```
1  package body decls.dtnoms is
2
3      procedure tbuida(tn: out Tnoms) is
4          tdispersio : taula_dispersio renames tn.tdispersio;
5          idx_tblocs : id_nom renames tn.idx_tblocs;
6          idx_tcaracters : index_tcaracters renames tn.idx_tcaracters;
7      begin
8
9          for i in 0..tam_tdispersio loop
10             tdispersio(i) := id_nom'first;    --id_nom'first indica que no apunta enlloc
11         end loop;
12
13         idx_tblocs := id_nom'first+1;
14         idx_tcaracters := index_tcaracters'first;
15
16     end tbuida;
17
18     function hash(k: in string) return natural is
19         comptador : natural := 0;
20     begin
21         for i in k'first..k'last loop
22             comptador := comptador + character'POS(k(i));
23         end loop;
24         return comptador mod tam_tdispersio;
25     end hash;
26
27     --Insereix un string dins la taula de caracters
28     procedure posa(tc: in out taula_caracters; idx_tc: in out index_tcaracters; s: in string) is
29     begin
30         for i in s'first..s'last loop
31             tc(idx_tc) := s(i);
32             idx_tc := index_tcaracters'succ(idx_tc);
33         end loop;
34         tc(idx_tc) := Ascii.NUL;
35         idx_tc := index_tcaracters'succ(idx_tc);
36     end posa;
37
38     --Compara un string amb un altre ja introduit dins la taula de caracters
39     --si son iguals retorna true, sino false
40     function compara(tc: in taula_caracters; s: in string;
41                      id: in index_tcaracters) return boolean is
42         idx_tcaracters : index_tcaracters := id;
43         idx_s : natural := s'first;
44     begin
45         while tc(idx_tcaracters) = s(idx_s) and idx_s < s'last loop
46             idx_tcaracters := index_tcaracters'succ(idx_tcaracters);
47             idx_s := natural'succ(idx_s);
48         end loop;
49         return (tc(idx_tcaracters) = s(idx_s) and
50                 idx_s = s'last and
51                 tc(idx_tcaracters + 1) = Ascii.NUL);
52     end compara;
53
54     procedure posa_id(tn: in out Tnoms; s: in string; id: out id_nom) is
55         p : natural;
56         idx : id_nom;
57         tdispersio: taula_dispersio renames tn.tdispersio;
58         tblocs : taula_blocs renames tn.tblocs;
59         tcaracters : taula_caracters renames tn.tcaracters;
60         idx_tblocs : id_nom renames tn.idx_tblocs;
61         idx_tcaracters : index_tcaracters renames tn.idx_tcaracters;
62     begin
63         p := hash(s);
64         idx := tdispersio(p);
65         while idx /= id_nom'first and then not compara(tcaracters, s, tblocs(idx).ptcaracters) loop
66             idx := tblocs(idx).ptblocs;
67         end loop;
68         if idx = id_nom'first then
69             id := idx_tblocs;
70             tblocs(idx_tblocs).ptcaracters := idx_tcaracters;
```

```
71              posa(tcaracters, idx_tcaracters, s);
72              idx_tblocs := idx_tblocs + 1;
73          end if;
74      end posa_id;
75
76      procedure posa_cad(tn: in out Tnoms; s: in string; id: out id_string) is
77          tcaracters : taula_caracters renames tn.tcaracters;
78          idx_tcaracters : index_tcaracters renames tn.idx_tcaracters;
79      begin
80          id := idx_tcaracters;
81          posa(tcaracters, idx_tcaracters, s);
82      end posa_cad;
83
84      --retorna la posicio on acaba l'string a llegir
85      function con(tc: in taula_caracters; idx: in index_tcaracters) return index_tcaracters is
86          i : index_tcaracters;
87      begin
88          i := idx;
89          while tc(i) /= Ascii.NUL loop
90              i := index_tcaracters'succ(i);
91          end loop;
92          return i;
93      end con;
94
95      function con_id(tn: in Tnoms; id: in id_nom) return string is
96          i : index_tcaracters;
97          tblocs : taula_blocs renames tn.tblocs;
98          tc : taula_caracters renames tn.tcaracters;
99      begin
100         i := con(tc, tblocs(id).ptcaracters);
101         return string(tc(tblocs(id).ptcaracters..i));
102     end con_id;
103
104     function con_cad(tn: in Tnoms; id: in id_string) return string is
105         i : index_tcaracters;
106         tc: taula_caracters renames tn.tcaracters;
107     begin
108         i := con(tc, id);
109         return string(tc(id..i));
110     end con_cad;
111
112 end decls.dtnoms;
113
```