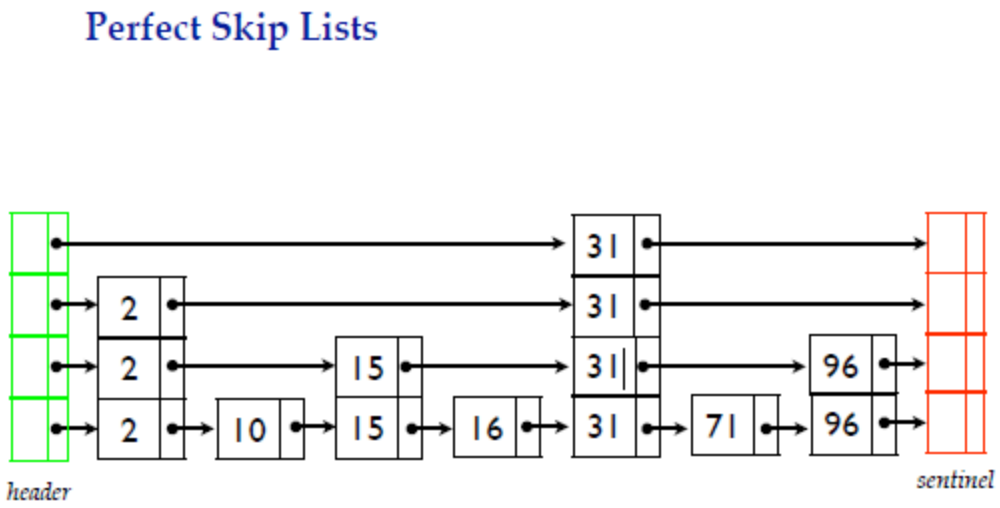
GTU BIL 101
HW07

Answer 2:

skip list has invented in Bill Pugh it the meaning of this as you can assume is that one of the type of sorting in data structure and as a linked list .and is it more easier to implement rather thaan treelist sorting . it uses use random coin flips to build the data structure and we search an element in skiplist by using log(n).for example let us look for a simple example down:



as you can see Keys in sorted order and Each higher level contains 1/2 the elements of the level below it and also Header & sentinel nodes are in every level

.

So now for finding some number like (16) it will start its journey from the key node which is header sheet at the left side of the chart and it will compare the wanted value (16) with (2) which is note equal or greater than 16 and it will keep searching it will go down and look for 16 again and compare them with 16 at down it will compare again and again and like this it will look to 10,15 and finally after 15 the wanted value 16 is matched so it will print us that node's number or value.

One of the advantages of the this kind of searching is that,by linked and sorted skip list we can find the ordered value or number faster and easier than linear list and it rescue us more space than and makes it more decorated list than linear.

skiplist's advantages also can be these things:

a)using little memory space

b)easy to emplement

c)effcient search structure

Answer 3:

so let us assume that we have a list by the name of (mylist) and we can do any operation on it that we want like insertion,deletion etc.let is write the algorithms:

1) first setup will be specifing a variable counter=0

comparing the every entry of the given list ,the given number with the key and

we can write it like (entry=key),and also(counter=counter+1)

and return counter

2)for the second one we will use again a counter like previous one =>for example (ex:1) and looking and retunr the result when the condition(i==i+1) satisfies by taking an other counter.

3) for the third one it will take elements from ent of the list consecutively and ti will store it in an onther list.