

Please do the following practice on a **Linux machine** with GCC compiler installed.

(若在虛擬機上執行，量測時請盡量減少host machine的程式運作)

1. Download <http://www.cs.ccu.edu.tw/~pschen/dhrystone.tar.gz>

2. Compile the program

```
$ gcc -DUNIX dhry21a.c dhry21b.c timers_b.c -o myprog.exe -pg
```

3. Execute the program

```
$ ./myprog.exe                => generate gmon.out
```

4. Profiling the program

```
$ gprof ./myprog.exe
```

5. Please give the number of runs through the benchmark: **2000000**

6. Answer the following questions.

- Q1: Which functions are called by `Proc_1`?
- Q2: Which functions are called by `Func_2`?
- Q3: How many times are `Proc_3` and `Proc_7` called separately?
- Q4: Use `gprof2dot` (<https://github.com/jrfonseca/gprof2dot>) and `Graphviz` (<https://graphviz.org/>) to convert `gprof` text information to a corresponding PNG file.

上傳至eCourse2的檔案應該包含:

- Please write down your answer in a WORD file and turn in to ECOURSE2.
  - Please also describe your CPU information, RAM size, OS version, and GCC version in the file.
  - 若使用虛擬機，請同時描述虛擬機軟體之版本、target machine的設定。
- 將 `$ gprof ./myprog.exe` 的執行結果轉存之純文字檔。
- 使用 `gprof2dot` 與 `Graphviz` 所產生的PNG file。
- Deadline: September 26 (Tuesday), 24:00.