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Microsoft Visual Studio Debug Console
Welcome To Employee Management System
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LINQ Queries (Using Method & Query syntax)
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Retrieve employees with a salary greater than 50,000 using both query syntax and method syntax.

Using Method Syntax:
Id : 1 Name: Alice Department : HR Salary : 60000 Joining Date : 20-05-2018 00:00:00
Id : 2 Name: Bob Department : IT Salary : 75000 Joining Date : 15-07-2019 00:00:00
Id : 4 Name: David Department : IT Salary : 90000 Joining Date : 12-06-2017 00:00:00
Id : 5 Name: Eve Department : Marketing Salary : 55000 Joining Date : 30-08-2021 00:00:00
Id : 7 Name: Grace Department : IT Salary : 97000 Joining Date : 22-02-2016 00:00:00
Id : 8 Name: Hank Department : Finance Salary : 52000 Joining Date : 03-11-2019 00:00:00
Id : 10 Name: Jack Department : Sales Salary : 68000 Joining Date : 07-09-2018 00:00:00
Id : 11 Name: Karen Department : HR Salary : 51000 Joining Date : 09-07-2015 00:00:00
Id : 12 Name: Leo Department : IT Salary : 62000 Joining Date : 19-05-2023 00:00:00
Id : 13 Name: Mia Department : Finance Salary : 58000 Joining Date : 02-10-2017 00:00:00
Id : 14 Name: Nathan Department : Marketing Salary : 60000 Joining Date : 05-12-2021 00:00:00
Id : 15 Name: Olivia Department : Sales Salary : 75000 Joining Date : 14-03-2016 00:00:00
Id : 17 Name: Quinn Department : IT Salary : 84000 Joining Date : 13-07-2020 00:00:00
Id : 19 Name: Steve Department : Sales Salary : 56000 Joining Date : 20-11-2019 00:00:00

Using Query Syntax:
Id : 1 Name: Alice Department : HR Salary : 60000 Joining Date : 20-05-2018 00:00:00
Id : 2 Name: Bob Department : IT Salary : 75000 Joining Date : 15-07-2019 00:00:00
Id : 4 Name: David Department : IT Salary : 90000 Joining Date : 12-06-2017 00:00:00
Id : 5 Name: Eve Department : Marketing Salary : 55000 Joining Date : 30-08-2021 00:00:00
Id : 7 Name: Grace Department : IT Salary : 97000 Joining Date : 22-02-2016 00:00:00
Id : 8 Name: Hank Department : Finance Salary : 52000 Joining Date : 03-11-2019 00:00:00
Id : 10 Name: Jack Department : Sales Salary : 68000 Joining Date : 07-09-2018 00:00:00
Id : 11 Name: Karen Department : HR Salary : 51000 Joining Date : 09-07-2015 00:00:00
Id : 12 Name: Leo Department : IT Salary : 62000 Joining Date : 19-05-2023 00:00:00
Id : 13 Name: Mia Department : Finance Salary : 58000 Joining Date : 02-10-2017 00:00:00
Id : 14 Name: Nathan Department : Marketing Salary : 60000 Joining Date : 05-12-2021 00:00:00
Id : 15 Name: Olivia Department : Sales Salary : 75000 Joining Date : 14-03-2016 00:00:00
Id : 17 Name: Quinn Department : IT Salary : 84000 Joining Date : 13-07-2020 00:00:00
Id : 19 Name: Steve Department : Sales Salary : 56000 Joining Date : 20-11-2019 00:00:00
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Retrieve employee names and salaries sorted by Department and then by Salary (descending).

{ Name = Peter, Department = , Salary = 50000 }
{ Name = Tom, Department = , Salary = 45000 }
{ Name = Mia, Department = Finance, Salary = 58000 }
{ Name = Hank, Department = Finance, Salary = 52000 }
{ Name = Charlie, Department = Finance, Salary = 50000 }
{ Name = Rachel, Department = Finance, Salary = 48000 }
{ Name = Alice, Department = HR, Salary = 60000 }
{ Name = Karen, Department = HR, Salary = 51000 }
{ Name = Frank, Department = HR, Salary = 48000 }
{ Name = Grace, Department = IT, Salary = 97000 }
{ Name = David, Department = IT, Salary = 90000 }
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Microsoft Visual Studio Debug Console
{ Name = David, Department = IT, Salary = 90000 }
{ Name = Quinn, Department = IT, Salary = 84000 }
{ Name = Bob, Department = IT, Salary = 75000 }
{ Name = Leo, Department = IT, Salary = 62000 }
{ Name = Nathan, Department = Marketing, Salary = 60000 }
{ Name = Eve, Department = Marketing, Salary = 55000 }
{ Name = Ivy, Department = Marketing, Salary = 47000 }
{ Name = Olivia, Department = Sales, Salary = 75000 }
{ Name = Jack, Department = Sales, Salary = 68000 }
{ Name = Steve, Department = Sales, Salary = 56000 }

