

Quiz02-01:

```
(* ***** *)
use "../..../mysmlib/mysmlib-cls.sml";
(* ***** *)

val strlen = (* length *)
foreach_to_length(string_foreach)
val strsub = (* subscripting *)
foreach_to_get_at(string_foreach)

(* ***** *)

(*
HX-2023-02-20:
Please implement a function
[quiz02_01' of the following type:
//
fun
quiz02_01
(word: string): char -> int =
//
Given a word 'word' (of the type string),
'quiz02_01(word)' returns a function of the
type 'char -> int'; when applied to a char,
this function returns the number of times this
char appears in 'word'.

For instance, we have

quiz02_01("$abb^cccdddd")(#"0") = 0
quiz02_01("$abb^cccdddd")(#"1") = 0
quiz02_01("$abb^cccdddd")(#"a") = 1
quiz02_01("$abb^cccdddd")(#"b") = 2
quiz02_01("$abb^cccdddd")(#"c") = 3
quiz02_01("$abb^cccdddd")(#"d") = 4
quiz02_01("$abb^cccdddd")(#"z") = 0
quiz02_01("$abb^cccdddd")(#"$") = 1
quiz02_01("$abb^cccdddd")(#"^") = 1

*)

(* ***** *)
```

```

fun quiz02_01 (word: string) : int = ??

(* ***** *)

(* end of [CS320-2023-Spring-quizzes-quiz02_01.sml] *)

```

Quiz02-02:

```

(* ***** *)
use ".././../././mysmlib/mysmlib-cls.sml";
(* ***** *)

(*
//
HX-2023-02-20: 60 points
//
Please implement a function of the name quiz02_02
that takes two lists xs and ys of integers and checks
whether there exists a pair (x, y) such that  $|x-y| < 10$ 
where x is in xs and y is in ys.
//
*)

(* ***** *)

val abs =
  fn(x:int) => if x >= 0 then x else ~x

(* ***** *)

val quiz02_02 : (int list * int list) : bool = ??

(* ***** *)

(* end of [CS320-2023-Spring-quizzes-quiz02_02.sml] *)

```