```
Last login: Mon Apr 10 13:19:27 on ttys005 carbon:SamplePrograms$ cd Sec_01_1\:25pm/carbon:Sec 01 1:25pm$ utop
```

Welcome to utop version 1.14 (using OCaml version 4.01.0)!

Type #utop_help for help about using utop.

```
-(18:00:00) -< command 0>
                                                                         _____{ counter: 0 }_
utop # #use "subsetsum_cps.ml";;
val show list : ('a -> string) -> 'a list -> string = <fun>
val is_elem : 'a -> 'a list -> bool = <fun>
val sum : int list -> int = <fun>
File "subsetsum_cps.ml", line 47, characters 21-28:
Error: Unbound value explode
-(13:34:48) -< command 1 >--
                                                                        _____{ counter: 0 }-
utop # #use "subsetsum_cps.ml";;
val explode : string -> char list = <fun>
val show_list : ('a -> string) -> 'a list -> string = <fun>
val is_elem : 'a -> 'a list -> bool = <fun>
val sum : int list -> int = <fun>
val process solution cps v1 : ('a -> string) -> 'a -> (unit -> 'b) -> (unit -> 'b) -> 'b =
  <fun>
val try_subset_cps_v1 : int list -> int list -> (unit -> 'a) -> (unit -> 'a) -> 'a = <fun>
val subsetsum_cps_v1 : int list -> unit = <fun>
-( 13:34:50 )-< command 2 >--
                                                                         _____{ counter: 0 }_
utop # subsetsum_cps_v1 [ 1; -2; 5; -5 ; 6] ;;
Here is a solution:
[1; -2; -5; 6]
Do you like it?
Yeah, we found one
- : unit = ()
-( 13:35:27 )-< command 3 >--
                                                                        _____{ counter: 0 }-
utop # subsetsum_cps_v1 [ 1; -2; 5; -5 ; 6] ;;
Here is a solution:
[1; -2; -5; 6]
Do you like it?
Here is a solution:
[ 5; -5 ]
Do you like it?
Oh no, no subset found.
- : unit = ()
-( 13:35:53 )-< command 4 >---
                                                                       _____{ counter: 0 }-
utop # #use "subsetsum_cps.ml";;
val explode : string -> char list = <fun>
val show_list : ('a -> string) -> 'a list -> string = <fun>
val is_elem : 'a -> 'a list -> bool = <fun>
val sum : int list -> int = <fun>
val process_solution_cps_v1 : ('a -> string) -> 'a -> (unit -> 'b) -> (unit -> 'b) -> 'b =
val try_subset_cps_v1 : int list -> int list -> (unit -> 'a) -> (unit -> 'a) -> 'a = <fun>
val subsetsum_cps_v1 : int list -> unit = <fun>
val process_solution_cps_v2 : ('a \rightarrow string) \rightarrow 'a \rightarrow ('a \rightarrow 'b) \rightarrow (unit \rightarrow 'b) \rightarrow 'b =
val try_subset_cps_v2 : int list -> int list -> (int list -> 'a) -> (unit -> 'a) -> 'a =
```

```
<fun>
val subsetsum_cps_v2 : int list -> unit = <fun>
                                                                             —{ counter: 0 }—
-( 13:36:07 )-< command 5 >----
utop # subsetsum_cps_v2 [ 1; -2; 3; -5; 6 ] ;;
Here is a solution:
[1; -2; -5; 6]
Do you like it?
Yeah, we found one.
It is as follows:
[ 1; -2; -5; 6 ]
-: unit =()
-(13:37:59) -< command 6 >-
                                                                         -----{ counter: 0 }-
utop # #use "wolf.ml";;
val is not elem : 'a list -> 'a -> bool = <fun>
val run : 'a -> unit = <fun>
val is_elem : 'a -> 'a list -> bool = <fun>
type loc = L \mid R
type state = loc * loc * loc * loc
val ok state : state -> bool = <fun>
val final : loc * loc * loc * loc -> bool = <fun>
val other side : loc -> loc = <fun>
val moves : state -> state list = <fun>
-( 13:38:13 )-< command 7 >--
                                                                         ____{ counter: 0 }_
utop # moves (L,L,L,L) ;;
- : state list = [(R, L, R, L)]
-(13:56:34) -< command 8 >
                                                                           ----{ counter: 0 }--
utop # List.map final (moves (L,L,L,L)) ;;
- : bool list = [false]
-( 13:56:44 )-< command 9 >--
                                                                           ----{ counter: 0 }--
utop # moves (L,L,L,L) ;;
- : state list = [(R, L, R, L)]
-( 13:57:38 )-< command 10 >--
                                                                             —{ counter: 0 }—
utop # moves (List.hd (moves (L,L,L,L))) ;;
- : state list = [(L, L, R, L); (L, L, L, L)]
-(13:58:11) -< command 11 >-
                                                                             —{ counter: 0 }—
utop # #use "wolf.ml";;
val is_not_elem : 'a list -> 'a -> bool = <fun>
val run : 'a -> unit = <fun>
val is_elem : 'a -> 'a list -> bool = <fun>
type loc = L \mid R
type state = loc * loc * loc * loc
val ok_state : state -> bool = <fun>
val final : loc * loc * loc * loc -> bool = <fun>
val other_side : loc -> loc = <fun>
val moves : state -> state list = <fun>
val crossing v1 : unit -> state list option = <fun>
-(13:58:29) -< command 12 >-
                                                                             —{ counter: 0 }—
utop # crossing_v1 () ;;
- : state list option =
Some
 [(L, L, L, L); (R, L, R, L); (L, L, R, L); (R, R, R, L); (L, R, L, L);
  (R, R, L, R); (L, R, L, R); (R, R, R, R)]
-(14:04:52) -< command 13 >-
                                                                         -----{ counter: 0 }-
utop # #use "wolf.ml";;
val is_not_elem : 'a list -> 'a -> bool = <fun>
val run : 'a -> unit = <fun>
val is elem : 'a -> 'a list -> bool = <fun>
type loc = L \mid R
```

```
type state = loc * loc * loc * loc
val ok_state : state -> bool = <fun>
val final : loc * loc * loc * loc -> bool = <fun>
val other_side : loc -> loc = <fun>
val moves : state -> state list = <fun>
val crossing_v1 : unit -> state list option = <fun>
exception FoundPath of (loc * loc * loc * loc) list
val crossing_v2 : unit -> (loc * loc * loc * loc) list option = <fun>
exception KeepLooking
val process_solution_exn : ('a -> string) -> 'a -> 'a option = <fun>
val show_list : ('a -> string) -> 'a list -> string = <fun>
val show loc : loc -> string = <fun>
val show state : loc * loc * loc * loc -> string = <fun>
val show_path : (loc * loc * loc * loc) list -> string = <fun>
val crossing_v3 : unit -> state list option = <fun>
-(14:05:11) -< command 14 >
                                                                          ----{ counter: 0 }--
utop # crossing v3 () ;;
Here is a solution:
[ (L, L, L, L); (R, L, R, L); (L, L, R, L); (R, R, R, L); (L, R, L, L); (R, R, L, R); (L, R,
L, R); (R, R, R, R) ]
Do you like it?
Here is a solution:
[ (L, L, L, L); (R, L, R, L); (L, L, R, L); (R, L, R, R); (L, L, R); (R, R, L, R); (L, R,
L, R); (R, R, R, R) ]
Do you like it?
- : state list option = None
-(14:11:41) -< command 15 >
                                                                            —{ counter: 0 }—
utop #
 Arg|Arith status|Array|ArrayLabels|Assert failure|Big int|Bigarray|Buffer|Callback|Camlint
```