SKY SOFTWARE

Departments — Works — Employees — Employees_Salaries — Salaries

Departments: department_id, department_name

Employees: employee_id, first_name, last_name, hire_date

Salaries: salary_id, salary, start_date, end_date

Departments
- **department_id**
- department _name

Employees
- **employee_id**
- first_name
- last_name
- hire_date
- department_id   (FK)

Salaries
- **salary_id**
- salary
- start_date
- end_date
- employee_id   (FK)

SQLQuery1.sql - D...FSHUB6G\user (59))* ⊟ ✕

```sql
-- Q1
select e.first_name , e.last_name ,e.hire_date ,d.department_name
from Employees e
join Departments d
on e.department_id = d.department_id ;
```

133 %

⊞ Results   📖 Messages

	first_name	last_name	hire_date	department_name
1	Ahnaf	Alnuman	2021-02-01	Software Development
2	Laila	Ahmad	2020-06-15	Software Development
3	Omar	Ahmad	2022-03-20	Quality Assurance
4	Noor	Khalid	2021-09-05	Quality Assurance
5	Sara	Ali	2019-11-12	Project Management
6	Fadi	Samir	2020-07-25	Project Management
7	Rana	Majed	2018-05-30	Human Resources
8	Hani	Ziad	2022-01-18	Sales
9	Aya	Salem	2021-04-10	Sales
10	Khaled	Mahmoud	2020-08-15	Finance
11	Amira	Tariq	2019-03-22	Finance
12	Bassem	Adnan	2021-10-05	Technical Support
13	Rami	Ibrahim	2020-12-01	Technical Support
14	Lina	Fares	2023-01-10	Software Development
15	Tareq	Othman	2022-06-18	Quality Assurance
16	Mona	Saad	2021-02-14	Project Management
17	Yara	Ali	2020-09-28	Human Resources
18	Nour	Jamal	2023-03-19	Sales
19	Sami	Walid	2022-11-05	Finance
20	Leen	Hatem	2021-07-21	Technical Support

Query executed successfully

```sql
--Q2
select  d.department_name,  e.first_name,  e.last_name
from Departments d
left join Employees e on d.department_id = e.department_id;
```

133 % ▼ ◂

▦ Results ▧ Messages

	department_name	first_name	last_name
1	Software Development	Ahnaf	Alnuman
2	Software Development	Laila	Ahmad
3	Software Development	Lina	Fares
4	Quality Assurance	Omar	Ahmad
5	Quality Assurance	Noor	Khalid
6	Quality Assurance	Tareq	Othman
7	Project Management	Sara	Ali
8	Project Management	Fadi	Samir
9	Project Management	Mona	Saad
10	Human Resources	Rana	Majed
11	Human Resources	Yara	Ali
12	Sales	Hani	Ziad
13	Sales	Aya	Salem
14	Sales	Nour	Jamal
15	Finance	Khaled	Mahmoud
16	Finance	Amira	Tariq
17	Finance	Sami	Walid
18	Technical Support	Bassem	Adnan
19	Technical Support	Rami	Ibrahim
20	Technical Support	Leen	Hatem
21	DBA	NULL	NULL

```sql
--Q3
select d.department_name, count(e.employee_id) AS "total employees"
from Departments d
join Employees e on d.department_id = e.department_id
group by d.department_name
having count (e.employee_id) > 1;
```

133 % ▼ ◂

▦ Results ▧ Messages

	department_name	total employees
1	Finance	3
2	Human Resources	2
3	Project Management	3
4	Quality Assurance	3
5	Sales	3
6	Software Development	3
7	Technical Support	3

```sql
--Q4
select  d.department_name, avg (s.salary) AS average_salary
from Departments d
JOIN Employees e on d.department_id = e.department_id
JOIN Salaries s on e.employee_id = s.employee_id
group by d.department_name
having avg(s.salary) > 1000;
```

