INSERT INTO SORTED LINKED – LIST

Insert Sorted ( ):

Description: Here **START** is a pointer variable which contains the address of first node. **PREV** is a pointer variable which contains address of previous node. **ITEM** is the value to be inserted.

```
1.    If (START == NULL) Then                    [Check whether list is empty]
2.          START = New Node                     [Create a new node]
3.          START->INFO = ITEM                   [Assign ITEM to INFO field]
4.          START->LINK = NULL                   [Assign NULL to LINK field]
5.    Else
6.          If (ITEM < START->INFO) Then         [Check whether ITEM is less then
                                                 value in first node]
7.                PTR = START
8.                START = New Node
9.                START->INFO = ITEM
10.               START->LINK = PTR
11.         Else
12.               Set PTR = START, PREV = START
13.               Repeat While (PTR != NULL)
14.                     If (ITEM < PTR->INFO) Then
15.                           PREV->LINK = New Node
16.                           PREV = PREV->LINK
17.                           PREV->INFO = ITEM
18.                           PREV->LINK = PTR
19.                           Return
20.                     Else If (PTR->LINK == NULL) Then    [Check whether PTR
                                                           reaches last node]
21.                           PTR->LINK = New Node
22.                           PTR = PTR->LINK
23.                           PTR->INFO = ITEM
24.                           PTR->LINK = NULL
25.                           Return
26.                     Else
27.                           PREV = PTR
28.                           PTR = PTR->LINK
                        [End of Step 14 If]
                  [End of While Loop]
            [End of Step 6 If]
      [End of Step 1 If]
29.   Exit
```