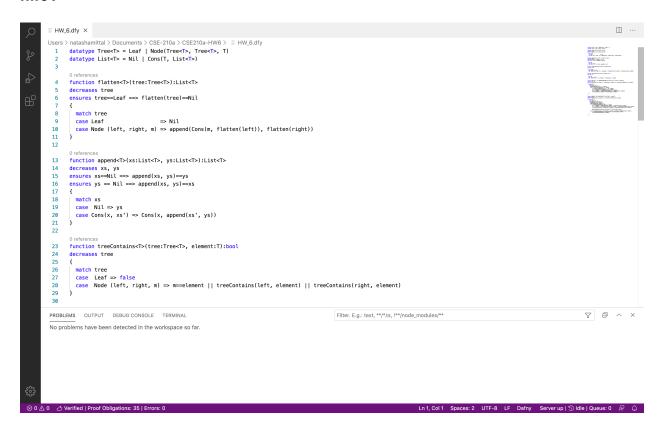
CSE210a: Homework 6 (Dafny) Natasha Mittal (nmittal1)

HW6:



Extra Credit:

```
HW6_ExtraCredit.dfy ×
                               The second secon
                                                          Oreferences
function eval(e:Exp, store:map<string, int>):int
decreases e, store
{
                                                                                match(e)
  case Const(n) => n
  case Var(s) => if(s in store) then store[s] else -1
  case Plus(el, e2) => eval(e1, store) + eval(e2, store)
  case Mult(e1, e2) => eval(e1, store) * eval(e2, store)
                                     10
11
12
                                                                Oreferences
function optimize(e:Exp):Exp
decreases e
{
                                     13
                                    14
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                                                                                 match (e)

case Mult(e1, e2) => if e1==Const(0) then Const(0)

else if e1==Const(1) then e2
else if e2==Const(0) then Const(0)
else if e2==Const(1) then e1
else if e1.Const(7 && e2.Const? then Const(e1.val*e2.val)
else Mult(e1, e2)

case Plus(e1, e2) => if e1==Const(0) then e1
else if e2==Const(0) then e1
else if e2==Const(0) then e1
else if e2==Const(0)
else Plus(e1, e2)

case Const(n)
=> Const(n)

case Var(s)
=> Var(s)
                                  PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7 @ ^ ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Filter. E.g.: text, **/*.ts, !**/node_modules/**
                                  No problems have been detected in the workspace so far.
Ln 31, Col 1 Tab Size: 4 UTF-8 CRLF Dafny Server up | 🔊 Idle | Queue: 0 👂 🕻
```