133 %

▦ Results 📄 Messages

	department_name	average_salary
1	Finance	2750.000000
2	Human Resources	1500.000000
3	Project Management	3050.000000
4	Quality Assurance	1850.000000
5	Sales	2250.000000
6	Software Development	5750.000000
7	Technical Support	1650.000000

```sql
--Q5
select d.department_name,  count(s.employee_id) AS high_salary_count
from Departments d
join Employees e on d.department_id = e.department_id
join Salaries s on e.employee_id = s.employee_id
where s.salary > 5000
group by d.department_name
having count(s.employee_id) > 1;
```

133 %

▦ Results 📄 Messages

	department_name	high_salary_count
1	Software Development	2

```sql
--Q6
select max(s.salary) AS highest_salary
from Salaries s;
```

133 %

▦ Results 📄 Messages

	highest_salary
1	6000.00

```sql
-- Create the database
CREATE DATABASE SkySoftware;
GO

USE SkySoftware;
GO

-- Create Departments table
CREATE TABLE Departments (
    department_id INT IDENTITY(1,1) PRIMARY KEY,
    department_name NVARCHAR(100) NOT NULL
);

-- Create Employees table
CREATE TABLE Employees (
    employee_id INT IDENTITY(1,1) PRIMARY KEY,
    first_name NVARCHAR(50) NOT NULL,
    last_name NVARCHAR(50) NOT NULL,
    hire_date DATE NOT NULL DEFAULT GETDATE() ,
    department_id INT FOREIGN KEY REFERENCES Departments(department_id)

);


-- Create Salaries table
CREATE TABLE Salaries (
    salary_id INT IDENTITY(1,1) PRIMARY KEY,
    employee_id INT FOREIGN KEY REFERENCES Employees(employee_id),
    salary DECIMAL(10, 2) NOT NULL DEFAULT 500.00,
    start_date DATE NOT NULL,
    end_date DATE NULL
);



-- Insert data  into Departments
Insert  into Departments (department_name) VALUES
('Software Development'),
('Quality Assurance'),
('Project Management'),
('Human Resources'),
('Sales'),
('Finance'),
('Technical Support');
```

```sql
INSERT INTO Employees (first_name, last_name, department_id, hire_date) VALUES
('Ahnaf', 'Alnuman', 1, '2021-02-01'),
('Laila', 'Ahmad', 1, '2020-06-15'),
('Omar', 'Ahmad', 2, '2022-03-20'),
('Noor', 'Khalid', 2, '2021-09-05'),
('Sara', 'Ali', 3, '2019-11-12'),
('Fadi', 'Samir', 3, '2020-07-25'),
('Rana', 'Majed', 4, '2018-05-30'),
('Hani', 'Ziad', 5, '2022-01-18'),
('Aya', 'Salem', 5, '2021-04-10'),
('Khaled', 'Mahmoud', 6, '2020-08-15'),
('Amira', 'Tariq', 6, '2019-03-22'),
('Bassem', 'Adnan', 7, '2021-10-05'),
('Rami', 'Ibrahim', 7, '2020-12-01'),
('Lina', 'Fares', 1, '2023-01-10'),
('Tareq', 'Othman', 2, '2022-06-18'),
('Mona', 'Saad', 3, '2021-02-14'),
('Yara', 'Ali', 4, '2020-09-28'),
('Nour', 'Jamal', 5, '2023-03-19'),
('Sami', 'Walid', 6, '2022-11-05'),
('Leen', 'Hatem', 7, '2021-07-21');

insert into Salaries (employee_id, salary, start_date, end_date) VALUES
(1, 5500.00, '2021-02-01', NULL),
(2, 6000.00, '2020-06-15', NULL),
(3, 1800.00, '2022-03-20', NULL),
(4, 1900.00, '2021-09-05', NULL),
(5, 3000.00, '2019-11-12', NULL),
(6, 3100.00, '2020-07-25', NULL),
(7, 1500.00, '2018-05-30', NULL),
(8, 2200.00, '2022-01-18', NULL),
(9, 2300.00, '2021-04-10', NULL),
(10, 2800.00, '2020-08-15', NULL),
(11, 2700.00, '2019-03-22', NULL),
(12, 1600.00, '2021-10-05', NULL),
(13, 1700.00, '2020-12-01', NULL);
```

```sql
select *
from Departments , Employees , Salaries
```

