The key in the assignment was to know how to use environment and fill it correctly for parsing the input correctly, it was actually very reasonable this time, since the information on the functions was provided in lambda form which really helped me understanding of both Haskell and the Semantics. This was a very well built assignment with the right amount of work.

I pattern matches the various cases of input in typing based on expression. I used recursion on ITE, Abs, App, LetIn to deal with nested functions. I use a function called formEnv to add additional k v pairs everytime a function is called recursively so I do not lose the previously added kv pairs. For Var "x" I simply lookup its value inside the env as base case of VarIds