

# CPP Assignment #2

## 1 implement two integer sort algorithms for doubled link list

A: bubble sort

[http://en.wikipedia.org/wiki/Bubble\\_sort](http://en.wikipedia.org/wiki/Bubble_sort)

B: quick sort

<http://en.wikipedia.org/wiki/Quicksort>

## 2 prepare test reports for the two sort methods

A: what is your test purpose?

B: what kind of data you prepare?

C: how do you confirm the result?

You should provide at least three different scenarios.

## 3 profiling test

Test purpose:

Practice how to test your code performance. Try to find some bottleneck in the code.

Figure out Which one is better algorithm than another by comparing two algorithms running speed.

Data prepare:

create 2000000 random integer data in you test program.

Test method:

coding:

Insert data in the doubled link list

call sort method.

Build code with -pg option

example: gcc -otest -pg test.c sort.c list.c

run gprof program and get profile report.

example: gprof -b test >report.txt

analyze the report.

## 4 integrate gprof in the eclipse IDE

1. Open the **Run->Extern tools->Open external tools dialog**
2. right click on **Program** and click **new** to create one configuration
3. give profile a name: Gprof
4. In the **Location** text box, give the FULL path to the gpof command: /usr/bin/gprof
5. In the **working directory**, input: \${workspace\_loc}/\${project\_path}
6. In **Arguements**, input: -b \${resource\_loc}
7. click **apply** and test by clicking **run** button.