[Course Overview](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live" \t "psplayer)

[Course Overview](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live)

[Hi everyone. My name is Steve Michelotti.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=5.53) [Welcome to my course, C# Design patterns:](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=7.97) [Mediator. I am a software engineer and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=10.62) [technologist, and I work at Microsoft. If](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=13) [you're a C# developer who wants to learn](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=15.82) [more about design patterns, then you're in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=17.59) [the right place. The mediator pattern](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=19.3) [provides a way to encapsulate interaction](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=21.39) [and communication between multiple objects](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=23.49) [and to do this with loose coupling](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=26.09) [regardless what type of application you're](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=28.51) [building. In this course, I'm going to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=29.68) [cover everything you'll need to be](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=31.92) [extremely productive implementing mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=33.61) [patterns in C# on day one. Some of the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=35.58) [major topics that we will cover include](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=38.74) [understanding what the mediator pattern is](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=41.04) [and why we care about it, implementing](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=43.19) [your own mediator patterns, multiple](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=45.73) [variations you might encounter with the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=48.06) [mediator pattern, and even more modern](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=50.2) [implementations of the pattern with the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=52.44) [mediate are open source library. By the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=53.8875) [end of this course, you'll be familiar not](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=56.51) [only with all the basics of the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=58.75) [pattern, but also several variations on](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=60.54) [the pattern. Before beginning this course,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=63.53) [you should feel comfortable with C# and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=65.97) [have some basic experience with](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=67.8) [introductory data structures. I hope](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=69.42) [you'll join me on this journey to learn](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=71.82) [how to use the mediator pattern with C#](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=73.46) [Design Patterns: Mediator course, on Pluralsight.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=e46720e0-3aae-4f6a-b109-709daa948359&clip=0&mode=live&start=75.54)

[Mediator Pattern](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live)

[The Mediator Pattern](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live)

[Hi, this is Steve Michelotti. Welcome to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=1.24) [my course on the mediator design pattern](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=3.79) [using C#. Expanding your knowledge to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=5.955) [include the canonical design patterns in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=8.58) [object‑oriented programming will be a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=10.48) [beneficial tool in your toolbox as you](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=12.46) [progress through your journey as a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=14.44) [developer. I'll start out with a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=16.65) [conceptual overview of the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=20.21) [pattern itself, what it is, and why we'd](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=22.05) [want to use it. We'll then jump quickly](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=24.48) [into code, and I'll show you a simple](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=27.07) [structural example first, followed by an](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=29) [implementation of a more real world](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=31.35) [example. After we implement the structural](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=33.455) [example, I'm going to show you multiple](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=35.72) [examples of a mediator pattern in practice](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=37.7) [so you get better depth on the various](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=39.825) [contexts in which you might observe the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=42.15) [mediator pattern in the real world. Okay,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=44.2) [first things first. What is the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=46.93) [pattern? Why do we care? What is this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=49.69) [useful for? A mediator pattern](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=52.18) [encapsulates how objects interact and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=54.54) [communicate with each other. This pattern](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=56.36) [promotes loose coupling of objects to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=58.95) [avoid an ugly dependency graph. The](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=61.9) [mediator pattern enables objects to avoid](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=64.27) [referring directly to each other by](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=66.47) [encapsulating communication in a central](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=68.95) [mediator object. Imagine we had 10 or 100](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=71.39) [or even a 1 million objects that each](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=75.17) [needs to communicate with each of the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=77.23) [other objects. If each of these objects](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=79.05) [had to refer and communicate to all other](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=81.64) [objects, this will get ugly in a hurry.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=84.18) [We'd have to keep track of all object](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=86.63) [references across all objects and keep](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=88.27) [them in sync at all times. Not an easy](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=90.91) [task. But with the mediator pattern, we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=93.31) [create a central mediator object. This](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=96.03) [single object has the sole responsibility](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=98.64) [for maintaining the references to the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=101.22) [objects in our network, and I'm using the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=103.24) [term network conceptually here. And it is](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=105.26) [also responsible for relaying any messages](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=108.48) [or communication between and to these](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=111.07) [objects. You can think of a mediator sort](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=113.15) [of like a communication hub. A mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=116.02) [pattern commonly consists of these four](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=118.46) [components, a mediator, a concrete](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=120.43) [mediator, a colleague, and one or more](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=123.21) [concrete colleagues. The mediator defines](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=126.08) [the communication between colleagues, and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=130.24) [it's typically an abstract‑based class,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=132.62) [meaning it can't be instantiated directly,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=135) [but must have another concrete class](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=137.29) [inherited. The concrete mediator inherits](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=139.04) [from the base mediator and implements the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=142.7) [communication that was essentially defined](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=145.29) [by the contract or base methods in the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=147.56) [mediator. A colleague is typically an](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=150.46) [abstract base class that represents a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=153.23) [related collection of objects. It](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=155.92) [references only its mediator and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=158.03) [communicates with it. You can think of](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=160.26) [this as bidirectional between the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=162.3) [and the colleague. The concrete colleagues](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=164.71) [are simply different types of sub‑classes](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=167.52) [that inherit from the abstract colleague](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=170.01) [base class and defines specific behavior.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=171.83) [Just one more thing I want to interject](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=175.04) [here. What you see here is a very close](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=176.63) [match to the canonical mediator pattern](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=178.99) [originally defined in the Gang of Four](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=181.59) [book. But remember, patterns can have many](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=183.31) [different variations. Patterns are just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=186.32) [guide rails, not prescriptive](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=188.49) [implementation rules that are set in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=190.42) [stone. So, for example, you could define a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=192.2) [class to be some sort of mediator and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=195.29) [another class to be some sort of colleague](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=197.52) [without the need for the mediator and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=199.41) [colleague objects having to inherit from](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=201.4) [an abstract base class. And you'd have no](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=203.38) [problem convincing me that that's a valid](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=205.82) [mediator pattern. Remember, these are just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=207.73) [patterns, not strict implementation rules.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=210.04) [Many different implementations are](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=213.08) [acceptable. And remember, one of the main](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=214.82) [benefits of the mediator pattern is the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=217.41) [ability to encapsulate object interaction](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=219.35) [with loose coupling between objects. Now](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=221.76) [that you have solid background context for](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=223.96) [the mediator pattern, let's start diving into code.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=0&mode=live&start=225.82)

