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)

```
fun f()
  g()


and g()
  f()
```

Mutual Recursion

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

```
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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