

Computing Problem Set #5-2

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Problem 1

Solution. By Amdahl's Law, the maximum speedup is given by:

$$S = \frac{1}{f + \frac{1-f}{p}} = \frac{1}{.004 + \frac{.996}{100}} = 71.63.$$

Problem 2 Solution.

A screenshot demonstrating that the code functions is shown below.

Figure 1: First C++ code!

```
[rccguest0045@midway-login1 CPP]$ cd
[rccguest0045@midway-login1 ~]$ ls
Exercises_day1  OSM_Lab  scratch-midway
[rccguest0045@midway-login1 ~]$ cd Exercises_day1/
[rccguest0045@midway-login1 Exercises_day1]$ ls
CPP  Fortran
[rccguest0045@midway-login1 Exercises_day1]$ cd CPP
[rccguest0045@midway-login1 CPP]$ ls
hidiho.cc  hidiho.exec
[rccguest0045@midway-login1 CPP]$ ./hidiho.exec
What is your name?
Geoff
Hello Geoff,how are you
[rccguest0045@midway-login1 CPP]$
```

Problems 3-6

Solution. See the attached files in this folder for the relevant code.