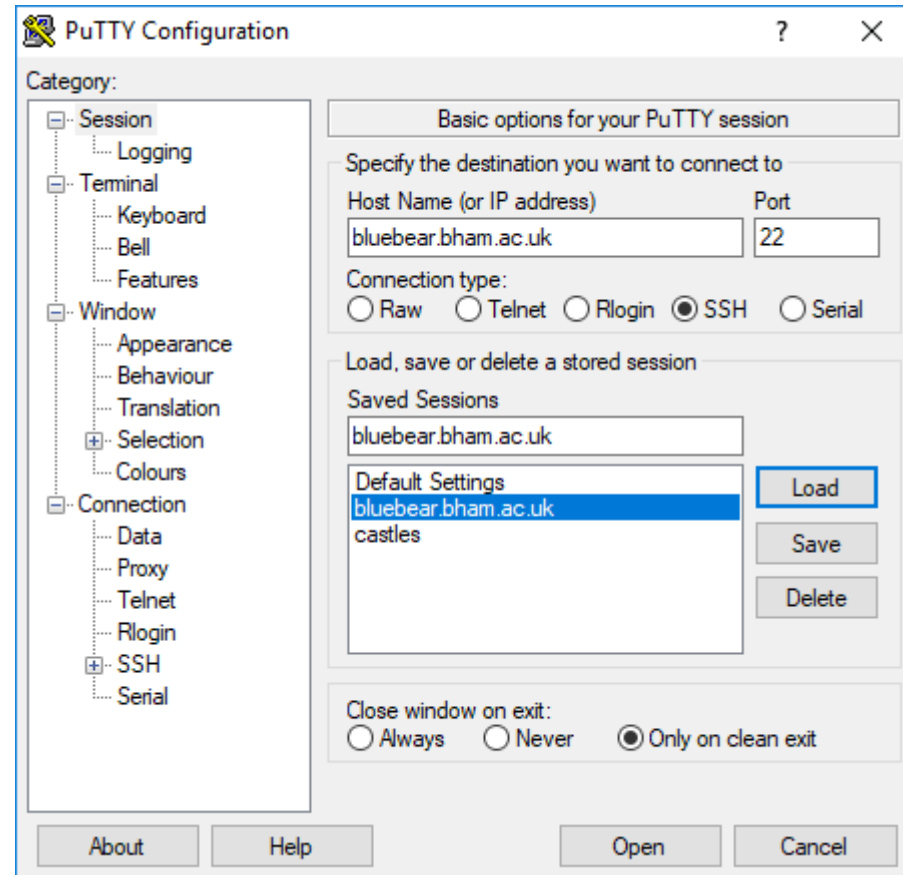
