proposed move to System F

At the Manticore meeting on 11/7/07, we discussed moving BOM in the direction of System F.

The following summarize the proposed changes to the <code>BOM</code> module:

New syntactic forms:

- let x : τ = y [τVec]
- apply f [τVec] [...] / [...]
- let x : τ = CONS [τVec] (...)
- let x : τ = CONST [τVec]
- throw k [τ] (...)

New types:

- α (* type variables *)
- ∀ αVec . τ
- T [τVec]
- τ + τ

Here are the changes to the datatypes in the <code>BOM</code> module:

datatype term
= ...

E_Apply of (var * ty list * var list * var list)
E_Throw of (var * ty list * var list)
E_HLOp of (hlop * ty list * var list * var list)

and rhs
= ...

E_TyApply of (var * ty list)
E_DCon of (data_con * ty list * ty list)

and lambda
= FB of

Unknown macro: { f }

and pat
= P_DCon of (data_con * ty list * var list)

P_DConst of (data_con * ty list)
...

and the changes to the BOMTy module:

datatype ty
= T_Var of ty_var

T_Forall of (ty_var list * ty)
T_TyCon of (tyc * ty list)
...

We'll also need to add the <code>ty_var</code> type and make changes to the representation of <code>tyc</code>.