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with Arbre_Genealogique;                                use Arbre_Genealogique;

procedure test_arbre_genealogique is

    AG:Arbre_Genealogique.Arbre_Binaire_Character.T_Branch;
    procedure Exemple_Arbre(AG:in out Arbre_Genealogique.Arbre_Binaire_Character.T_Branch) is
        begin
            Init_AG(18,AG);
            Ajouter_Ancetre(2, 'P', 18,AG);
            Ajouter_Ancetre(19, 'M', 18,AG);
            Ajouter_Ancetre(1, 'P', 2,AG);
            Ajouter_Ancetre(15, 'M', 2,AG);
            Ajouter_Ancetre(4, 'P', 15,AG);
            Ajouter_Ancetre(33, 'M', 19,AG);
            Ajouter_Ancetre(25, 'P', 33,AG);
            Ajouter_Ancetre(42, 'M', 33,AG);
            Ajouter_Ancetre(35, 'P', 42,AG);
        end Exemple_Arbre;

    procedure Tester_Exemple_Arbre is
        begin
            Exemple_Arbre(AG);
            --Tester la création et bonne répartition des ancêtres dans l'AG.
            pragma assert(not Est_Nul_AG(AG));
            pragma assert(Est_Present(2,AG));
            pragma assert(Est_Present(19,AG));
            pragma assert(Est_Present(1,AG));
            pragma assert(Est_Present(15,AG));
            pragma assert(Est_Present(4,AG));
            pragma assert(Est_Present(33,AG));
            pragma assert(Est_Present(25,AG));
            pragma assert(Est_Present(42,AG));
            pragma assert(Est_Present(35,AG));
            pragma assert(not Est_Present(64,AG));

            --
            --Tester le nombre d'ancêtres d'un noeud, ce dernier est inclu dans le calcul.
            pragma assert(Nombre_Ancetres(2,AG)=4);
            pragma assert(Nombre_Ancetres(19,AG)=5);
            pragma assert(Nombre_Ancetres(18,AG)=10);
            pragma assert(Nombre_Ancetres(33,AG)=4);
            pragma assert(Nombre_Ancetres(15,AG)=2);
            pragma assert(Nombre_Ancetres(4,AG)=1);
            pragma assert(Nombre_Ancetres(25,AG)=1);
        end Tester_Exemple_Arbre;

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procedure Tester_Supprimer is
begin
    Exemple_Arbre(AG);
    --Tester la suppression
    Supprimer_famille(35,AG);
    pragma assert(not Est_Present(35,AG));
    Supprimer_famille(25,AG);
    pragma assert(not Est_Present(25,AG));
    Supprimer_famille(4,AG);
    pragma assert(not Est_Present(4,AG));
    Supprimer_famille(15,AG);
    pragma assert(not Est_Present(15,AG));
    Supprimer_famille(1,AG);
    pragma assert(not Est_Present(1,AG));
    Supprimer_famille(19,AG);
    pragma assert(not Est_Present(19,AG));
    pragma assert(not Est_Present(33,AG));
    pragma assert(not Est_Present(42,AG));
    Supprimer_famille(18,AG);
    pragma assert(Est_Nul_AG(AG));
end Tester_Supprimer;
begin
    Tester_Exemple_Arbre;
    Tester_Supprimer;
end test_arbre_genealogique;

```