	department_id	department_name	employee_id	first_name	last_name	hire_date	department_id	salary_id	employee_id	salary	start_date	end_date
1	1	Software Development	1	Ahnaf	Alnuman	2021-02-01	1	1	1	5500.00	2021-02-01	NULL
2	1	Software Development	2	Laila	Ahmad	2020-06-15	1	1	1	5500.00	2021-02-01	NULL
3	1	Software Development	3	Omar	Ahmad	2022-03-20	2	1	1	5500.00	2021-02-01	NULL
4	1	Software Development	4	Noor	Khalid	2021-09-05	2	1	1	5500.00	2021-02-01	NULL
5	1	Software Development	5	Sara	Ali	2019-11-12	3	1	1	5500.00	2021-02-01	NULL
6	1	Software Development	6	Fadi	Samir	2020-07-25	3	1	1	5500.00	2021-02-01	NULL
7	1	Software Development	7	Rana	Majed	2018-05-30	4	1	1	5500.00	2021-02-01	NULL
8	1	Software Development	8	Hani	Ziad	2022-01-18	5	1	1	5500.00	2021-02-01	NULL
9	1	Software Development	9	Aya	Salem	2021-04-10	5	1	1	5500.00	2021-02-01	NULL
10	1	Software Development	10	Khaled	Mahmoud	2020-08-15	6	1	1	5500.00	2021-02-01	NULL
11	1	Software Development	11	Amira	Tariq	2019-03-22	6	1	1	5500.00	2021-02-01	NULL
12	1	Software Development	12	Bassem	Adnan	2021-10-05	7	1	1	5500.00	2021-02-01	NULL
13	1	Software Development	13	Rami	Ibrahim	2020-12-01	7	1	1	5500.00	2021-02-01	NULL
14	1	Software Development	14	Lina	Fares	2023-01-10	1	1	1	5500.00	2021-02-01	NULL
15	1	Software Development	15	Tareq	Othman	2022-06-18	2	1	1	5500.00	2021-02-01	NULL
16	1	Software Development	16	Mona	Saad	2021-02-14	3	1	1	5500.00	2021-02-01	NULL
17	1	Software Development	17	Yara	Ali	2020-09-28	4	1	1	5500.00	2021-02-01	NULL
18	1	Software Development	18	Nour	Jamal	2023-03-19	5	1	1	5500.00	2021-02-01	NULL
19	1	Software Development	19	Sami	Walid	2022-11-05	6	1	1	5500.00	2021-02-01	NULL
20	1	Software Development	20	Leen	Hatem	2021-07-21	7	1	1	5500.00	2021-02-01	NULL
21	1	Software Development	1	Ahnaf	Alnuman	2021-02-01	1	2	2	6000.00	2020-06-15	NULL
22	1	Software Development	2	Laila	Ahmad	2020-06-15	1	2	2	6000.00	2020-06-15	NULL
23	1	Software Development	3	Omar	Ahmad	2022-03-20	2	2	2	6000.00	2020-06-15	NULL
24	1	Software Development	4	Noor	Khalid	2021-09-05	2	2	2	6000.00	2020-06-15	NULL
25	1	Software Development	5	Sara	Ali	2019-11-12	3	2	2	6000.00	2020-06-15	NULL
26	1	Software Development	6	Fadi	Samir	2020-07-25	3	2	2	6000.00	2020-06-15	NULL
27	1	Software Development	7	Rana	Majed	2018-05-30	4	2	2	6000.00	2020-06-15	NULL
28	1	Software Development	8	Hani	Ziad	2022-01-18	5	2	2	6000.00	2020-06-15	NULL
29	1	Software Development	9	Aya	Salem	2021-04-10	5	2	2	6000.00	2020-06-15	NULL
30	1	Software Development	10	Khaled	Mahmoud	2020-08-15	6	2	2	6000.00	2020-06-15	NULL
31	1	Software Development	11	Amira	Tariq	2019-03-22	6	2	2	6000.00	2020-06-15	NULL
32	1	Software Development	12	Bassem	Adnan	2021-10-05	7	2	2	6000.00	2020-06-15	NULL