[Implementing the Mediator Pattern](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live)

[It's time to build our first Mediator, and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=1.24) [we're going to start out with a somewhat](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=3.47) [contrived Structural example before diving](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=4.77) [into some real‑world examples. Here I have](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=7.12) [a simple .NET Core 3.0 console application](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=10.05) [in Visual Studio 2019 with nothing added](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=13.280000000000001) [except the default Program.cs. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=16.6) [create a folder called Structural. And if](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=19.85) [anyone wonders how I created that folder,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=24.71) [I'm using the Add New File Visual Studio](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=26.83) [extension, which allows me to create](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=29.02) [folders and new files very quickly without](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=30.83) [having to do a bunch of right‑clicking, so](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=32.65) [you'll see me use that several times](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=34.46) [during the course. Let's now add a file](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=35.78) [called Mediator.cs to that new folder, and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=38.56) [in here I'm going to add a method called](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=43.86) [Send. This is just an abstract method, and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=45.38) [we have to make the class abstract as](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=48.23) [well. Now it wants us to add a class for](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=50.1) [Colleagues, so let's do that. Similarly,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=52.81) [let's make this abstract. In here, you can](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=56.33) [see I've added a little bit of](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=59.78) [implementation. The first thing is that we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=61.15) [have a constructor for the Colleague that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=64.11) [takes in a mediator and sets that on line](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=65.68) [15 to the protected member on line 11.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=68.06) [Remember, you heard me mention before that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=70.73) [the mediator knows about all the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=72.39) [colleagues and each colleague knows about](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=73.96) [its single mediator. Then you're gonna see](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=76.03) [I have a Send method which will send](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=78.78) [messages to that mediator, and we have an](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=80.96) [abstract HandleNotification method at the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=83.45) [bottom. Think of this as when we need to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=85.27) [receive messages, so we have both Send and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=87.36) [Receive. Let's add a concrete Colleague](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=89.52) [that inherits from this abstract Colleague](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=91.78) [class. We have Colleague1. Let's inherit](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=93.92) [from Colleague. We have a red squiggle](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=97.82) [because we need to implement a few things](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=100.94) [on the abstract class. First, let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=102.47) [generate that constructor. Second, we have](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=105.75) [to implement the abstract class itself.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=108.91) [The shortcut I've been doing here is](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=110.82) [Ctrl+dot. So I'm going to do Implement](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=112.03) [Abstract Class. And then we have to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=114.51) [provide some implementation in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=116.77) [HandleNotification, and very simple here,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=118.36) [I'm just putting a Console.WriteLine that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=120.52) [Colleague1 has handled the notification.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=122.31) [Let's create Colleague2 that does the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=125.04) [exact same thing, except we'll just change](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=127.19) [the method slightly. I'm gonna copy and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=129.38) [paste to make that happen. So just copy](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=131.45) [and paste Colleague1 to Colleague2, change](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=136.94) [the message, and we'll move that to its](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=139.04) [own file. Now let's implement the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=140.73) [ConcreteMediator. We're going to inherit](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=143.38) [from the abstract Mediator. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=147.11) [implement the abstract class. Basically,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=151.27) [we have to implement the Send method.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=154.06) [Before we do that, let's make sure we have](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=155.66) [references to Colleagues. Now I'm doing](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=157.41) [this in a pretty structural and mechanical](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=159.46) [way, I'm just explicitly referring to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=161.4) [Colleague1 and Colleague2. We'll see some](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=163.44) [different ways we can do that in a few](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=165.76) [minutes, but for right now I'm making it](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=167.07) [super explicit. Now let's implement the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=168.72) [Send method. What we can see here is that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=170.535) [to send a message, if it's Colleague1](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=172.75) [sending it, the Mediator says, send it to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=174.72) [Colleague2, we'll let them handle the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=176.97) [notification. The HandleNotification when](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=178.65) [we invoke that is essentially Colleague2](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=181.36) [receiving it. Similarly, if it's not](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=183.57) [Colleague1, that must mean it's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=185.47) [Colleague2, so we'll let Colleague1 handle](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=186.76) [it. It's like them sending messages to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=188.73) [each other. Now let's go back to our](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=190.32) [Program.cs to use all this. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=191.66) [instantiate the ConcreteMediator. Then we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=194.4) [have to have some new Colleagues. I'm just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=198.23) [going to instantiate them directly, c1 and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=199.97) [c2, notice we're passing the mediator into](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=201.81) [each Colleague. But we also have to make](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=204.7) [sure the mediator knows about the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=206.33) [Colleagues. So you can see here is where](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=207.66) [we're setting up sort of the bidirectional](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=209.5) [references, so to speak. With that in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=211.74) [place, we can send messages. So, for](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=213.55) [example, c1 can send a message and c2 can](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=215.42) [send messages. Let's go ahead and run this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=221.3525) [now, and you can see Colleague2 receives a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=225.26) [notification message, the message was,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=228.31) [Hello, World from c1, and c1 receives a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=230.83) [message, hi there, which was from c2. This](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=233.77) [Structural example was really close to the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=236.1) [original pattern that was introduced many](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=237.7) [years ago, but there are alternatives to consider that we'll examine next.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=1&mode=live&start=239.48)