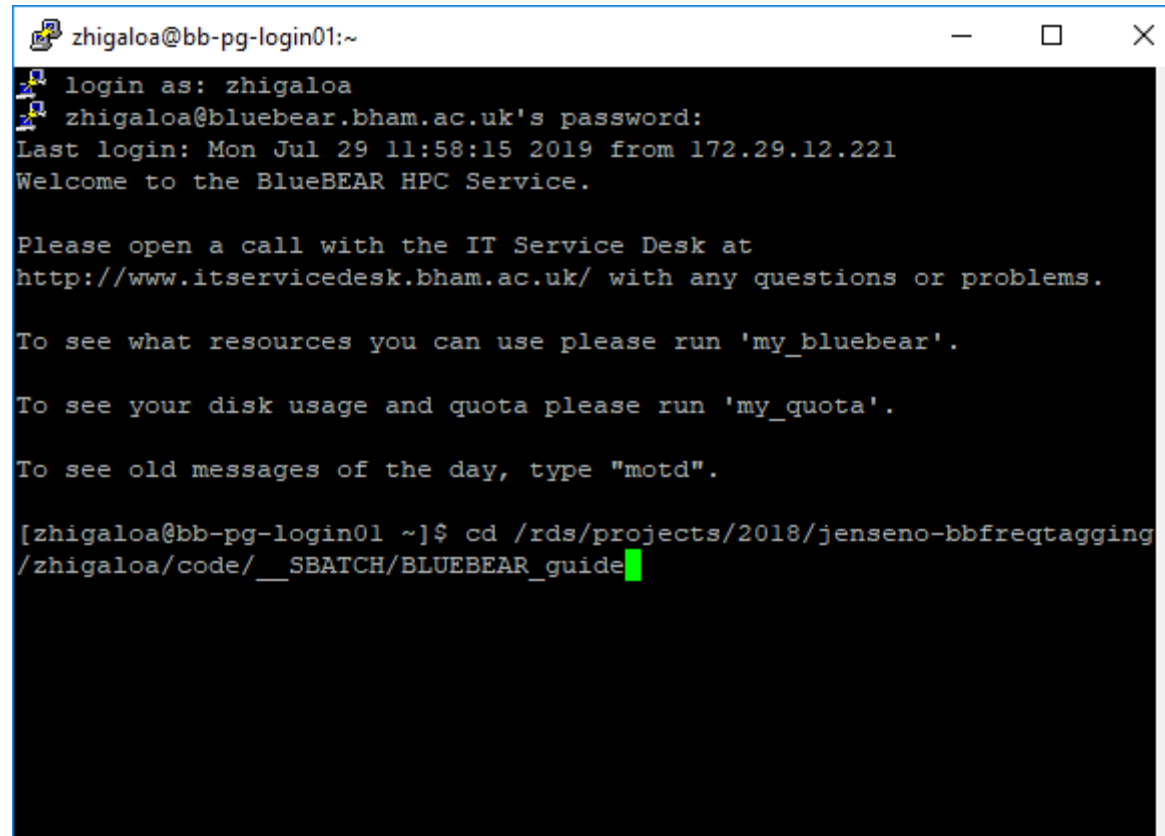


