'LL Touring Frame - Blue, 50', 'Blue', 1406.13, 333.42, 'Puyallup');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (896, 'LL Touring Frame - Blue, 54', 'Blue', 1424.27, 333.42, 'Albany');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (897, 'LL Touring Frame - Blue, 58', 'Blue', 1433.34, 333.42, 'Everett');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (898, 'LL Touring Frame - Blue, 62', 'Blue', 1451.49, 333.42, 'Clackamas');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (899, 'LL Touring Frame - Yellow, 44', 'Yellow', 1369.84, 333.42, 'Spokane');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (900, 'LL Touring Frame - Yellow, 50', 'Yellow', 1406.13, 333.42,
'Cheyenne');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (901, 'LL Touring Frame - Yellow, 54', 'Yellow', 1424.27, 333.42,
'Bellingham');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (902, 'LL Touring Frame - Yellow, 58', 'Yellow', 1433.34, 333.42,
'Springfield');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (903, 'LL Touring Frame - Blue, 44', 'Blue', 1369.84, 333.42, 'Beaverton');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (904, 'ML Mountain Frame-W - Silver, 40', 'Silver', 1256.44, 364.09, 'Kelso');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (905, 'ML Mountain Frame-W - Silver, 42', 'Silver', 1274.59, 364.09, 'Federal
Way');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (906, 'ML Mountain Frame-W - Silver, 46', 'Silver', 1292.73, 364.09, 'Tigard');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (907, 'Rear Brakes', 'Silver', 317.00, 106.50, 'Hillsboro');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (988, 'Mountain-500 Silver, 52', 'Silver', 13008.96, 564.99, 'Fremont');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (989, 'Mountain-500 Black, 40', 'Black', 12405.69, 539.99, 'Camarillo');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (990, 'Mountain-500 Black, 42', 'Black', 12596.19, 539.99, 'Salt Lake City');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (991, 'Mountain-500 Black, 44', 'Black', 12759.49, 539.99, 'San Ramon');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (992, 'Mountain-500 Black, 48', 'Black', 12891.03, 539.99, 'Union City');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (993, 'Mountain-500 Black, 52', 'Black', 13008.96, 539.99, 'El Segundo');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (994, 'LL Bottom Bracket', NULL, 223.00, 53.99, 'Milpitas');

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INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (995, 'ML Bottom Bracket', NULL, 168.00, 101.24, 'Newport Beach');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (996, 'HL Bottom Bracket', NULL, 170.00, 121.49, 'Salt Lake City');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (997, 'Road-750 Black, 44', 'Black', 8967.47, 539.99, 'Visalia');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (998, 'Road-750 Black, 48', 'Black', 9130.77, 539.99, 'Hayward');
INSERT INTO [dbo].[Products] ([ProductID], [ProductName], [Color], [Weight], [Price],
[City])
VALUES (999, 'Road-750 Black, 52', 'Black', 9262.31, 539.99, 'Fullerton');
GO

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## ЗАПОЛНЕНИЕ ТАБЛИЦЫ Shipments

```

USE [ПОСТАВЩИКИ И ПРОДУКТЫ];
GO
BULK INSERT [ПОСТАВЩИКИ И ПРОДУКТЫ].[dbo].[Shipments]
FROM 'C:\Documents and Settings\Admin\Мои документы\ЛАБОРАТОРНЫЕ РАБОТЫ ПО
СИ\lab_cpp#12\Входные данные в формате TXT\Shipments.txt'
WITH (
    CODEPAGE = 'ACP',
    DATAFILETYPE = 'char',
    FIELDTERMINATOR = '\t',
    ROWTERMINATOR = '\n'
);
GO

```

## СЦЕНАРИЙ С ЗАПРОСАМИ, ОБЕРНУТЫМИ В ХРАНИМЫЕ ПРОЦЕДУРЫ

```

-----
-- ВАРИАНТ 01
-----
CREATE PROCEDURE Query01
-- Для каждого продукта указать номер и общее количество поставщиков, поставляющих этот
продукт.
AS
BEGIN
    SELECT ProductID, COUNT(SupplierID) AS 'Number of Suppliers'
    FROM Shipments
    GROUP BY ProductID
END;
GO
EXEC Query01;
GO
ALTER PROCEDURE Query02 @ProductID int
-- Получить имена поставщиков продукта под номером ?.
AS
BEGIN
    SELECT s.SupplierName
    FROM Suppliers s JOIN Shipments t ON s.SupplierID = t.SupplierID
    WHERE t.ProductID = @ProductID
END;
GO
EXEC Query02 @ProductID = 881;
GO
ALTER PROCEDURE Query03