[Alternative Considerations](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live)

[An important thing to keep in mind, and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=1.28) [you've heard me mention this before, is](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=3.14) [that these are patterns, not prescriptive](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=5.05) [code examples that can only have one true](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=7.58) [correct implementation. You'll see slight](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=9.97) [variations in the patterns, and it's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=12.13) [important to be able to identify them as](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=13.95) [different variations that can have their](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=16) [own pros and cons. Let's change our](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=17.61) [initial implementation a little bit. Now,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=19.91) [one thing about our original](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=22.0875) [implementation was that the concrete](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=23.61) [mediator had explicit references to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=25.86) [Colleague1 and 2. Well, this is great if](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=27.96) [we want to be super clear on what the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=30.31) [colleagues are, but it's not so good if](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=31.67) [we're not sure how many colleagues we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=33.56) [might have. What if we have 10 or 100? I](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=34.93) [don't necessarily want to add 100](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=37.22) [properties for that. So we're going to add](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=38.43) [a Register method to the mediator and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=40.07) [provide an alternate way to set up those](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=42.26) [bidirectional references. In a base](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=44.400000000000006) [Colleague class, I'm going to comment out](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=48.05) [this constructor. Before I comment it out,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=49.46) [I copied it to my clipboard. Rather than](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=52.67) [just deleting the constructor, I'm going](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=54.89) [to leave it in there, comment it out, so](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=56.269999999999996) [for the people that download the course](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=58.36) [code samples, they'll be able to recreate](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=59.93) [everything I've done. Now the reason I](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=62.02) [copied it is because I actually want to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=63.96) [create an explicit method here and just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=65.48) [rename it. We're going to make this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=67.24) [internal, and we're just going to call it](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=68.85) [SetMediator. So basically doing the same](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=71.34) [thing, but not a requirement of the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=74.4) [constructor anymore. Then for Colleague1](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=75.95) [and 2, we can comment out the constructor.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=79.33) [Now back in the ConcreteMediator, we're](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=80.97) [going to comment out these two explicit](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=86.9) [references, and I'm going to replace it](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=88.96) [with a list of colleagues. Now we're going](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=91.99) [to add a method to register new](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=94.23) [colleagues. Now we have one place where we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=96.04) [can set up the bidirectional references.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=99.1) [We're going to call that SetMediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=101.74) [method that we just created and add it to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=103.56) [the list of colleagues. Now let's scroll](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=106.36) [down to this Send method and let's comment](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=108.71) [out the original implementation. Again,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=110.9) [normally I would delete it, but I'm just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=114.2) [commenting it out because I want you to be](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=115.26) [able to recreate all my code. We just need](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=116.83) [to send the notification to all colleagues](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=119.37) [who aren't the current colleague. And we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=121.38) [can just do this with one line of code. So](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=124.11) [we're still invoking the handle](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=125.95) [notification. What's happening here is](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=127.14) [we're saying where it's not the current](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=129.13) [colleague that is sending the message,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=131.41) [find all the other colleagues, essentially](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=133.35) [foreach over all the other colleagues, and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=135.67) [invoke the HandleNotification method. Now](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=138.34) [let's flip back to our Program.cs, we can](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=141.92) [comment out these two lines. We also don't](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=144.59) [need the mediator sent into the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=147.99) [constructor anymore, and now we can just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=149.24) [call the Register method. Let's run the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=152.16) [code to make sure it all still runs](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=154.17) [exactly as it did before. And sure enough,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=156.31) [behavior is exactly the same. This has](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=159.39) [made things maybe a little bit more](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=161.93) [elegant, but we haven't necessarily saved](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=163.63) [any lines of code, but it does give the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=166.22) [colleagues control as to if and when they](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=168.38) [register themselves with a mediator. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=171.05) [look at a slight variation where we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=173.35) [delegate not only the establishing of the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=174.82) [bidirectional references to the mediator,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=176.7) [but also the creation of the colleagues.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=178.7) [So back in the CreateMediator class, we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=181.12) [already have the Register method. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=183.34) [add a new method called CreateColleague.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=185.78) [Now notice we're using generics where T is](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=188.24) [some type of Colleague object, and we're](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=190.84) [saying T has a default constructor, which](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=193.5) [enables us to do this. So we are](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=195.59) [delegating the instantiation of that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=198.67) [colleague to this method. Now we can](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=200.84) [invoke the SetMediator, and we can, of](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=203.05) [course, also add it to the collection of](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=205.5) [colleagues, and let's return it. Now when](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=207.52) [we go back to Program.cs. We can comment](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=212.315) [out all of this, and let's see what we can](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=214.44) [do to replace it. Now we just have two](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=216.7) [lines of code. One will create the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=219.54) [Colleagues c1, we're telling it what type](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=222.23) [we want to create, it encapsulates all in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=224.63) [one place the creation and the setting up](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=226.85) [of the bidirectional communication. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=229.71) [run this again to make sure the behaviors](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=231.7) [are the same. And sure enough, it is.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=233.035) [Remember, these are just patterns. There's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=236.14999999999998) [multiple ways to do things. In reality,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=239.07) [you're going to see different variations](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=241.345) [of this pattern across different code](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=243.31) [bases, so it's good to be aware of some potential variations you might see.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=2&mode=live&start=245.26)

[Mediator Example - Chat App](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live)

