# LABSHEET - 1

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**BATCH : C.S.E - B**

```
adhinene@sampat: ~
adhinene@sampat:~$ ghci
GHCi, version 8.8.4: https://www.haskell.org/ghc/  :? for help
Prelude> 5+2
7
Prelude> 5 * 2 + 3
13
Prelude> sqrt 4.0
2.0
Prelude> sum[2,3,4]
9
Prelude> length[2,3,4,5]
4
Prelude> :m + Data.List
Prelude Data.List> sort [3,4,1,2,77,6]
[1,2,3,4,6,77]
Prelude Data.List>
```

## First Script :

```
Ex1.hs
add x y = x+y
square x = x * x
```

```
adhinene@sampat: ~
adhinene@sampat:~$ subl Ex1.hs
adhinene@sampat:~$ ghci
GHCi, version 8.8.4: https://www.haskell.org/ghc/  :? for help
Prelude> add 3 4

<interactive>:1:1: error:
    • Variable not in scope: add :: Integer -> Integer -> t
    • Perhaps you meant one of these:
        'and' (imported from Prelude), 'odd' (imported from Prelude)
Prelude> :l Ex1.hs
[1 of 1] Compiling Main             ( Ex1.hs, interpreted )
Ok, one module loaded.
*Main> add 3 4
7
*Main>
```

## Second Script (before changes):

```
~/Ex1a.hs - Sublime Text (UNREGISTERED)
File  Edit  Selection  Find  View  Goto  Tools  Project  Preferences  Help
Ex1.hs    Ex1a.hs

1  quad x = x*x*x*x
2  quad1 x = x^4
3  quad2 x = square (square x)
```

```
adhinene@sampat: ~
adhinene@sampat:~$ subl Ex1a.hs
adhinene@sampat:~$ ghci
GHCi, version 8.8.4: https://www.haskell.org/ghc/  :? for help
Prelude> :a Ex1a.hs
[1 of 1] Compiling Main             ( Ex1a.hs, interpreted )

Ex1a.hs:3:11: error: Variable not in scope: square :: t0 -> t1
  |
3 | quad2 x = square (square x)
  |           ^^^^^^

Ex1a.hs:3:19: error: Variable not in scope: square :: t -> t0
  |
3 | quad2 x = square (square x)
  |                   ^^^^^^
Failed, no modules loaded.
Prelude>
```

## Second Script (after changes) :

```
~/Ex1a.hs - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
Ex1.hs   Ex1a.hs
1 module Ex1a where
2 import Ex1
3 quad x = x*x*x*x
4 quad1 x = x^4
5 quad2 x = square (square x)
```

```
~/Ex1.hs - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
Ex1.hs   Ex1a.hs
1 module Ex1(square) where
2 add x y = x+y
3 square x = x * x
```

```
adhinene@sampat: ~
adhinene@sampat:~$ ghci
GHCi, version 8.8.4: https://www.haskell.org/ghc/  :? for help
Prelude> :a Ex1a.hs
[1 of 2] Compiling Ex1              ( Ex1.hs, interpreted )
[2 of 2] Compiling Ex1a             ( Ex1a.hs, interpreted )
Ok, two modules loaded.
*Ex1a> quad 5
625
*Ex1a> quad1 5
625
*Ex1a> quad2 5
625
*Ex1a>
```

## List Of Commands :

```
Prelude> 2*-3

<interactive>:6:2: error:
    • Variable not in scope: (*-) :: Integer -> Integer -> t
    • Perhaps you meant one of these:
        ‘*’ (imported from Prelude), ‘-’ (imported from Prelude),
        ‘*>’ (imported from Prelude)
Prelude> 2*(-3)
-6
Prelude> True && False
False
Prelude> False || True
True
Prelude> True && 1

<interactive>:10:9: error:
    • No instance for (Num Bool) arising from the literal ‘1’
    • In the second argument of ‘(&&)’, namely ‘1’
      In the expression: True && 1
      In an equation for ‘it’: it = True && 1
Prelude> 1==1
True
Prelude> 2 /= 3
True
Prelude> not True
False
Prelude> 1 + (4 * 4)
17
Prelude> 1 + 4 * 4
17
Prelude> [1,2,3]
[1,2,3]
Prelude> [True,False,"testing"]

<interactive>:17:13: error:
    • Couldn't match expected type ‘Bool’ with actual type ‘[Char]’
    • In the expression: "testing"
      In the expression: [True, False, "testing"]
      In an equation for ‘it’: it = [True, False, "testing"]
Prelude> [1..10]
[1,2,3,4,5,6,7,8,9,10]
Prelude> [1.0,1.25..2.0]
[1.0,1.25,1.5,1.75,2.0]
Prelude> [1,4..15]
[1,4,7,10,13]
Prelude> [10,9..1]
[10,9,8,7,6,5,4,3,2,1]
Prelude> [3,1,3] ++ [3,7]
[3,1,3,3,7]
Prelude> [] ++ [False,True] ++ [True]
[False,True,True]
Prelude> 1 : [2,3]
[1,2,3]
Prelude> "This is a string"
"This is a string"
Prelude> putStrLn "Here's a newline -->\n<-- See?"
Here's a newline -->
<-- See?
Prelude> "" == []
True
Prelude> :type 3 + 2
3 + 2 :: Num a => a
Prelude>
```