using Query Syntax

{ Name = Peter, Department = , Salary = 50000 }
{ Name = Tom, Department = , Salary = 45000 }
{ Name = Mia, Department = Finance, Salary = 58000 }
{ Name = Hank, Department = Finance, Salary = 52000 }
{ Name = Charlie, Department = Finance, Salary = 50000 }
{ Name = Rachel, Department = Finance, Salary = 48000 }
{ Name = Alice, Department = HR, Salary = 60000 }
{ Name = Karen, Department = HR, Salary = 51000 }
{ Name = Frank, Department = HR, Salary = 48000 }
{ Name = Grace, Department = IT, Salary = 97000 }
{ Name = David, Department = IT, Salary = 90000 }
{ Name = Quinn, Department = IT, Salary = 84000 }
{ Name = Bob, Department = IT, Salary = 75000 }
{ Name = Leo, Department = IT, Salary = 62000 }
{ Name = Nathan, Department = Marketing, Salary = 60000 }
{ Name = Eve, Department = Marketing, Salary = 55000 }
{ Name = Ivy, Department = Marketing, Salary = 47000 }
{ Name = Olivia, Department = Sales, Salary = 75000 }
{ Name = Jack, Department = Sales, Salary = 68000 }
{ Name = Steve, Department = Sales, Salary = 56000 }

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Use Select to display employee names along with their joining year.

{ Name = Alice, JoiningDate = 20-05-2018 00:00:00 }
{ Name = Bob, JoiningDate = 15-07-2019 00:00:00 }
{ Name = Charlie, JoiningDate = 10-03-2020 00:00:00 }
{ Name = David, JoiningDate = 12-06-2017 00:00:00 }
{ Name = Eve, JoiningDate = 30-08-2021 00:00:00 }
{ Name = Frank, JoiningDate = 05-01-2022 00:00:00 }
{ Name = Grace, JoiningDate = 22-02-2016 00:00:00 }
{ Name = Hank, JoiningDate = 03-11-2019 00:00:00 }
{ Name = Ivy, JoiningDate = 18-04-2020 00:00:00 }
{ Name = Jack, JoiningDate = 07-09-2018 00:00:00 }
{ Name = Karen, JoiningDate = 09-07-2015 00:00:00 }
{ Name = Leo, JoiningDate = 19-05-2023 00:00:00 }
{ Name = Mia, JoiningDate = 02-10-2017 00:00:00 }
{ Name = Nathan, JoiningDate = 05-12-2021 00:00:00 }
{ Name = Olivia, JoiningDate = 14-03-2016 00:00:00 }
{ Name = Peter, JoiningDate = 25-06-2019 00:00:00 }
{ Name = Quinn, JoiningDate = 13-07-2020 00:00:00 }
{ Name = Rachel, JoiningDate = 11-10-2021 00:00:00 }
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Microsoft Visual Studio Debug Console
{ Name = Quinn, JoiningDate = 13-07-2020 00:00:00 }
{ Name = Rachel, JoiningDate = 11-10-2021 00:00:00 }
{ Name = Steve, JoiningDate = 20-11-2019 00:00:00 }
{ Name = Tom, JoiningDate = 28-03-2022 00:00:00 }