```

```

-- Определить поставщиков (номера и имена), которые ничего не поставляют.
AS
BEGIN
    SELECT s.SupplierID, s.SupplierName
    FROM Suppliers s
    WHERE NOT EXISTS (SELECT * FROM Shipments t WHERE s.SupplierID = t.SupplierID)
END;
GO
EXEC Query03;
GO
ALTER PROCEDURE Query04 @Color nvarchar(10)
-- Получить имена поставщиков по крайней мере одного продукта цвета ?.
AS
BEGIN
    SELECT DISTINCT s.SupplierName
    FROM Suppliers s JOIN Shipments t ON s.SupplierID = t.SupplierID JOIN
        Products p ON t.ProductID = p.ProductID
    WHERE p.Color = @Color
END;
GO
EXEC Query04 'BLACK';
GO
ALTER PROCEDURE Query05
-- Найти все товары (названия), поставляемые поставщиками с статусом болеше среднего.
AS
BEGIN
    SELECT DISTINCT p.ProductName
    FROM Products p JOIN Shipments t ON p.ProductID = t.ProductID JOIN
        Suppliers s ON t.SupplierID = s.SupplierID
    WHERE s.Status > (SELECT AVG(Status) FROM Suppliers)
END;
GO
EXEC Query05;
GO
-----
-- ВАРИАНТ 02
-----
CREATE PROCEDURE Query06 @City nvarchar(20)
-- Вычислить суммарную стоимость всех продуктов, поставляемых поставщиками из города ?.
AS
BEGIN
    SELECT SUM(p.Price*t.Qty) AS 'Total Summa'
    FROM Products p JOIN Shipments t ON p.ProductID = t.ProductID JOIN
        Suppliers s ON t.SupplierID = s.SupplierID AND s.City = @City
END;
GO
EXEC Query06 'High Wycombe';
GO
ALTER PROCEDURE Query07
-- Получить имена поставщиков всех типов продуктов.
AS
BEGIN
    SELECT s.SupplierName
    FROM Suppliers s
    WHERE NOT EXISTS (
        SELECT *
        FROM Products p
        WHERE NOT EXISTS (
            SELECT *
            FROM Shipments t
            WHERE t.ProductID =
p.ProductID AND t.SupplierID = s.SupplierID))
END;
GO

```



```

EXEC Query07;
GO
ALTER PROCEDURE Query08 @ProductID int
-- Получить имена поставщиков, которые не поставляют продукт с номером ?.
AS
BEGIN
    SELECT DISTINCT s.SupplierName
    FROM Suppliers s
    WHERE NOT EXISTS (
        SELECT *
        FROM Shipments t
        WHERE t.SupplierID = s.SupplierID AND t.ProductID =
@ProductID)
END;
GO
EXEC Query08 881;
GO
ALTER PROCEDURE Query09 @SupplierID int
-- Получить имена поставщиков по крайней мере тех типов продуктов, которые поставяет
поставщик под номером ?.
AS
BEGIN
    SELECT DISTINCT s.SupplierName
    FROM Suppliers s JOIN Shipments t ON s.SupplierID = t.SupplierID
    WHERE t.ProductID IN (SELECT ProductID FROM Shipments WHERE SupplierID =
@SupplierID)
END;
GO
EXEC Query09 @SupplierID = 502
GO
CREATE PROCEDURE Query10 @City nvarchar(20)
-- Вычислить суммарную стоимость всех поставляемых продуктов, находящихся в городе ?.
AS
BEGIN
    SELECT SUM(p.Price*t.Qty) AS 'Total Summa'
    FROM Products p JOIN Shipments t ON p.ProductID = t.ProductID
    WHERE p.City = @City
END;
GO
EXEC Query10 @City = 'Missoula'
GO
-----
-- ВАРИАНТ 03
-----
CREATE PROCEDURE Query11
-- Получить все пары имен поставщиков, находящихся в одном городе.
AS
BEGIN
    SELECT first.SupplierName AS 'First Name', second.SupplierName AS 'Second Name'
    FROM Suppliers first, Suppliers second
    WHERE first.City = second.City AND first.SupplierID > second.SupplierID
END;
GO
EXEC Query11;
GO
CREATE PROCEDURE Query12
-- Определить общее количество поставщиков, участвующих в поставках.
AS
BEGIN
    SELECT COUNT(DISTINCT SupplierID) FROM Shipments
END;
GO
EXEC Query12;

