

```

using System;
using System.Collections;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace Compiler
{
    // used in Lexical Analyzer

    //https://stackoverflow.com/questions/981776/using-an-enum-as-an-array-index-in-c-sharp
    // By IanGolby
    public class ArrayByEnum<T, U> : IEnumerable where U : Enum // requires C# 7.3
    or later
    {
        private readonly T[] _array;
        private readonly int _lower;

        public ArrayByEnum()
        {
            _lower = Convert.ToInt32(Enum.GetValues(typeof(U)).Cast<U>().Min());
            int upper = Convert.ToInt32(Enum.GetValues(typeof(U)).Cast<U>().Max());
            _array = new T[1 + upper - _lower];
        }

        public T this[U key]
        {
            get { return _array[Convert.ToInt32(key) - _lower]; }
            set { _array[Convert.ToInt32(key) - _lower] = value; }
        }

        public IEnumerator GetEnumerator()
        {
            return Enum.GetValues(typeof(U)).Cast<U>().Select(i =>
this[i]).GetEnumerator();
        }
    }
}

```