CS1103/2103 ADDS mock prac test

# Please fill out the first three boxes below but do not turn over this sheet until told that you may do so.

|  |  |
| --- | --- |
| NAME |  |
| Student ID |  |
| Course name |  |
| (Supervisor only)  ID sighted/notes |  |

Official Setup Time: 5 mins

Writing Time: 60 mins

Total Duration: 65 mins

Questions Time Marks

Answer all 3 questions 60 mins 10 marks

ADDS – Practical Exam

### Please download the adds-pe.cpp file from the following URL and make changes to answer these three questions.

### You should only upload the modified adds-pe.cpp file to your svn repository and submit to the websubmission system. The test script will compile your code using “g++ -o main.out -std=c++11 -O2 -Wall \*.cpp”.

In this practical exam, you are asked to realise the following three operations based on the given data structure. The example output of each function is given in the source file.

### Question 1: (1 mark for style, 2 mark for functionality)

Please fill in the function Node\* add(Node\* head, int val) which accepts a head pointer to a list and an integer. A new node is created with the given value and added to the front of the list. The new head pointer is returned.

### Question 2: (1 mark for style, 2 mark for functionality)

Please fill in the function void printOdd(Node\* head) which accept a head pointer to a list and print out the elements in odd position using std::cout. The head node is defined to be in position 1.

### Question 3: (1 mark for style, 3 mark for functionality)

Please fill in the function void clear(Node\* n1, Node\* n2). In this function, n1 and n2 pointing to two nodes in the same list. Your task is to remove all nodes between these two nodes. And for all deleted nodes, you need to free the memory in the heap.

If there is no node in between n1 and n2, your function should do nothing.