```

```

GO
CREATE PROCEDURE Query13 @SupplierID int
-- Вычислить суммарную стоимость всех продуктов, поставляемых поставщиком под номером
?.
AS
BEGIN
    SELECT SUM(p.Price*t.Qty) AS 'Total Summa'
    FROM Products p JOIN Shipments t ON p.ProductID = t.ProductID
    WHERE t.SupplierID = @SupplierID
END;
GO
EXEC Query13 @SupplierID = 25;
GO
CREATE PROCEDURE Query14
-- Для каждого поставщика указать номер и общий объем поставки в штуках.
AS
BEGIN
    SELECT t.SupplierID, SUM(p.Price*t.Qty) AS 'Total Summa'
    FROM Products p JOIN Shipments t ON p.ProductID = t.ProductID
    GROUP BY t.SupplierID
END;
GO
EXEC Query14
GO
CREATE PROCEDURE Query15 @SupplierID int
-- Определить цвета продуктов, поставляемых поставщиком под номером ?.
AS
BEGIN
    SELECT p.Color
    FROM Products p JOIN Shipments t ON p.ProductID = t.ProductID
    WHERE t.SupplierID = @SupplierID
END;
GO
EXEC Query15 @SupplierID = 25;
GO
-----
-- ВАРИАНТ 04
-----
ALTER PROCEDURE Query16
-- Найти всех поставщиков, поставляющих продукты, цена которых отличается не более чем
на 10% от текущей средней цены продуктов.
AS
BEGIN
    DECLARE @AvgPrice money
    SET @AvgPrice = (SELECT AVG(Price) FROM Products)
    SELECT @AvgPrice
    SELECT DISTINCT s.SupplierName
    FROM Suppliers s JOIN Shipments t ON s.SupplierID = t.SupplierID JOIN
    Products p ON t.ProductID = p.ProductID
    WHERE p.Price BETWEEN 0.9*@AvgPrice AND 1.1*@AvgPrice
END;
GO
EXEC Query16;
GO
ALTER PROCEDURE Query17
-- Выбрать информацию обо всех поставках, таких, что поставщик и поставляемый им
продукт находятся в одном городе.
AS
BEGIN
    SELECT t.SupplierID, t.ProductID
    FROM Shipments t JOIN Suppliers s ON t.SupplierID = s.SupplierID JOIN
    Products p ON t.ProductID = p.ProductID

```

```

        WHERE s.City = p.City
END;
GO
EXEC Query17
GO
ALTER PROCEDURE Query18
-- Указать номера продуктов, поставляемых более чем одним поставщиком
AS
BEGIN
    SELECT t.ProductID
    FROM Shipments t
    GROUP BY t.ProductID
    HAVING COUNT (t.SupplierID) > 1;
END
GO
EXEC Query18
GO
ALTER PROCEDURE Query19
-- Указать имена поставщиков, статус которых меньше текущего среднего статуса в таблице поставщиков.
AS
BEGIN
    SELECT s.SupplierName, s.Status
    FROM Suppliers s
    WHERE s.Status < (SELECT AVG(Status) FROM Suppliers)
END;
GO
EXEC Query19
GO
CREATE PROCEDURE Query20 @ProductID int
-- Определить в поставках максимальное и минимальное количество продуктов с номером ?.
AS
BEGIN
    SELECT MAX(t.Qty) AS 'MaxQ', MIN(t.Qty) AS 'MinQ'
    FROM Shipments t
    WHERE t.ProductID = @ProductID
END;
GO
EXEC Query20 @ProductID = 881
GO
-----
-- ВАРИАНТ 05
-----
ALTER PROCEDURE Query21 @SupplierID int, @ProductID int
-- Определить общее количество продуктов с номером ?, поставляемых поставщиком под номером ?.
AS
BEGIN
    SELECT COUNT(ProductID)
    FROM Shipments
    WHERE SupplierID = @SupplierID AND ProductID = @ProductID
END;
GO
EXEC Query21 @SupplierID = 448, @ProductID = 900
GO
CREATE PROCEDURE Query22 @City nvarchar(20), @Status int
-- Определить имена поставщиков из города ? со статусом больше ?.
AS
BEGIN
    SELECT SupplierName
    FROM Suppliers
    WHERE City = @City AND Status > @Status

