```
Last login: Fri Feb 3 13:15:12 on ttys014 carbon:public-class-repo$ cd SamplePrograms/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.

```
utop # #use "fold.ml";;
val fold : ('a -> 'b -> 'b) -> 'a list -> 'b = <fun>
                                _____{ counter: 0 }_
-( 13:42:50 )-< command 1 >----
utop # fold (+) 0 [1;2;3;4] ;;
-: int = 10
utop # Int32.to string ;;
- : int32 -> string = <fun>
utop # let x::Int32 = 4 ;;
Error: The variant type list has no constructor Int32
                               _____{ counter: 0 }-
-( 13:46:35 )-< command 4 >-----
utop # string of int ;;
- : int -> string = <fun>
utop # string of int 4 ;;
- : string = "4"
utop # fold f z [1;2;3] ;;
Error: Unbound value f
utop # #use "fold.ml";;
val fold : ('a -> 'b -> 'b) -> 'a list -> 'b = <fun>
utop # fold f "" [1;2;3] ;;
- : string = "123"
utop # #use "fold.ml";;
val fold : ('a -> 'b -> 'b) -> 'a list -> 'b = <fun>
val f : int -> string -> string = <fun>
utop # fold f "" [1;2;3] ;;
- : string = "1, 2, 3, "
utop # #use "fold.ml";;
val fold v1 : ('a -> 'b -> 'b) -> 'b -> 'a list -> 'b = <fun>
val f : int -> string -> string = <fun>
val fold_v2 : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
                      _____{ counter: 0 }-
-( 13:50:43 )-< command 12 >----
utop # fold_v2 (+) 0 [1;2;3;4] ;;
```

```
-: int = 10
utop # fold_v2 f "" [1;2;3;4] ;;
Error: This expression has type int -> string -> string
     but an expression was expected of type int -> string -> int
     Type string is not compatible with type int
utop # #use "fold.ml";;
val fold v1 : ('a -> 'b -> 'b) -> 'b -> 'a list -> 'b = <fun>
val f : int -> string -> string = <fun>
val fold_v2 : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val g : string -> int -> string = <fun>
                              _____{{ counter: 0 }-
-( 13:56:09 )-< command 15 >--
utop # fold_v2 f "" [1;2;3;4] ;;
Error: This expression has type int -> string -> string
     but an expression was expected of type int -> string -> int
     Type string is not compatible with type int
utop # fold_v2 g "" [1;2;3;4] ;;
-: string = "4, 3, 2, 1, "
utop # #use "fold.ml";;
val fold v1 : ('a -> 'b -> 'b) -> 'b -> 'a list -> 'b = <fun>
val f : int -> string -> string = <fun>
val fold_v2 : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val q : string -> int -> string = <fun>
utop # fold_v2 g "" [1;2;3;4] ;;
- : string = ", 1, 2, 3, 4"
utop # #use "fold.ml";;
File "fold.ml", line 98, characters 17-18:
Warning 3: deprecated feature: ISO-Latin1 characters in identifiers
File "fold.ml", line 98, characters 18-19:
Error: Illegal character (\128)
utop # #use "fold.ml";;
val fold_v1 : ('a -> 'b -> 'b) -> 'b -> 'a list -> 'b = <fun>
val f : int -> string -> string = <fun>
val fold v2 : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val q : string -> int -> string = <fun>
val foldr : ('a -> 'b -> 'b) -> 'a list -> 'b -> 'b = <fun>
val foldl : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val foldr : ('a -> 'b -> 'b) -> 'a list -> 'b -> 'b = <fun>
val foldl : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val foldr : ('a -> 'b -> 'b) -> 'a list -> 'b -> 'b = <fun>
val foldl : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val foldr : ('a -> 'b -> 'b) -> 'a list -> 'b -> 'b = <fun>
val foldl : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val length : int list -> int = <fun>
-( 14:08:26 )-< command 21 >-----
                                           _____{ counter: 0 }-
```

```
utop # length [1;2;3;4] ;;
-: int = 5
-( 14:08:45 )-< command 22 >----
                                         _____{ counter: 0 }-
utop # #use "fold.ml";;
val fold v1 : ('a -> 'b -> 'b) -> 'b -> 'a list -> 'b = <fun>
val f : int -> string -> string = <fun>
val fold v2 : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val g : string -> int -> string = <fun>
val foldr : ('a -> 'b -> 'b) -> 'a list -> 'b -> 'b = <fun>
val foldl : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val foldr : ('a -> 'b -> 'b) -> 'a list -> 'b -> 'b = <fun>
val foldl : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val foldr : ('a -> 'b -> 'b) -> 'a list -> 'b -> 'b = <fun>
val foldl : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val foldr: ('a -> 'b -> 'b) -> 'a list -> 'b -> 'b = <fun>
val foldl : ('a -> 'b -> 'a) -> 'a -> 'b list -> 'a = <fun>
val length : 'a list -> int = <fun>
utop # length [1;2;3;4] ;;
-: int = 4
utop # length [1;2;3;6] ;;
-: int = 4
utop # length [] ;;
-: int = 0
-( 14:11:03 )-< command 26 >----
                                  _____{{ counter: 0 }-
utop # foldr (fun h t -> h :: t) [] [1;2;3;4] ;;
-: int list = [1; 2; 3; 4]
-( 14:11:06 )-< command 27 >----
                                         _____{ counter: 0 }-
utop # foldr (fun h t -> h :: t) [] ( 1::2::3::4::[]) ;;
-: int list = [1; 2; 3; 4]
utop # foldr (+) 0 [1;2;3;4] ;;
Error: This expression has type int but an expression was expected of type
      int list
utop # foldr (+) [1;2;3;4] 0 ;;
-: int = 10
utop #
Arg|Arith_status|Array|ArrayLabels|Assert_failure|Big_int|Bigarray|Buffer|Call|
```