Assignment #7

Generating Sequences

Write definitions for each of the following Python functions, and for each function, include a clear and concise comment to describe its purpose. Use only the Python topics covered so far in class.

1. `Join( strings )`

   The result of concatenating, in order, all strings in the list-of-strings '`strings`'

   ```
   Join( [ "to", "get", "her" ] ) ⇒ "together"
   ```

2. `CumulativeSums( numbers )`

   A copy of the numeric list '`numbers`', but with each item replaced by the sum of all items up to and including it

   ```
   CumulativeSums( [ 5, 2, 4, -3, 6 ] ) ⇒ [ 5, 7, 11, 8, 14 ]
   CumulativeSums( [ 1, 2, 3, 4, 5 ] )  ⇒ [ 1, 3, 6, 10, 15 ]
   CumulativeSums( [ 0, 0, 0 ] )        ⇒ [ 0, 0, 0 ]
   CumulativeSums( [ ] )                ⇒ [ ]
   ```

3. `CommonTwo( string1, string2 )`

   The string formed from all characters which appear in both strings '`string1`' and '`string2`', in the order of their appearance in '`string1`'; assume that neither of the parameter strings contains duplicate characters

   ```
   CommonTwo( "star", "wars"   ) ⇒ "sar"
   CommonTwo( "cork", "rock"   ) ⇒ "cork"
   CommonTwo( "cork", "dublin" ) ⇒ ""
   ```

4. `CommonAll( strings )`

   The string formed from all characters which appear in every string in the list-of-strings '`strings`', in the order of their appearance in the first string in this list; assume that none of the parameter strings contains duplicate characters

   ```
   CommonAll( [ "abcdef", "gbdahc", "dechg"      ] ) ⇒ "cd"
   CommonAll( [ "abcdef", "abcd", "cdef", "abef" ] ) ⇒ ""
   CommonAll( [ "computer"                       ] ) ⇒ "computer"
   CommonAll( [ ]                                  ) ⇒ ""
   ```

Program Submission:

Store the function definitions in a file named '`a07.py`', and turn it in for grading by typing:

```
submit-cs1117 a07.py
```

Due Date: Fri Oct 30, 11:00am