CEG4136 Parallella Lab Manual

Lab1. Transfer files and compile files

In this lab, you will need to transfer a pre-written C file to the Parallella board via PSFTP.exe.

Open PSFTP and login

PSFTP (Putty Secure FTP) is a free client that you can also download from the Putty site that enables you to securely transfer files between computers. PSFTP will acts as an interactive FTP session that allows you to list directory contents, browse the file systems, etc.

Login to the Parallella using PSFTP. Type

```
open parallella@"IP address for Parallella"
```

This will establish a connection, and type in the username and password.

User "put" to transfer files from Windows to Parallella

Ensure that the file "MatmulARM.c" is on your desktop before initializing the transfer.

Type in

```
put MatmulARM.c
ls
```

You should be able to see the file successfully transferred to parallella.

Use GCC compiler to compile C program under Linux

1) Now we head back to Putty and open SSH connection to Parallella.
2) Navigate directory to the file we just transferred.
3) Compile MatmulARM.c

```
gcc -o MatmulARMMatmulARM.c
ls
```

4) Execute program

```
./MatmulARM
```

```
parallella@parallella:~/epiphany-examples/apps/matmul-16$ cd
parallella@parallella:~$ ls
MatmulARM.c  epiphany-examples  parallella-examples  tests  ztemp.sh
parallella@parallella:~$ gcc -o MatmulARM MatmulARM.c
parallella@parallella:~$ ls
MatmulARM  MatmulARM.c  epiphany-examples  parallella-examples  tests  ztemp.sh
parallella@parallella:~$ ./MatmulARM
Seed = 0.000000
Matrix Multiplication finished!
parallella@parallella:~$
```

Lab1. Hello-world on Epiphany-16

1) Open SSH connection, log into Parallella in the terminal.
2) Navigate the directory to

```
cd /home/parallella/epiphany-examples/apps/hello-world
```

3) First build the program

```
./build.sh
```

4) Then execute the program

```
./run.sh
```

5) You should be able to see the results of hello world message from 16 epiphany cores.