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Polymorphism Reflection

Polymorphism is a level of abstraction that allows us as programmers to reuse code from interface classes into multiple similar classes. It also allows us to overwrite functions to make them function differently in each class depending on how we want to use them.

One of the benefits of using polymorphism is it allows you to abstract the designs for your program even further so you can more easily expand on and customize code to fit the ideas and features you want to add.

For our Eternal quest program I was able to use Polymorphism to reduce duplicate code and get my program to run using one function that stretched across multiple classes for example. In my File handling class I was able to just use item.format because I had a list of Goals.

foreach (Goal item in \_goalEntry)

            {

                \_createFile.WriteLine(item.Format());

            }

Inside my Goals Class I had this line of code

 public virtual string Format(){

        string formated = "";

        return formated;

    }

That I was able to modify in each class as follows:

Simple Class:

public override string Format()

    {

        string formated = $"{\_goalType}|{\_goalName}|{\_goalDescription}|{\_goalPoints}|{\_isComplete}";

        return formated;

    }

Eternal Class:

public override string Format()

    {

        string formated = $"{\_goalType}|{\_goalName}|{\_goalDescription}|{\_goalPoints}";

        return formated;

    }

Checklist Class:

public override string Format()

    {

        string formated = $"{\_goalType}|{\_goalName}|{\_goalDescription}|{\_goalPoints}|{\_bonusPoints}|{\_timesCompleted}|{\_total}";

        return formated;

    }

And all this allowed me to get a save file to look like this:

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1400

Simple|Simple|Simple Test|100|True

Eternal|Eternal|Eternal Test|50

Checklist|Cheklist|Checklist Test|50|500|3|3

Simple|Simple 2|Testing additional Funcionality|500|True

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