[Now that we've looked at a mechanical](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=1.24) [structural example, let's use a paradigm](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=2.88) [that's a little more real world. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=5.58) [revisit the diagram I showed in the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=8.38) [beginning when we were looking at the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=9.86) [structure of the Mediator pattern, but now](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=11.19) [you can see we've got some real‑world](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=13.69) [constructs here. The Chatroom will be the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=15.51) [abstract base Mediator, and the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=18.38) [TeamChatroom will inherit from it and be](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=20.48) [where we implement the primary code. The](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=23.07) [Chatroom has a reference to all team](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=25.58) [members in the chat, and the team members](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=27.33) [are the colleagues. We can have different](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=29.68) [types of colleagues. The Developer and the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=31.89) [Testers are all concrete colleagues. They](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=34.3) [inherit from the TeamMember base object](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=36.83) [and represent different types of team](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=39.09) [members or, in this case, different types](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=40.93) [of colleagues. Here I am back in Visual](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=42.84) [Studio. We're going to take this code and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=45.64) [we're going to set it aside. I'm going to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=47.75) [use the Extract method, and we're just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=50.87) [going to set it aside into its own method.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=54.76) [Again, I'm not going to delete it because](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=56.825) [for the people that download the course](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=59.36) [samples, I want them to be able to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=60.5) [recreate a whole course. But let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=62.09) [collapse it, and we'll set it aside so it](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=65.07) [won't be a distractor for our next](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=67.61) [example. Let's make a new folder called](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=68.94) [ChatApp and let's add a class to it called](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=71.44) [Chatroom.cs. Let's make this abstract](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=74.29) [because it's our abstract Mediator, and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=78.52) [let's add some base methods. We'll](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=81.98) [register a new TeamMember, and Send will](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=84.38) [be sending chat messages. Let's add the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=87.24) [class for TeamMember. Let's make this one](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=89.49) [abstract. This is our abstract colleague.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=92.92) [We're just going to add a constructor that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=96.54) [sets the name of a TeamMember, and then](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=98.07) [that's a read‑only property for name on](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=100.53) [line. 16. Now let's use a similar](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=102.19999999999999) [technique we used in the last structural](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=104.33) [example, where we'll essentially use a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=106.03) [setter method to set the Mediator, which](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=107.99) [is a Chatroom for this colleague. And this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=109.92) [Chatroom member, doesn't exist yet, so](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=112.41) [let's generate it. You can see it](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=114.68) [generated it and put it on line. 11. Now](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=117.93) [we need the Send and Receive methods. Send](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=121.05) [will just be sending a message to the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=123.14750000000001) [mediator, in this case a Chatroom, and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=125.15) [Receive will be like receiving a chat](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=127.47) [message. Now that we've implemented our](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=129.33) [abstract base classes, let's go implement](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=131.57) [our concrete classes, starting with our](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=134.2) [concrete Mediator. Let's inherit from](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=136.71) [Chatroom. Let's implement the abstract](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=139.97) [class. Let's add a private list of team](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=143.73) [members. Let's implement the Register](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=147.1) [method next. Once again, you'll see the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=149.46) [bidirectional references being set up,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=151.99) [similar to what we did before. Now we'll](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=153.82) [put code into the Send method. Simple loop](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=156.16) [over the members, invoking the Receive](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=158.66) [method of each one, sending in a message.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=160.79) [Let's also add a convenience method to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=164.24) [register multiple team members at once. So](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=166.17) [instead of just one Register method, which](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=169.62) [we can see on line. 13, what I'm doing](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=171.59) [here on line 24 is, I have a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=173.81) [RegisterMembers method, which takes any](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=175.63) [number of team members, loops over them,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=178.36) [and invokes the Register method that's on](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=180.58) [line. 13. Now let's add a concrete](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=182.89) [colleague. Let's start by adding a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=184.83) [Developer team member. This will inherit](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=186.79) [from TeamMember. Let's generate the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=190.25) [constructor and override the Receive](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=194.23) [method. And let's put some code in here](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=196.7) [for the Developer. We're just saying the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=198.46) [name of the developer receiving the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=199.89) [message. You can see I'm using the nameof](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=201.65) [operator there just to show that it is a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=204.07) [developer and they've received it. And](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=205.67) [then we'll just maintain the call to the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=207.65) [base class Receive, which simply outputs](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=209.2) [the message. Let's copy and paste this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=211.47) [entire class and make a Tester team](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=213.41) [member. So this class is called Tester.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=215.41) [I've renamed the constructor for Tester.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=221.56) [In the nameof operator on line 30 we've](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=223.51) [added Tester. And let's add this to its](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=226.01) [own cs file. Now back in Program.cs, let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=228.14) [put the code in for our initial chat. Now,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=233.11) [just put in a bunch of code here, so let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=236.325) [walk through this one by one. First off,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=238.03) [let's revolve the namespace to get rid of](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=241.11) [the red squiggles. On line 11 I've](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=242.9) [instantiated a new chat room. Lines. 13](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=246.54) [through 17, I'm creating five team](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=250.11) [members. The first three are developers,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=253) [Steve, Justin, and Jenna. And the last two](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=255.12) [are testers, Kim and Julia. And then on](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=257.61) [line 18 I call the RegisterMembers method,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=260.27) [where I can send in any arbitrary number](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=262.83000000000004) [of team members. That's the convenience](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=264.81) [method that just allows us a view that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=266.58) [with one line of code. Then Steve says,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=268.26) [Hey, everyone we're going to be deploying](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=270.19) [at 2pm. today. And Kim response, Ok,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=272.08) [thanks for letting us know. Let's run the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=274.81) [app. And sure enough, you can see the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=276.79) [first five lines, all five team members](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=279.36) [have received the message from Steve](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=282.35) [saying, hey, everyone, we're deploying.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=284.09) [And then we have another five lines where](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=286.14) [all five team members receive the message](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=288.07) [from Kim saying, okay, thanks for letting](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=290.36) [us know. Now let's say we want to be able](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=292.07) [to only send to sub‑team members. For](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=294.63) [example, let's say we just want to send to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=298.47) [the developers, or just sent to the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=299.93) [testers. I'm going to come back into the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=301.32) [base class here for Chatroom.cs and add a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=303.23) [SendTo method. This looks a lot like the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=305.78) [Send method, but notice that we have a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=308.27) [generic type constraint of T, where T must](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=310.97) [be a TeamMember. So we're either going to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=313.55) [send to developers or send to testers.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=315.28) [Back in TeamChatroom, let's implement](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=318.61) [this. We're going to copy the line 21 from](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=321.25) [Send, and we're going to paste it right](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=324.66) [here. But the difference is that we only](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=327.39) [want to send this to the type that's being](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=329.54) [requested, either developers or testers.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=331.9) [So we're going to use the ofType operator.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=334.11) [I should say the ofType method, and I'm](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=336.70500000000004) [going to call ToList on it, just so we can](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=340.44) [keep using that for each method, which](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=342.53) [only exists on generic list. And let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=344.07) [make sure the TeamMember class has this as](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=346.44) [well. So we're just having a SendTo method](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=349.47) [on the TeamMember, which sends along to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=352.88) [the chatroom.SendTo method. We just pass](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=354.95) [it along to the Mediator, which is the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=357.01) [chatroom. Back in the Program.cs., let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=359.03) [see how we can use this. And on line 24](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=362.28) [you can see that Steve is just sending a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=364.415) [message to his other developers to say,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=367.21) [Make sure you execute your unit tests](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=369.53499999999997) [before checking in! Let's run it and see](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=371.24) [what happens. And sure enough, you can see](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=373.5) [right at the bottom there, only three](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=375.98) [lines, the three developers have received](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=377.87) [the message from Steve saying, Make sure](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=380.57) [you run your unit tests. Again, this is](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=382.3) [just to show you some different examples](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=384.87) [to bring the concepts home. In the real](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=386.77) [world, you potentially might see some different variations.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=3&mode=live&start=388.65)

