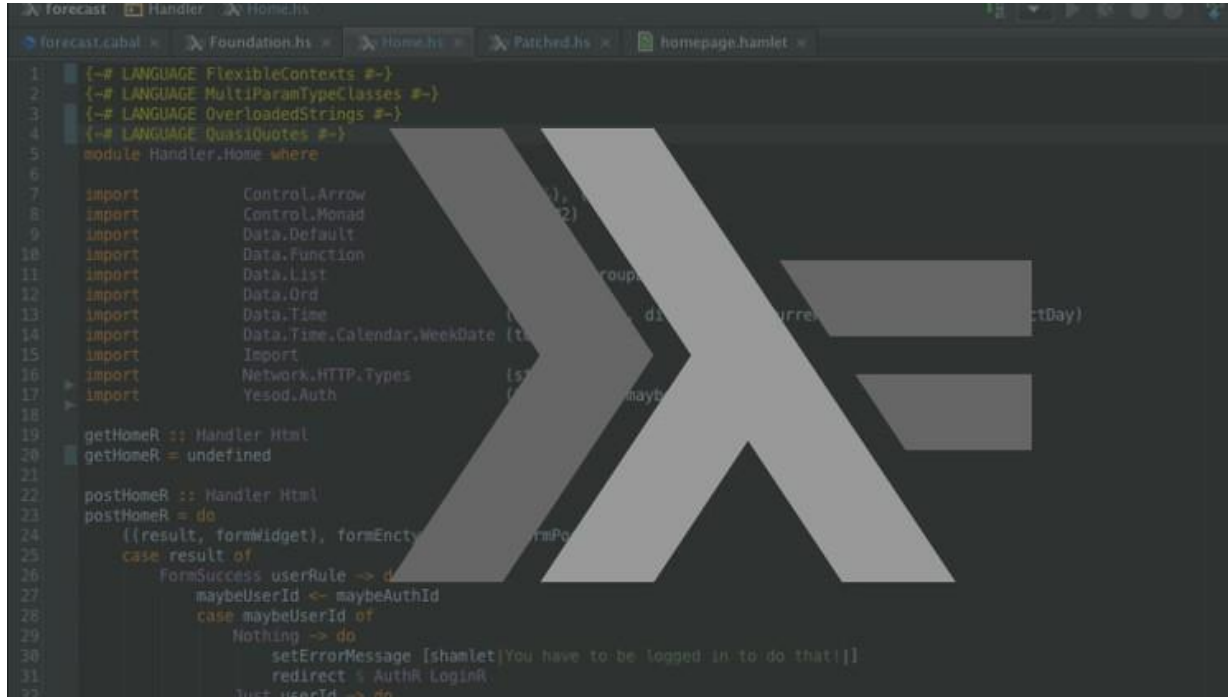


# Fibonacci



```
1 {-# LANGUAGE FlexibleContexts #-}
2 {-# LANGUAGE MultiParamTypeClasses #-}
3 {-# LANGUAGE OverloadedStrings #-}
4 {-# LANGUAGE QuasiQuotes #-}
5 module Handler.Home where
6
7 import Control.Arrow
8 import Control.Monad
9 import Data.Default
10 import Data.Function
11 import Data.List
12 import Data.Ord
13 import Data.Time
14 import Data.Time.Calendar.WeekDate
15 import Import
16 import Network.HTTP.Types
17 import Yesod.Auth
18
19 getHomeR :: Handler Html
20 getHomeR = undefined
21
22 postHomeR :: Handler Html
23 postHomeR = do
24   ((result, formWidget), formEnctype) <- runFormPost
25   case result of
26     FormSuccess userRule -> do
27       maybeUserId <- maybeAuthId
28       case maybeUserId of
29         Nothing -> do
30           setErrorMessage [shamlet|You have to be logged in to do that!|]
31           redirect % AuthR.LoginR
32         Just userId -> do
```

# Fibonacci

Write a function *fib* :: *Int* -> *Int* that returns the n-th element of the Fibonacci sequence using the recursive algorithm that defines it (  $f(0)=0$ ,  $f(1)=1$ ,  $f(n)=f(n-1)+f(n-2)$  for  $n \geq 2$  ).

# The Fibonacci Sequence

**0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377...**

In mathematics, the Fibonacci numbers form a sequence, in which each number is **the sum of the two preceding ones**