Assignment-1(Unit-1)

Q.1 What are the various asymptotic notations?

Q.2 Write a Pseudo code that will concatenate two linked lists. Function should have two parameters, pointers to the beginning of the lists and the function should link second list at the end of the first list.

Q.3 Each element of an array Data [20][50] requires 4 bytes of storage. Base address of Data is 2000. Determine the location of Data [10][10] when the array is stored as:
(i) Row major
(ii) Column major

Q.4 How will you create link list representation of a polynomial. Explain it with the suitable example.

Q.5 What is the time, and space complexity of the following code:

```
int a = 0, b = 0;
for (i = 0; i < N; i++) {
   a = a + rand();
}
for (j = 0; j < M; j++) {
   b = b + rand();
}
```

Q.6 Write an algorithm to add a node in the end of a linked list.

Q.7 Write an algorithm to add a node in the beginning of a linked list.

Q.8 Write an algorithm to delete a node from the linked list.

Q.9 Write an algorithm to delete a node from circular linked list.