CPSC 418: Parallel Computing
In Class Worksheet

Winter 2016–2017 Term 2


# Generalized Reduce: Longest Sequence of Ones

Name: _____ Student Number: _____

Name: _____ Student Number: _____

Name: _____ Student Number: _____

In answering the questions below, remember that

```
ChildData = {StartLength, LongestIndex, LongestLength, EndLength, MyListLength}.
```

or perhaps more compactly

```
ChildData = {SL, LI, LL, EL, MLL}.
```

See the slides for a full description of the problem.

1. `Leaf(Data)`: Write the code for this function assuming that `Data` is the subset of the list assigned to this worker node. The function should return a tuple of the form `ChildData`.

2. `Combine(Left, Right)`: Write the code for this function assuming that `Left` and `Right` are each a tuple of the form `ChildData`. The function should return a tuple of the same form.

3. `Root(ChildData)`: Write the code for this function assuming that `ChildData` is the tuple computed by `Combine()` at the root node. The function should return a tuple of the form {`Index`,`Length`}.