[Mediator Example - Location Proximity](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live)

[In our last more real‑world example, I](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=1.34) [showed a lightweight chat application with](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=3.98) [the C# Console App. But I certainly don't](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=5.83) [want to give you the impression that the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=8.11) [mediator pattern is only good for chat](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=9.39) [applications. Let's look at another](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=11.22) [example where we want colleague objects to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=13.28) [communicate their position to each other.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=15.93) [This example will be a little more](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=18.08) [advanced since you're now familiar with](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=19.74) [the mediator concepts. I'll use a C#](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=21.74) [Windows Forms application on .NET Core 3,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=24.25) [and it will be a slightly generic example,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=27.73) [but you'll see how you can apply to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=29.5) [different domains. Now I'm actually going](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=31.11) [to collapse this project here and add a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=34.355000000000004) [whole new project to the existing](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=36.12) [solution. We're going to make this a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=37.57) [Windows Form App with .NET Core, which now](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=41.03) [supports Windows Forms. And we have Form1.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=44.32) [And you noticed I named that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=50.19) [MarkerPositions. We're going to have](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=52.26) [markers that are the colleagues that need](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=54.44) [to communicate their position to each](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=56.57) [other. When one marker is on the move,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=58.01) [it'll communicate its position in real](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=60.6) [time to the other markers. These markers](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=62.27) [could be vehicles in traffic, airplanes in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=64.89) [an air traffic control situation, or a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=67.33000000000001) [team of people that want to communicate](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=69.35) [their GPS position to other team members.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=70.8) [This will be just a simple example to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=73.27) [illustrate the concept. Let's start out by](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=75.22) [adding a class called MarkerMediator.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=77.71) [We're going to dispense with the formality](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=82.49) [of creating abstract‑based classes and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=84.32) [jump right to a concrete mediator. Now I](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=86.34) [know I just added a lot of code here, but](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=88.88) [you're actually going to be already very](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=90.85) [familiar with almost all of it. Line 11,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=92.38) [we have a list of markers. Those are the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=95.34) [colleagues. We have a CreateMarker method,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=96.91) [which, similar to what you saw before,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=100.14) [will encapsulate the creation of new](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=101.5575) [markers and setting up the bidirectional](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=103.56) [references. And we also have a Send method](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=106.04) [where we're sending the point, that's the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=108.505) [location, and which marker is sending it.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=110.14) [It's going to loop over all markers, get](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=112.94) [all markers except for the current one,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=115.26) [and invoke the ReceiveLocation method.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=117.31) [Let's get rid of some of these red](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=121) [squiggles, starting out with Point. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=122.3) [resolve the namespace, System.Drawing. Now](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=124.68) [the other red squiggles are for the Marker](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=128.94) [class that doesn't exist yet, so let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=130.84) [create that. I'm actually going to have](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=132.1) [this inherit from the Label control, which](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=135.25) [is in the System.Windows.Forms namespace.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=138.84) [This is just for convenience of the demo.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=140.95) [Now I have a bunch of code to implement](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=143.24) [here, so let's walk through it step by](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=144.81) [step. First thing is, you've seen this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=146.44) [before. We have a SetMediator method,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=148.93) [which sets a private mediator reference.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=151.38) [That member is on line 12. This is the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=154.25) [constructor for the marker. We're just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=157.54) [sending some initial text and some](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=159.5) [alignment. We're also setting up a couple](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=160.92) [of event handlers for MouseDown and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=163.22) [MouseMove because I'm going to be dragging](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=165.28) [this marker on the screen. So let's go](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=167.47) [implement MouseDown and MouseMove next.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=169.65) [Let's resolve the namespace for Point. On](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=172.89) [MouseDown, we need to capture the position](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=176.99) [of the mouse that is dragging the current](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=178.17) [marker. In fact, let's move line 28, that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=180.06) [member for mouseDownLocation, up to the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=183.06) [top just to make it consistent with our](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=185.25) [other code. So in the MouseDown, that's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=187.18) [going to essentially start the dragging](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=191.45) [operation. We check to see if is it the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=192.73) [left mouse button dragging? Yes, set the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=194.47) [point. Now let's implement MouseMove. In](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=197.23) [the MouseMove, we're going to make sure](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=200.46) [that while we're dragging, the position of](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=202.51) [the marker is in sync with the dragging](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=204.23) [mouse. We're going to continuously send](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=206.325) [the location to the mediator. So line 43](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=209.38) [and 44, we're just setting the left and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=213.14499999999998) [the top. And before that, line 42, we're](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=215.32) [just showing the text is going to be the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=218.07) [XY coordinates of the location. But then](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=219.39) [on line 45, this is where we make the call](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=222.49) [to the mediator.Send, very similar to what](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=225.03) [you've seen us do before. The final step](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=227.55) [is we need to implement the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=230.11) [ReceiveLocation method for the marker so](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=231.19) [that it can receive location notifications](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=234.34) [from other markers that are moving. So if](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=237.46) [we look at the code that I just put in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=240.87) [here in the ReceiveLocation, line 51](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=242.47) [calculates the distance. The CalcDistance](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=245.2) [method is actually a local function, which](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=248.49) [is a relatively new feature that was added](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=251.14) [in C# 7. CalcDistance is literally just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=253.08) [the formula for distance that we've been](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=256.64) [using since middle school and high school.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=258.38) [XY coordinates, we're squaring them,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=261.54) [meaning power of 2, and we're taking the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=264.33) [square root of that. Once we calculate the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=266.24) [distance, we do a check. If the distance](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=268.93) [is less than 100 and the BackColor is not](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=271.08) [already red, make it red. Also if the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=273.52) [distance is greater than 100 and is not](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=276.21) [already green, make it green. Now this is](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=278.18) [coming along pretty well at this point. So](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=280.26) [now we just need to implement the actual](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=282.28) [form. Our mediator and our colleagues are](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=283.96) [basically complete. I'm going to flip over](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=287.79) [here to the form, and the form is going to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=290.32) [host the mediator. So we've got the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=292.35) [MarkerMediator, and we're also going to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=294.28) [add a button. Notice I've called it](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=296.26) [addButton. When we click it, it's just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=298.17) [going to add a new marker. Let's add some](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=300.68) [code in here to theForm1 constructor. Now](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=303.28) [the code I just added, I'm just sending](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=305.88) [some basic properties of that addButton.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=307.91) [We're instantiating it. We're adding a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=309.815) [click handler. We just set the text of the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=312.08) [button to say Add Marker. And we're just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=314.45) [docking it to the bottom of the form and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=316.61) [adding this addButton to the control](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=319.08) [itself. So nothing that interesting here,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=320.7) [just setting up the button. So the last](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=322.85) [thing is we need to implement this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=325.23) [OnAddClick handler. And we just make a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=326.57) [call to the mediator.CreateMarker. At this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=329.8) [point, m is the variable for the marker,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=332.02) [and we're adding it to the form itself. At](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=334.765) [this point, it's already got the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=337.35) [bidirectional references set up between](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=338.4) [itself and the mediator. Every time we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=340.68) [click this button, a new marker will be](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=343.59) [added that's already registered with the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=345.18) [mediator. And like I said, we'll add it to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=346.7) [the form. Now we've added a lot of code](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=348.61) [here. Let's go run it and see it in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=350.45) [action. Let's make sure to set this as my](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=352.58) [startup project, and now we can run it.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=355.8) [Okay, here's my form. It doesn't look like](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=360.34) [much so far. You can see we have our Add](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=362.28) [Marker button that's docked to the bottom.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=364.92) [Let's go ahead and click it. And when I do](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=367.13) [that, we have a marker that's added to the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=369.38) [top saying Drag me. I can drag it around.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=371.42) [And as I drag it, you can see the X and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=373.85) [the Y coordinate is changing. Now let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=375.485) [add another marker or another colleague.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=378.5) [Now as I drag this one, we can see that if](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=382.52) [it's more than 100 away, the first one](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=384.15) [turned green. As I get closer, it turns](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=385.7) [red. Faraway green, closer red. You can](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=387.44) [see we can move it all around the screen.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=391.04) [It's getting those instant notifications.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=392.5) [So let's move that about right here. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=394.59) [keep it green. Let's add another marker.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=398.02) [Now they are both turning. So we can see](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=401.33) [red, green, depending on where it is. Both](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=403.26) [of these other colleagues are getting](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=406.48) [real‑time notifications as this is being](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=408.12) [dragged around the screen. So let's leave](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=410.01) [this one right here, let's say. Now](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=412.06) [they're both green. Let's add another](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=414.67) [marker. Sure enough, you can see all these](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=416.45) [colors changing. Let's leave it right](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=418.54) [here, and we can add one final marker. And](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=420.63) [as you can see, all of them are changing.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=424.39) [All these colleagues are receiving](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=426.25) [real‑time notifications as this is being](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=427.72) [dragged around the screen to where this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=430.77) [location is. This is just another](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=432.46) [conceptual example to demonstrate how you](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=435.51) [might incorporate a mediator pattern into different types of C# applications.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=4&mode=live&start=437.43)

[MediatR](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live)