## Step 1: Open PUTTY and login to bluebear.bham.ac.uk

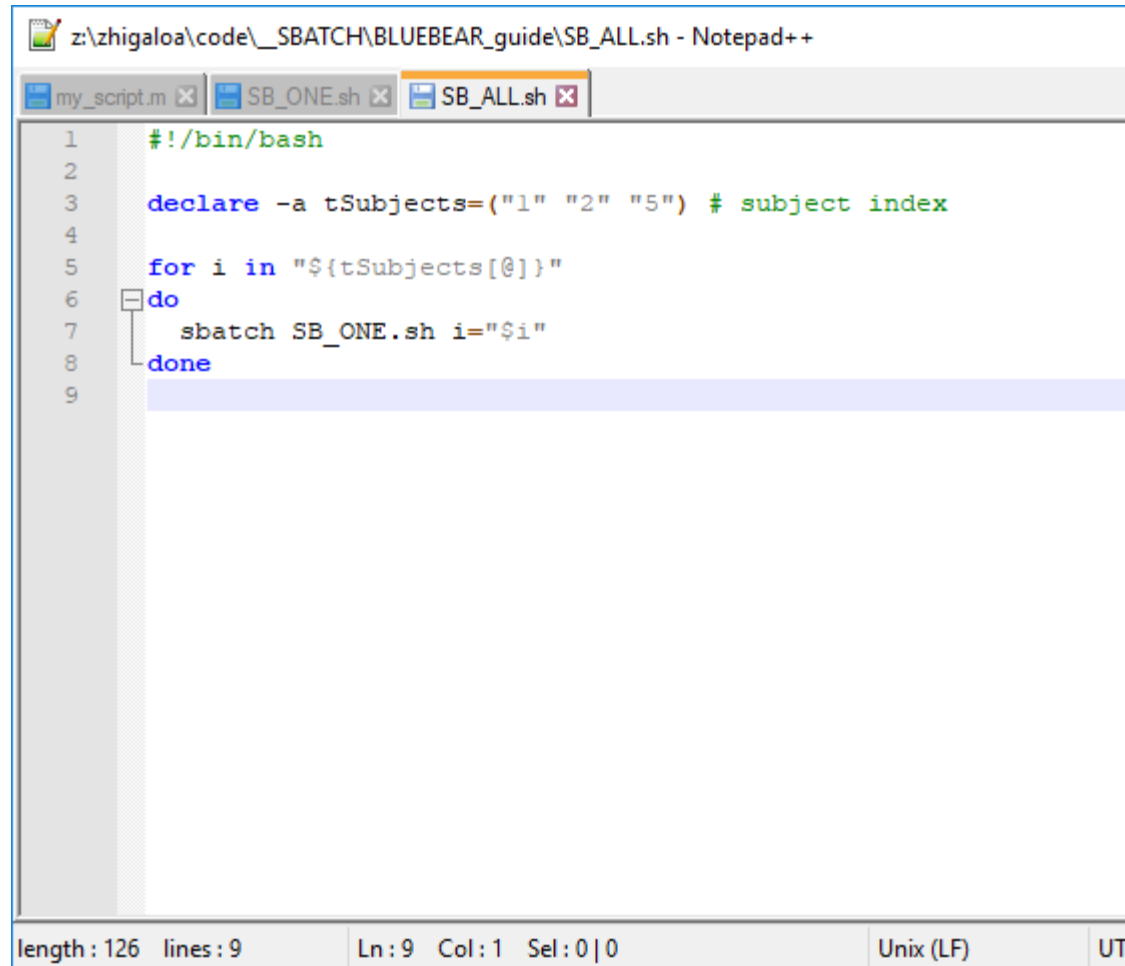


## Step 2: Select folder with the scripts using “cd” command

A terminal window titled 'zhigaloe@bb-pg-login01:~' with standard window controls. The terminal shows a login sequence for user 'zhigaloe' on 'bluebear.bham.ac.uk'. It displays the last login time and a welcome message. Instructions are provided for opening a call with the IT Service Desk, running 'my\_bluebear' for resources, 'my\_quota' for disk usage, and 'motd' for messages. The final command shown is 'cd /rds/projects/2018/jenseno-bbfreqtagging/zhigaloe/code/\_\_SBATCH/BLUEBEAR\_guide', with a green cursor at the end of the line.

