Programming

With Mr. K

What we're doing today

- Who am I and what do I do?
- What is coding and where is it used?
- Examples of code
- Hospital Exercise
- Questions

Who am I?

- Born in New York, moved here 5 years ago
- Software Programmer for 13 years
- I have a wife, a daughter and two dogs
- I've been working on computers since I was 6 years old

Who can tell me what a software programmer does?

My Dogs

Who are you?

Let's do some polling!

What is coding?

- It's a way to give computers instructions to do things
- We do this so that we can break down real life problems and automate it
- Automation leads to faster and more consistent ways to do things
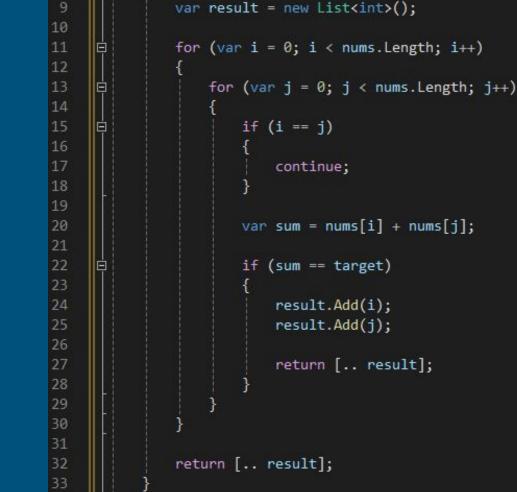- It can also do some things better than we can

Where is it used?

Everywhere!

- Simple things like a calculator
- Everyday things like your phones, cars, and TV
- Entertainment industry (games, movies, etc.)
- Complex things like rockets to get people to space or finding the cure for cancer

Why do I like it?

- I can work in any field with the same set of skills
- The field is always changing and there's always something new to learn
- There's always hard new problems to solve. I like solving puzzles.
- I love to help others and make a difference

Code examples

```csharp
public int[] TwoSum(int[] nums, int target)
{
    var result = new List<int>();

    for (var i = 0; i < nums.Length; i++)
    {
        for (var j = 0; j < nums.Length; j++)
        {
            if (i == j)
            {
                continue;
            }

            var sum = nums[i] + nums[j];

            if (sum == target)
            {
                result.Add(i);
                result.Add(j);

                return [.. result];
            }
        }
    }

    return [.. result];
}
```

Hospital Exercise - Dogtors

Hospital Exercise

We're going to try to help the dogtors schedule patients in a way that makes sure everyone is seen and helped when it matters.

There are two dogtors. They must see the most hurt patients first. If there are two equally hurt patients they have to see the patient who came in first.

How hurt they are is broken into three categories; Severity A, B, and C. Severity A is the most hurt and C is the least. Severity A patient takes the dogtor 30 minutes, B takes 15 minutes, and C takes 10 minutes to heal.

Hospital Exercise

We'll do the first 3 together and you'll do the last 8 in pairs.

Questions?