[In the last couple of years, there is an](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=1.2) [open source library that has risen in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=2.84) [popularity in the C# world called MediatR](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=4.48) [by Jimmy Bogard. It describes itself as a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=7.74) [simple, unambitious mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=11.02) [implementation in .NET. At the time of](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=13.31) [this recording, the MediatR NuGet package](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=15.74) [has over 7 million downloads. This](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=18.01) [mediator library actually has quite a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=20.72) [different implementation than the original](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=22.76) [Gang of Four mediator design pattern. But](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=24.71) [that's not a bad thing; in fact, that's a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=27.11) [good thing. And it further illustrates the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=28.83) [point I've tried to drive home multiple](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=31.1) [times, which is that design patterns are](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=33.36) [patterns that can take many different](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=35.84) [forms. If you were building a stateful](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=38.24) [chat application like the one we've done](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=40.345) [previously, this library is probably not](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=42.14) [the library you'd use to do that type of](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=44.38) [implementation. Where MediatR really](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=46.05) [shines is processing messages, both send](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=49.22) [and receive style messages, as well as](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=52.69) [broadcast or command style messages. And](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=54.58) [MediatR ensures that these messages are](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=57.49) [routed to the appropriate places. So you](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=60.43) [might think of it as a little more of an](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=63.11) [in‑memory messaging system. The MediatR](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=65.19) [library can be found here on GitHub, and,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=69.19) [of course, on NuGet. The library has many](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=71.95) [features, and we could do an entire](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=76.95) [Pluralsight course on just this library,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=78.68) [but that's out of scope for this course.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=80.785) [The MediatR library is most commonly used](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=83.26) [in a vertical slices architecture, which](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=85.3) [I'll show momentarily. But for our](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=87.99) [purposes here, my goal is not to show you](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=90.06) [how to use the entire MediatR library, but](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=92.54) [just to give the most basic introduction,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=95.87) [so you get some exposure to yet another](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=97.495) [flavor of the mediator pattern. Before](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=99.73) [diving into code, let me give a quick](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=103.09) [sneak peek as to what we'll build. We're](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=105.2) [going to use an ASP.NET Web API](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=107.41) [Controller, which has a mediator object](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=110.21) [provided by the MediatR library. The API](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=112.59) [Controller will pass a RequestQuery object](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=115.63) [into the mediator, and the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=118.28) [coordinates the logic of what to do next.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=120.44) [Specifically, it will pick the correct](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=123.21) [handler that should be invoked for the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=125.16) [current RequestQuery object. The handler](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=127.61) [will perform the primary business logic to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=130.22) [process the request, and it'll return a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=132.6) [response message object to the mediator,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=134.89) [which the mediator will pass back to the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=137.8) [API Controller to be returned. Let me show](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=139.54) [what I just described with a simple](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=142.21) [activity diagram. We have our API](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=144.09) [controller. It's going to have this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=146.64) [RequestQuery object, think of it is just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=149.17) [like an ID parameter. It's going to send](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=152.13) [this RequestQuery object to the mediator.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=155.02) [The mediator decides which handler to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=157.74) [invoke and sends this object onto that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=159.84) [handler. The handler does the business](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=162.09) [logic it needs, creates the response](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=164.61) [objects it's supposed to create, and sends](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=166.25) [us back to the mediator. The mediator will](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=168.45) [then send it back to the API Controller.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=170.94) [Let's go ahead and create this now. I'm](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=173.98) [going to add a new project to my existing](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=176.82) [solution, ASP.NET Core Web Application.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=178.86) [Let's call this MediatRDemo. And we're](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=184.79) [just doing a simple Web API, so Web API](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=190.29) [project is the one we want. By default,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=192.12) [this has a WeatherForecastController,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=196.65) [which we're going to go ahead and delete.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=198.16) [And the WeatherForecast object, we'll](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=200.74) [delete this as well. And we're going to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=202.03) [add a few NuGet packages next. There it](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=204.74) [is, MediatR, 7 million downloads. I'm also](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=209.47) [going to install the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=214.7) [Microsoft.DependencyInjection Library for](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=215.83) [it to make the dependency injection a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=218.14) [little bit easier. I also want to install](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=219.34) [the EntityFrameworkCore.InMemory library.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=224.97) [To make the demo simple, we won't use a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=227.26) [real database; we'll use the in‑memory](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=229.19) [implementation for our database. I'm going](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=230.92) [to open the Startup class, and in](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=234.625) [ConfigureServices, which is where we](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=236.62) [traditionally add middleware, we'll add](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=238.26) [the middleware we need for MediatR Startup](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=239.99) [configuration. I'm going to resolve a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=241.99) [namespace, so the AddMediatR, just think](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=244.68) [of it as adding the library to our current](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=247.13) [project. We don't need to get into all the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=249.26) [details, because, again, it's beyond the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=251.02) [scope of this course; this is just a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=253.22) [gentle introduction. We're setting it up](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=254.65) [to use the in‑memory database. And](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=257.48) [ContactsContext is showing the red](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=261.3) [squiggle because we haven't created it](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=263.08) [yet. So let's go do that now. And notice](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=264.38) [I'm adding it to a data folder. Okay,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=267.79) [let's have a quick look at the code I](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=271.53) [added. I'm calling this a ContactsContext.