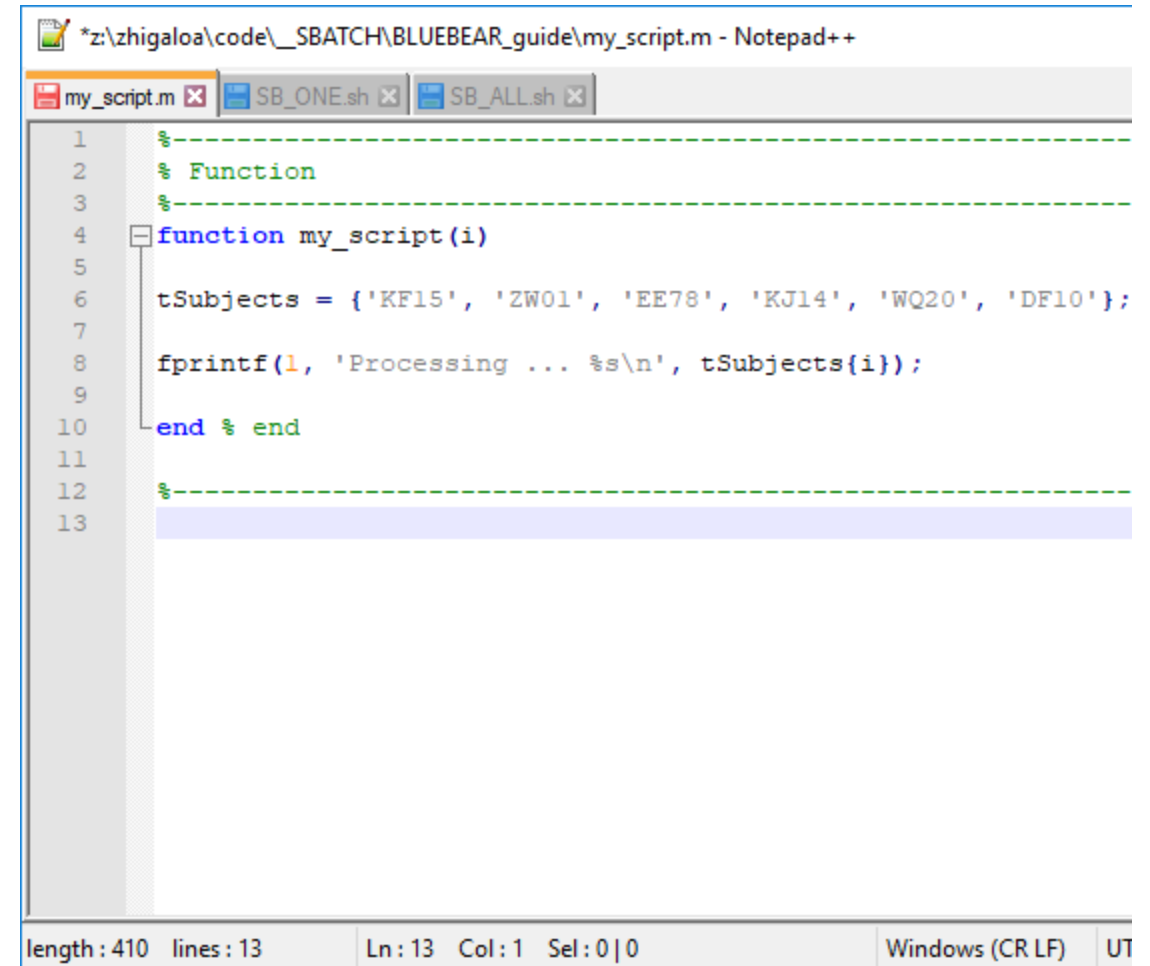
```
zhigaloe@bb-pg-login01:~  
login as: zhigaloe  
zhigaloe@bluebear.bham.ac.uk's password:  
Last login: Mon Jul 29 11:58:15 2019 from 172.29.12.221  
Welcome to the BlueBEAR HPC Service.  
  
Please open a call with the IT Service Desk at  
http://www.itservicedesk.bham.ac.uk/ with any questions or problems.  
  
To see what resources you can use please run 'my_bluebear'.  
  
To see your disk usage and quota please run 'my_quota'.  
  
To see old messages of the day, type "motd".  
  
[zhigaloe@bb-pg-login01 ~]$ cd /rds/projects/2018/jenseno-bbfreqtagging/  
zhigaloe/code/__SBATCH/BLUEBEAR_guide
```

### Step 3: Set subject indices in “SB\_ALL.sh” script (the indices MUST match the subjects in your MATLAB script)



```
z:\zhigaloo\code\_SBATCH\BLUEBEAR_guide\SB_ALL.sh - Notepad++
my_script.m x SB_ONE.sh x SB_ALL.sh x
1  #!/bin/bash
2
3  declare -a tSubjects=("1" "2" "5") # subject index
4
5  for i in "${tSubjects[@]}"
6  do
7      sbatch SB_ONE.sh i="$i"
8  done
9
```