using Query Syntax

{ Name = Alice, JoiningDate = 20-05-2018 00:00:00 }
{ Name = Bob, JoiningDate = 15-07-2019 00:00:00 }
{ Name = Charlie, JoiningDate = 10-03-2020 00:00:00 }
{ Name = David, JoiningDate = 12-06-2017 00:00:00 }
{ Name = Eve, JoiningDate = 30-08-2021 00:00:00 }
{ Name = Frank, JoiningDate = 05-01-2022 00:00:00 }
{ Name = Grace, JoiningDate = 22-02-2016 00:00:00 }
{ Name = Hank, JoiningDate = 03-11-2019 00:00:00 }
{ Name = Ivy, JoiningDate = 18-04-2020 00:00:00 }
{ Name = Jack, JoiningDate = 07-09-2018 00:00:00 }
{ Name = Karen, JoiningDate = 09-07-2015 00:00:00 }
{ Name = Leo, JoiningDate = 19-05-2023 00:00:00 }
{ Name = Mia, JoiningDate = 02-10-2017 00:00:00 }
{ Name = Nathan, JoiningDate = 05-12-2021 00:00:00 }
{ Name = Olivia, JoiningDate = 14-03-2016 00:00:00 }
{ Name = Peter, JoiningDate = 25-06-2019 00:00:00 }
{ Name = Quinn, JoiningDate = 13-07-2020 00:00:00 }
{ Name = Rachel, JoiningDate = 11-10-2021 00:00:00 }
{ Name = Steve, JoiningDate = 20-11-2019 00:00:00 }
{ Name = Tom, JoiningDate = 28-03-2022 00:00:00 }

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Find the total, minimum, and average salary of employees.

Total salary: 1231000 , Minimum Salary ; 45000 , Average Salary : 61550

using Query Syntax

Total salary: 1231000 , Minimum Salary ; 45000 , Average Salary : 61550

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Group employees by department and display all names in each department.

Department : HR, Total employees in HR department :3
Alice
Frank
Karen
Department : IT, Total employees in IT department :5
Bob
David
Grace
Leo
Quinn
Department : Finance, Total employees in Finance department :4
Charlie
Hank
Mia
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Rachel
Department : Marketing, Total employees in Marketing department :3
Eve
Ivy
Nathan
Department : Sales, Total employees in Sales department :3
Jack
Olivia
Steve
Department : , Total employees in department :2
Peter
Tom

using Query Syntax

Department : HR, Total employees in HR department :3
Alice
Frank
Karen
Department : IT, Total employees in IT department :5
Bob
David
Grace
Leo
Quinn
Department : Finance, Total employees in Finance department :4
Charlie
Hank
Mia
Rachel
Department : Marketing, Total employees in Marketing department :3
Eve
Ivy
Nathan
Department : Sales, Total employees in Sales department :3
Jack
Olivia
Steve
Department : , Total employees in department :2
Peter
Tom

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Find the department with the highest average salary.

Department with Highest Salary is  IT with salary : 81600

using Query Syntax

Department with Highest Salary is  IT with salary : 81600

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Retrieve employees who joined after 2020.
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using Query Syntax

```
{ Id = 5, Name = Eve, JoiningDate = 30-08-2021 00:00:00 }
{ Id = 6, Name = Frank, JoiningDate = 05-01-2022 00:00:00 }
{ Id = 12, Name = Leo, JoiningDate = 19-05-2023 00:00:00 }
{ Id = 14, Name = Nathan, JoiningDate = 05-12-2021 00:00:00 }
{ Id = 18, Name = Rachel, JoiningDate = 11-10-2021 00:00:00 }
{ Id = 20, Name = Tom, JoiningDate = 28-03-2022 00:00:00 }
```

Find the oldest and newest employee based on joining date.

Oldest Employee of the Company : Karen with Joining Date : 09-07-2015 00:00:00

Newest Employee of the Company : Leo with Joining Date : 19-05-2023 00:00:00

using Query Syntax

Oldest Employee of the Company : Karen with Joining Date : 09-07-2015 00:00:00

Newest Employee of the Company : Leo with Joining Date : 19-05-2023 00:00:00

Find the total salary paid in each department.

```
Department : HR Total Salary : 159000
Department : IT Total Salary : 408000
Department : Finance Total Salary : 208000
Department : Marketing Total Salary : 162000
Department : Sales Total Salary : 199000
```

using Query Syntax

```
Department : HR Total Salary : 159000
Department : IT Total Salary : 408000
Department : Finance Total Salary : 208000
Department : Marketing Total Salary : 162000
Department : Sales Total Salary : 199000
```

Get employees who have no department assigned (handling nullable values).

Peter
Tom

using Query Syntax

Peter
Tom