Diego Rodriguez

```prolog
/*Females Definitions*/
female(erika).
female(bere).
female(kenny).

/*Male Definitions*/
male(javier).
male(dimitri).
male(diego).

/*Parent Definitions*/
parent(erika, dimitri).
parent(javier, bere).
parent(erika, kenny).
parent(javier, diego).

/*Problem 1 Definitions*/
mother(X,Y) :- parent(X,Y) , female(X).

/*Problem 2 Definition*/
sister(X,Y) :- parent(Z,Y) , parent(Z,X) , female(X).

/*Problem 3 Definition*/
second(X,List) :- [A,B|C] = List , X = B.

/*Problem 4 Definition*/
twice([],[]).
twice(In,Out) :- [H|T] = In , [H,H|N] = Out , twice(T,N).

/*Problem 5 Definition*/
interleave([],[],[]).
interleave(A,B,X) :- [H1|T1] = A , [H2|T2] = B, [H1,H2|T] = X , interleave(T1,T2,T).
```

```
 DxExWxExY 12:08 PM /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog
   └──> prolog
Code HW1.pdf  hw.pl
 DxExWxExY 12:08 PM /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog
   └──> prolog
Code HW1.pdf  hw.pl
 DxExWxExY 12:08 PM /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog
   └──> prolog hw.pl
Warning: /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog/hw.pl:24:
        Singleton variables: [A,C]
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).

?- mother(erika,dimitri).
true .

?- mother(erika,kenny).
true.

?- mother(erika,diego).
false.

?-
```

```
 DxExWxExY 12:16 PM /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog
   └──> prolog hw.pl
Warning: /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog/hw.pl:24:
        Singleton variables: [A,C]
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For help, use ?- help(Topic). or ?- apropos(Word).

?- sister(kenny,dimitri).
true.

?- sister(bere,diego).
true.

?- sister(erika,javier).
false.

?-
```

```
DxExWxExY@Laptopexe: /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog    —    □    X

DxExWxExY 12:18 PM /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog
└──> prolog hw.pl
Warning: /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog/hw.pl:24:
        Singleton variables: [A,C]
Welcome to SWI-Prolog (Multi-threaded, 64 bits, Version 7.2.3)
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For help, use ?- help(Topic). or ?- apropos(Word).

?- second(b,[a,b,c,d]).
true.

?- second(g,[a,g,c,d]).
true.

?- second(c,[a,g,c,d]).
false.

?- second(a,[a,g,c,d]).
false.

?-
```

```
DxExWxExY@Laptopexe: /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog    —    □    X

DxExWxExY 12:22 PM /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog
└──> prolog hw.pl
Warning: /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog/hw.pl:24:
        Singleton variables: [A,C]
Welcome to SWI-Prolog (Multi-threaded, 64 bits, Version 7.2.3)
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Please visit http://www.swi-prolog.org for details.

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

?- twice([a,e,i],X).
X = [a, a, e, e, i, i] .

?- twice(X,[a,a,e,e,i,i]).
X = [a, e, i] .

?-
```

```
DxExWxExY 12:26 PM /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog
└──> prolog hw.pl
Warning: /mnt/c/Users/DxExWxExY/Google Drive/Documents Backup/CS Prog Lang/Prolog/hw.pl:24:
        Singleton variables: [A,C]
Welcome to SWI-Prolog (Multi-threaded, 64 bits, Version 7.2.3)
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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).

?- interleave([a,b],[c,d], Z).
Z = [a, c, b, d] .

?- interleave([h,l,o],[e,l,!], X).
X = [h, e, l, l, o, !] .

?-
```