length : 126 lines : 9 Ln : 9 Col : 1 Sel : 0 | 0 Unix (LF) UT

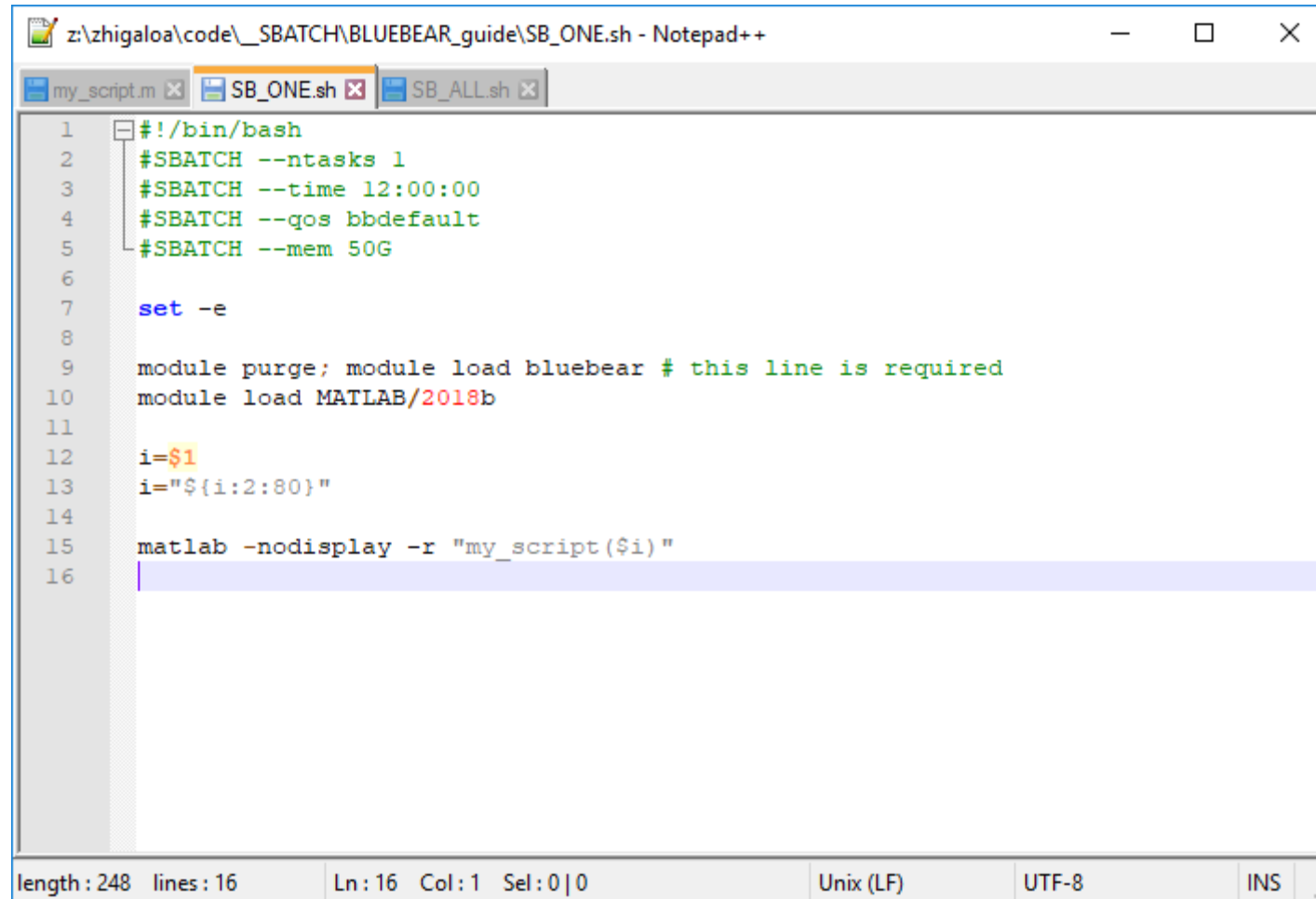


```
*z:\zhigaloo\code\_SBATCH\BLUEBEAR_guide\my_script.m - Notepad++
my_script.m x SB_ONE.sh x SB_ALL.sh x
1  %-----
2  % Function
3  %-----
4  function my_script(i)
5
6      tSubjects = {'KF15', 'ZW01', 'EE78', 'KJ14', 'WQ20', 'DF10'};
7
8      fprintf(1, 'Processing ... %s\n', tSubjects{i});
9
10 end % end
11
12 %-----
13
```

length : 410 lines : 13 Ln : 13 Col : 1 Sel : 0 | 0 Windows (CR LF) UT

In this example, subjects with indices 1, 2 and 5 are selected.