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=273.16) [This is just the default Entity Framework](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=275.9) [DbContext. It's got a constructor on line](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=277.65999999999997) [12, which takes DbContext options. On line](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=280.56) [16, I simply have a DbSet of Contact](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=283.89) [objects, and then on line 18, I have the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=286.38) [OnModelCreating method, and I'm just doing](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=289.05) [this to put some seed data in my in‑memory](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=291.66) [database. All of this is very standard](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=294.25) [Entity Framework code. If this is the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=296.49) [first time you're seeing it, there are](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=298.88) [numerous Entity Framework courses on](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=300.22499999999997) [Pluralsight. For our purposes here, this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=301.58) [is just to set up the demo. The other](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=303.51) [thing you'll notice is we have a Contact](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=305.59) [class, FirstName, LastName. In fact, you](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=307.24) [can see at the bottom there, Steve](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=309.68) [Michelotti, Bill Gates, Satya Nadella. If](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=311.81) [I scroll down, you can see I put that](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=314.15) [Contact object right there, Id, FirstName,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=315.7) [LastName. If we go back to the Startup](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=318.35) [file, in the Configure method, I'm just](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=320.11) [going to put a little snippet of code](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=322.97) [right here to make sure that the seed data](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=324.28) [gets called on application startup, and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=327.31) [you can see we have the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=329.47) [Database.EnsureCreated method there on](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=330.02) [line 59. Let's just resolve the namespace](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=332.055) [here. Now it's time to add our actual API](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=335.15) [Controller. We'll just select Empty API](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=338.4) [Controller here, and we'll call this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=341.5675) [ContactsController. We're going to add a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=343.82) [constructor and inject an IMediator object](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=347.24) [into the constructor. Let's generate this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=349.73) [member, which I just did on line 15. And,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=351.87) [by the way, since this is a one‑liner on](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=356.42) [the constructor, if we want, we could](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=358.79) [change the constructor to an](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=360.43) [expression‑bodied member. Now that we've](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=361.87) [got the initial constructor in place, I'm](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=363.91) [going to add a region here for nested](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=365.95) [classes. The first nested class is very](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=367.65) [simple. It's a query object that's an](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=370.56) [IRequest. Remember from the diagram, think](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=373.38) [of this as the input message, just as a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=375.89) [simple property called Id. Query is an](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=377.81) [IRequest of Contact, so it's basically](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=381.4) [setting up that it's expecting this type](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=383.39) [of response object. Now let's actually put](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=385.32) [in the handler that handles the request.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=388.75) [The contact handler is IRequestHandler of](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=391.31) [Query and Contact. Now that we've resolved](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=393.63) [our namespaces, our red squiggles go away.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=397.44) [So this is where the business logic gets](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=399.81) [done. It handles a request. In this case,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=401.39) [it looks up the data from the database and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=403.16) [returns it. We could inject other](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=405.42) [behaviors here, maybe mapping to different](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=407.15) [objects, logging, whatever the case may](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=408.99) [be, this is just a simpler handler that's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=410.73) [returning back the response object. Up at](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=413.16) [the top, we can actually put in our API](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=416.55) [method now, and what's happening here is](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=418.76) [we have a traditional API method, Get by](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=420.57) [id. You can see the query is the input](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=423.36) [getting it from the route. It just has](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=426.39) [that id property. And if I scroll over](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=428.14) [here a little bit, you'll see that it's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=430.34) [just getting the mediator object right](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=432.58) [there on line 24, it's sending the query](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=434.68) [into the mediator object, the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=437.53) [delegates to the handler and returns the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=440.08) [result object, which, because of this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=443.15) [expression‑bodied member, just gets](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=445.45) [returned right back to the API. So the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=447.12) [Contact result object gets returned. And](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=449.54) [this is an example of a vertical slice](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=452.85) [architecture where everything I need to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=454.59) [handle this request is all present right](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=456.1) [here in the file. I don't have to go off](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=458.48) [to a huge repository class to find the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=460.42) [method I need; it's all right here. Let's](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=462.33) [go ahead and run this real quick. And now](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=464.5) [we have to set this one as our startup](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=466.27) [project. And because this is an API app,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=467.59) [we're just going to run this from Postman.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=471.89) [I'll put the URL right here, api/contacts.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=473.12) [Let's run it. And sure enough, the id of 1](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=477.77) [was Steve Michelotti. If we change that to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=481.12) [a 2, now you can see the result we got](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=484.54) [back is Bill Gates. Even though I said](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=487.66) [this was a basic example, I know there](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=490.2) [were a lot of moving parts here, so you](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=492.19) [may want to watch this clip multiple](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=493.83) [times. The main takeaway here is that the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=495.25) [MediatR library provides a simple](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=497.69) [messaging interface to connect request](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=499.62) [handlers with the appropriate request and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=502.04) [response objects. But remember, this](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=504) [library contains many other features,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=506.61) [including the ability to handle commands](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=508.76) [and wiring different middleware behaviors,](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=510.96) [so I encourage you to explore it more on your own.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=5&mode=live&start=512.795)

