

# PV178: Programming for .NET Framework

## CLI Libraries, Base Class Library (seminar)

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## Motivation – “Sparse List”

- List in which many items are missing (i.e. have default value).
- Memory-saving implementation is desirable.

# Sparse List

- Download and open `SparseListExample.zip` from IS
- `SparseList<T>` implements `IList<T>`
- How it works:
  - variable count denotes real size of the list.
  - Two arraylists: `indices` and `values`. Non-default item `item` is at position `k` in the sparse list iff then for some `n` we have `indices[n]=k` and `values[n]=item`.
  - numbers in `indices` are sorted incrementally.
  - E.g. for sparse list of integers: `count=6`, `indices={1,3}` and `values={9,8}` determine list `{0,9,0,8,0,0}`.

# Sparse Lists – Assignment

- 1 Implement the things that are missing (to find out which ones, try to build the project)
- 2 Implement static method `WriteToFile<T>(SparseList<T>,string)` in Program. The method should output elements of the list to the file given by string, each element at one line.

# Homework

- Will be available in IS by tomorrow morning
- Topic: Enumerators, Streams, Filesystem
- Deadline: March 15, 2009