```

```

END;
GO
EXEC Query22 @City = 'Edmonton', @Status = 50
GO
ALTER PROCEDURE Query23
AS
-- Найти всех поставщиков, поставляющих дорогие продукты. Цена таких продуктов
отличается от цены самого дорогого продукта не более чем в 4 раза.
BEGIN
    SELECT s.SupplierName
    FROM Suppliers s JOIN Shipments t ON s.SupplierID = t.SupplierID JOIN
        Products p ON t.ProductID = p.ProductID
    WHERE p.Price >= (SELECT MAX(Price) FROM Products)/4
END;
GO
EXEC Query23
GO
CREATE PROCEDURE Query24 @Weight decimal(10,2)
AS
-- Определить номера и вес всех типов продуктов, вес которых превышает ?.
BEGIN
    SELECT ProductID, Weight
    FROM Products
    WHERE Weight > @Weight
END;
GO
EXEC Query24 @Weight = 10000.00
GO
ALTER PROCEDURE Query25
AS
-- Для каждого продукта выбрать номер и общий объем поставки в штуках.
BEGIN
    SELECT ProductID, SUM(Qty) AS 'Total Number'
    FROM Shipments
    GROUP BY ProductID
END;
GO
EXEC Query25
GO
-----
-- ВАРИАНТ 06
-----
CREATE PROCEDURE Query26
-- Указать названия продуктов, цена которых больше текущей средней цены в таблице
продуктов.
AS
BEGIN
    SELECT ProductName
    FROM Products
    WHERE Price > (SELECT AVG(Price) FROM Products)
END;
GO
EXEC Query26
GO
CREATE PROCEDURE Query27
-- Определить общее количество поставляемых продуктов.
AS
BEGIN
    SELECT COUNT(DISTINCT ProductID) AS 'Total Number'
    FROM Shipments
END;
GO

```

```

EXEC Query27
GO
ALTER PROCEDURE Query28 @MinPrice money, @MaxPrice money
-- Найти всех поставщиков, поставляющих продукты, находящиеся в ценовом диапазоне от ?
до ? включительно.
AS
BEGIN
    SELECT DISTINCT s.SupplierName
    FROM Suppliers s JOIN Shipments t ON s.SupplierID = t.SupplierID JOIN
        Products p ON t.ProductID = p.ProductID
    WHERE p.Price BETWEEN @MinPrice AND @MaxPrice
END;
GO
EXEC Query28 @MinPrice = 500.00, @MaxPrice = 1000.00
GO
CREATE PROCEDURE Query29
-- Определить продукты, которые никем не поставляются.
AS
BEGIN
    SELECT p.ProductID, p.ProductName
    FROM Products p
    WHERE NOT EXISTS (SELECT * FROM Shipments t WHERE t.ProductID = p.ProductID)
END;
GO
EXEC Query29
GO
CREATE PROCEDURE Query30
-- Найти все пары названий городов, таких, что поставщик из первого города поставяет
продукт, находящийся в другом городе.
AS
BEGIN
    SELECT DISTINCT s.City AS 'First City', p.City AS 'Second City'
    FROM Suppliers s JOIN Shipments t ON s.SupplierID = t.SupplierID JOIN
        Products p ON t.ProductID = p.ProductID
END;
GO
EXEC Query30
GO

```