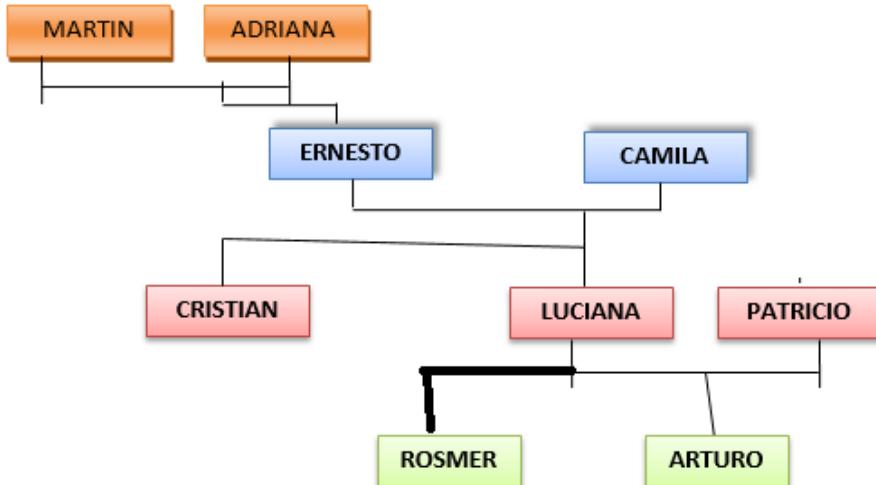


# Sustitutorio de IA

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EJEMPLOS DE CONSULTAS:

```
SWI-Prolog -- c:/Users/F20LAB303-XXE/Desktop/sustihelder.pl
File Edit Settings Run Debug Help
Earlier definition at c:/users/f20lab303-xxe/desktop/sustihelder.pl:4
Current predicate: progenitor/2
Use :- discontiguous mujer/1. to suppress this message
Warning: c:/users/f20lab303-xxe/desktop/sustihelder.pl:33:
Clauses of hombre/1 are not together in the source-file
Earlier definition at c:/users/f20lab303-xxe/desktop/sustihelder.pl:5
Current predicate: mujer/1
Use :- discontiguous hombre/1. to suppress this message
Warning: c:/users/f20lab303-xxe/desktop/sustihelder.pl:39:
Singleton variables: [Z]
Welcome to SWI-Prolog (Multi-threaded, 64 bits, Version 7.2.3)
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SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software,
and you are welcome to redistribute it under certain conditions.
Please visit http://www.swi-prolog.org for details.

For help, use ?- help(Topic). or ?- apropos(Word).

1 ?- bisnietos(N,martin).
N = rosmery ;
N = arturo ;
false.
```

% hechos %

% nivel 1 %

mujer(adriana).  
hombre(martin).  
progenitor(martin,ernesto).  
progenitor(adriana,ernesto).

% nivel 2 %

mujer(camila).  
hombre(ernesto).  
progenitor(camila,luciana).  
progenitor(ernesto,luciana).  
progenitor(camila,cristian).  
progenitor(ernesto,cristian).

% nivel 3 %

mujer(luciana).  
hombre(patricio).  
hombre(cristian).  
progenitor(luciana,rosmery).  
progenitor(patricio,rosmery).  
progenitor(luciana,arturo).  
progenitor(patricio,arturo).

% nivel 4 %

mujer(rosmery).  
hombre(arturo).

% reglas %

mismo(X,X).

diferente(X,Y):-not(mismo(X,Y)).

pareja(X,Y):-progenitor(X,Y),progenitor(X,Z),diferente(X,Y).

madre(X,Y):-progenitor(X,Y),mujer(X).

padre(X,Y):-progenitor(X,Y),hombre(X).

hijos(X,Y):-progenitor(Y,X).

hijo(X,Y):-progenitor(Y,X),hombre(X).

hija(X,Y):-progenitor(Y,X),mujer(X).

bisnietos(Y,X):-bisnieta(Y,X);bisnieto(Y,X).

bisnieto(Y,X):-progenitor(X,Z),progenitor(Z,P),progenitor(P,Y),hombre(Y).

bisnieta(Y,X):-progenitor(X,Z),progenitor(Z,P),progenitor(P,Y),mujer(Y).