[Final Words](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live)

[We covered many aspects of the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=1.14) [pattern in this course. We started out](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=3.36) [with a conceptual overview of the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=6.57) [pattern, what it is, and why we'd want to](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=8.47) [use it. I talked about how the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=10.8) [pattern encapsulates interaction between](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=12.7) [objects. We then dove into code, and I](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=14.7) [showed a basic structural example of the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=17.99) [pattern so you could solidify the](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=20.41) [concepts. And then we implemented a](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=22.47) [lightweight chat application for more](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=24.49) [real‑world concepts. It's important to be](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=26.75) [able to identify the mediator pattern when](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=30.24) [you see it and understand how it can apply](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=32.45) [to different examples. I showed different](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=35.05) [examples, including location proximity and](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=37.05) [the MediatR library. If you remember](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=39.84) [nothing else from this course, remember](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=42.51) [this. When you think of the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=44.33) [pattern, you should think of encapsulating](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=46.35) [object interaction between multiple](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=48.45) [colleague objects, and doing this with](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=50.62) [loose coupling so the colleague objects](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=53.24) [don't all have to know about each other.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=55.64) [This concludes the course on the mediator](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=59.34) [pattern in C#. Thanks for watching. I hope](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=61.07) [you enjoyed the course. Deepening your](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=63.61) [knowledge of all design patterns can have](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=65.4) [tremendous benefits as you create your own](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=67.34) [code and consume code of others. I hope](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=69.58) [this course helps you along your journey. Happy coding.](https://app.pluralsight.com/player?course=c-sharp-design-patterns-mediator&author=steve-michelotti&name=4d3fd6c8-ef9c-4693-a4c2-a0785641d26c&clip=6&mode=live&start=72.36)