CSci 2041:

Advanced Programming Principles

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Exercise #1:Comparing `find_all_by` and `find_all_with`

```
let rec find_all_by eq elem lst = match lst with
| [] -> []
| x::xs -> let rest = find_all_by eq elem xs
in if eq elem x then x :: rest else rest

let rec find_all_with f lst = match lst with
| [] -> []
| x::xs ->
let rest = find_all_with f xs
in if f x then x::rest else rest
```

Can `find_all_by` be defined using `find_all_with`?

Can `find_all_with` be defined using `find_all_by`?

Exercise #2:

Recall, `let find_all = find_all_by (=)`.

Can we define `find_all` using `find_all_with`?

Recall..

```
let rec find_all_with f lst = match lst with
| [] -> []
| x::xs ->
let rest = find_all_with f xs
in if f x then x::rest else rest
```