# Performing File Input/Output

Writing data to files is critical in ensuring permanent storage of information. We will use two types of objects to write and read files. These objects are very similar to the Console class that we used all of the first semester. These objects have a ReadLine, Write and WriteLine methods

## Below is a recipe for writing to a file.

### Add the necessary using statement:

using System.IO;

### Declare and initialise the object to write:

TextWriter writer = new StreamWriter(filename);

### Do some writing:

writer.Write("Mulroney");

writer.WriteLine("Harper");

### Now close the file:

writer.Close();

## Below is a recipe for reading from a file.

### Add the necessary using statement:

using System.IO;

### Declare and initialise the object to write:

TextReader reader = new StreamReader(filename);

### Do some reading:

reader.ReadLine();

### Now close the file:

reader.Close();

The foreach traversal is read-only. i.e. You may not insert or remove items in the loop body

We will use the Medal class to practice the method of the list class. Since the Medal class was already built, it is pointless to re-code it. You simply have to make it accessible to your current project. Following the step below:

### Add a reference to the Medal project

### Add a using statement in your code

Add the following statements to your Main.

//create a list to store the medal objects

List<Medal> medals = new List<Medal>();

medals.Add(new Medal("Ryan Cochrane", "Swimming", "Silver", 2012, false);

medals.Add(new Medal("Adam van Koeverden", "Canoeing", "Silver", 2012, false);

medals.Add(new Medal("Rosie MacLennan", "Gymnastics", "Gold", 2012, false);

medals.Add(new Medal("Christine Girard", "Weightlifting", "Bronze", 2012, false);

medals.Add(new Medal("Charles Hamelin", "Short Track", "Gold", 2014, true);

medals.Add(new Medal("Alexandre Bilodeau", "Freestyle skiing", "Gold", 2012, true);

medals.Add(new Medal("Jennifer Jones", "Curling", "Gold", 2014, false);

medals.Add(new Medal("Charle Cournoyer", "Short Track", "Bronze", 2014, false);

medals.Add(new Medal("Mark McMorris", "Snowboarding", "Bronze", 2014, false);

medals.Add(new Medal("Sidney Crosby ", "Ice Hockkey", "Gold", 2014, false);

medals.Add(new Medal("Brad Jacobs", "Curling", "Gold", 2014, false);

medals.Add(new Medal("Ryan Fry", "Curling", "Gold", 2014, false);

medals.Add(new Medal("Antoine Valois-Fortier", "Judo", "Bronze", 2012, false);

medals.Add(new Medal("Brent Hayden", "Swimming", "Bronze", 2012, false);

//write all the medals to file

//write only the names of all the medal holder to file

// write all the gold medals to file

// write all the medals in 2012 to file

// write all the world record medals to file