Finer control of Array Job IDs

In the previous example we used a simple range (1-5) to submit 5 tasks of an arrayjob. But arrayjob IDs do not need to be consecutive, or a range. You can also use a comma-separated list of array ids, or a combination of both forms.

```
$ qsub -t 1,3,5 myarrayjob.q
3217287
$ qsub -t 1-3,5 myarrayjob.q
3217288
```

On NYU HPC we have added a patch to support regular sequences (this is available in some other batch systems such as SGE):

```
#!/bin/bash
#PBS -l walltime=5:00
#PBS -l nodes=1:ppn=1
#PBS -l mem=1gb
# submit with array ids 1,3,5:
#PBS -t 1-5:2
```
Array job with a single task

You can also submit an array job with a single task. This is useful:

- when testing that your arrayjob script works, and requests correct resources
- when a single task in your arrayjob fails for any reason, and needs to be resubmitted

```
$ qsub -t 4 myarrayjob.q
3217287[
$ qstat -t 3217287[

soho.es.its.nyu.edu:

<table>
<thead>
<tr>
<th>Req'd</th>
<th>Req'd</th>
<th>Elap</th>
<th>Username</th>
<th>Queue</th>
<th>Jobname</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job ID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| SessID | NDS   | TSK  | Memory   | Time  | S   | Time
| ------ | ----- | ----- | -------- | ----- | ---- | -------
| ------ | ----- | ----- | -------- | ----- | ---- | -------
| 3217287[4] | ab123 | s48   | myarrayjob.q-4 |
| 9276       | 1      | 1     | 1024m   | 00:05:00 C | -- |
```

Exercise

Notice that /share/apps/examples/arrayjob/ also contains files called pg74.txt, pg1232.txt and so forth.

Modify myarrayjob.q to use this number as the array ID and count the words in the corresponding pg*.txt file.