Comparative Programming Languages

Give a brief description of the main syntactic constructs used in Smalltalk (or Squeak) programs, illustrating your answer by explaining the meaning of the following fragment of code:

```smalltalk
[self isAwake] whileTrue:
| item |
  item := self askForCookie.
  (self isCookie: item)
    ifTrue: [self eat: item]
    ifFalse: [self complainAbout: item].
  (self isFull) ifTrue: [self sleep]
```

Suggest how you implement in Smalltalk (or Squeak) a binary tree in which each node contains an integer and pointers to two or fewer other nodes of the same kind.

Outline the code you would use (a) to construct this kind of tree, and (b) to sum all the integers in a given tree.