**Step 4:** Set hours and memory in “SB\_ONE.sh” script, and select your MATLAB script (here, “my\_script”).



```
z:\zhigaloo\code\_SBATCH\BLUEBEAR_guide\SB_ONE.sh - Notepad++  
my_script.m x SB_ONE.sh x SB_ALL.sh x  
1  #!/bin/bash  
2  #SBATCH --ntasks 1  
3  #SBATCH --time 12:00:00  
4  #SBATCH --qos bbdefault  
5  #SBATCH --mem 50G  
6  
7  set -e  
8  
9  module purge; module load bluebear # this line is required  
10 module load MATLAB/2018b  
11  
12 i=$1  
13 i="{i:2:80}"  
14  
15 matlab -nodisplay -r "my_script($i)"  
16  
length: 248 lines: 16 Ln: 16 Col: 1 Sel: 0|0 Unix (LF) UTF-8 INS
```

In this example, time (which is necessary to finish the computation) is 12 hours and memory is 50 GB.

**Step 5:** Use command “bash SB\_ALL.sh” to launch script for all subjects.

```
zhigaloea@bb-pg-login01:/rds/projects/2018/jenseno-bbfreqtagging/zhigaloea...  
http://www.itservicedesk.bham.ac.uk/ with any questions or problems.  
To see what resources you can use please run 'my_bluebear'.  
To see your disk usage and quota please run 'my_quota'.  
To see old messages of the day, type "motd".  
  
[zhigaloea@bb-pg-login01 ~]$ cd /rds/projects/2018/jenseno-bbfreqtagging  
/zhigaloea/code/__SBATCH/BLUEBEAR_guide  
[zhigaloea@bb-pg-login01 BLUEBEAR_guide]$ ls  
~$Bluebear_SBATCh_guide.pptx  my_script.m  SB_ONE.sh  
Bluebear_SBATCh_guide.pptx    SB_ALL.sh  
[zhigaloea@bb-pg-login01 BLUEBEAR_guide]$ bash SB_ALL.sh  
Submitted batch job 6188870  
Submitted batch job 6188871  
Submitted batch job 6188872  
Submitted batch job 6188873  
[zhigaloea@bb-pg-login01 BLUEBEAR_guide]$ bash SB_ALL.sh  
Submitted batch job 6188890  
Submitted batch job 6188891  
Submitted batch job 6188892  
Submitted batch job 6188893  
[zhigaloea@bb-pg-login01 BLUEBEAR_guide]$ bash SB_ALL.sh
```

**Step 6:** After some time (when resources in bluebear become available) two output files (per subject) will be created in the script folder: \*.out and \*.stats.

```
List - [z:\zhigaloe\code\_SBATCH\BLUEBEAR_guide\slurm-6188956.out]
File Edit Options Encoding Help
Java/1.8.0_152
MATLAB/2018b
Opening log file: /rds/homes/z/zhigaloe/java.log.36176

      < M A T L A B (R) >
    Copyright 1984-2018 The MathWorks, Inc.
      R2018b (9.5.0.944444) 64-bit (glnxa64)
        August 28, 2018

To get started, type doc.
For product information, visit www.mathworks.com.

Processing ... KF15
```

```
List - [z:\zhigaloe\code\_SBATCH\BLUEBEAR_guide\slurm-6188956.stats]
File Edit Options Encoding Help
100 %
+-----+
| Job on the BlueBEAR cluster:
| Starting at Thu Aug  1 09:47:04 2019 for zhigaloe(607737)
| Identity jobid 6188956 jobname SB_ONE.sh
| Running against project chious-meg-posture and in partition cascadelake-shared
| Requested cpu=1,mem=50G,node=1,billing=1 - 12:00:00 walltime
| Assigned to nodes bear-pg0211u07b
| Command /rds/projects/2018/jenseno-bbfreqtagging/zhigaloe/code/_SBATCH/BLUEBEA
R_guide/SB_ONE.sh
| WorkDir /rds/projects/2018/jenseno-bbfreqtagging/zhigaloe/code/_SBATCH/BLUEBEA
R_guide
+-----+
+-----+
| Finished at Thu Aug  1 09:47:27 2019 for zhigaloe(607737) on the BlueBEAR
Cluster
| Required () - 00:00:23 walltime
| JobState COMPLETING - Reason None
| Exitcode 0:0
+-----+
|
```

In this example, “slurm-6188956.out” contains MATLAB script output and “slurm-6188956.stats” some extra info.