**BRAC University**

**Department of Computer Science and Engineering**

**CSE 220: Data Structures**

**Task 1**

Implement a recursive algorithm to find factorial of *n*.

**Task 2**

Implement a recursive algorithm to find the *n*-th Fibonacci number.

**Task 3**

Print all the elements of a given array recursively.

**Task 4**

Implement a recursive algorithm that takes a decimal number *n* and converts *n* to its corresponding (you may return as a string) binary number.

**Task 5**

Implement a recursive algorithm to find the m^n.

**Task 6**

Implement a recursive algorithm to add all the elements of a non-dummy headed singly linked linear list. Only head of the list will be given as parameter where you may assume every node can contain only integer as its element.

Note: you’ll need a Singly Node class for this code.

**Task 7**

Implement a recursive algorithm which will print all the elements of a non-dummy headed singly linked linear list in reversed order.

Example: if the linked list contains 10, 20, 30 and 40, the method will print

40

30

20

10

Note: you’ll need a Singly Node class for this code.