CSE 341

Section 4
The SML Module System

- Good for organizing code, and managing namespaces (useful, relevant)
- Good for maintaining invariants (interesting)
Invariants

- Ordering of operations
  - e.g. insert, then query
- Data kept in good state
  - e.g. fractions in lowest terms
- Policies followed
  - e.g. don't allow shipping request without purchase order
- Sensitive information hidden
  - e.g. force authentication for api use
Module Example

See bank.sml
Mutual Recursion

Two or more functions, all call some other.

e.g. (pseudocode)

```plaintext
fun f()
    g()

and g()
    f()
```
Mutual Recursion

ML Syntax: we introduce the new keyword "and", and use it to include more function declarations.

```ml
fun f x = <body>
and g x = <other_body>
```
Mutual Recursion

see mutual_rec.sml
Review

Currying, and Higher Order Functions

see all_pairs.sml
Questions

Always feel free to email:

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