

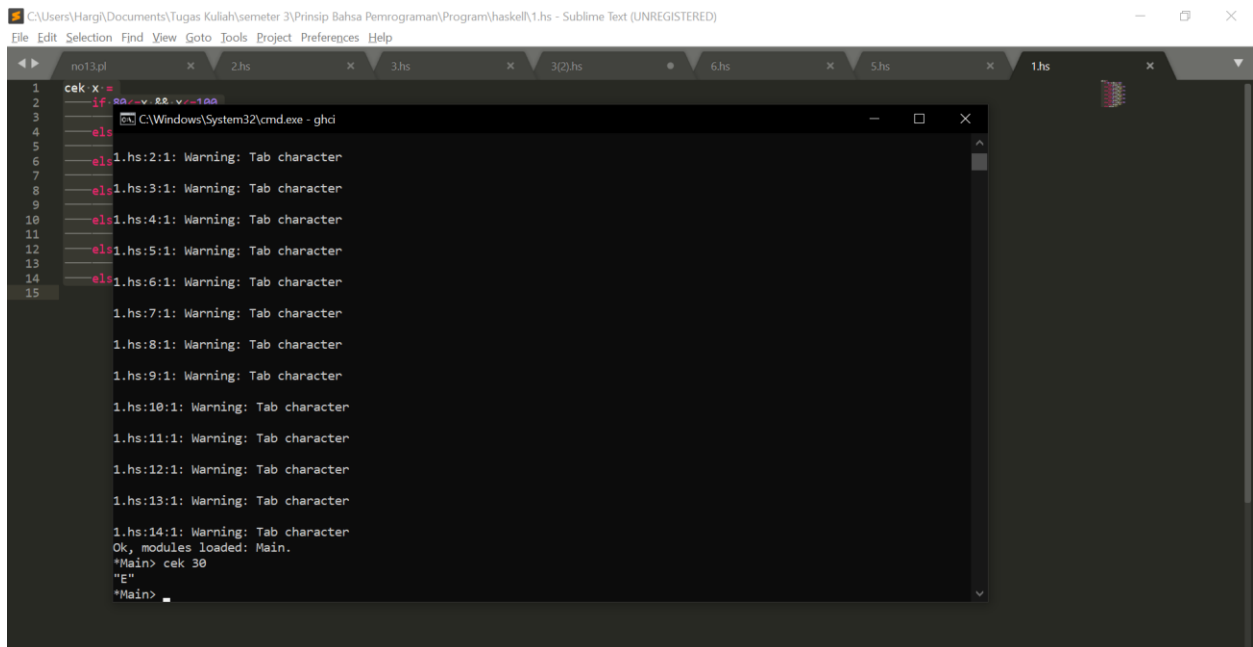
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D4-2A

1. cek x =

```
if 80<=x && x<=100
    then print "A"
else if 75<=x && x<=79
    then print "AB"
else if 70<=x && x<=74
    then print "B"
else if 65<=x && x<=69
    then print "BC"
else if 60<=x && x<=64
    then print "C"
else if 50<=x && x<=59
    then print "D"
else print "E"
```



The screenshot shows a Sublime Text editor window with the title bar "C:\Users\Hargi\Documents\Tugas Kuliah\semester 3\Prinsip Bahasa Pemrograman\Program\haskell\1.hs - Sublime Text (UNREGISTERED)". The editor has several tabs open: "noT3.pl", "2.hs", "3.hs", "3(2).hs", "6.hs", "5.hs", and "1.hs". The "1.hs" tab is active, displaying the following Haskell code:

```
1 cek x =
2   if 80<=x && x<=100
3   then print "A"
4   else
5   if 75<=x && x<=79
6   then print "AB"
7   else
8   if 70<=x && x<=74
9   then print "B"
10  else
11  if 65<=x && x<=69
12  then print "BC"
13  else
14  if 60<=x && x<=64
15  then print "C"
16  else
17  if 50<=x && x<=59
18  then print "D"
19  else print "E"
```

Below the code, the execution output is visible in a separate window. It shows several warnings about tab characters and the final output of the program:

```
1.hs:2:1: Warning: Tab character
1.hs:3:1: Warning: Tab character
1.hs:4:1: Warning: Tab character
1.hs:5:1: Warning: Tab character
1.hs:6:1: Warning: Tab character
1.hs:7:1: Warning: Tab character
1.hs:8:1: Warning: Tab character
1.hs:9:1: Warning: Tab character
1.hs:10:1: Warning: Tab character
1.hs:11:1: Warning: Tab character
1.hs:12:1: Warning: Tab character
1.hs:13:1: Warning: Tab character
1.hs:14:1: Warning: Tab character
Ok, modules loaded: Main.
*Main> cek 30
"E"
*Main>
```

2. module GCD where

gcde a 0 = a

gcde a b = gcde b(a `mod` b)

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```
module GCD where
gcd = ...
gcd = ...
gcd = ...
C:\Windows\System32\cmd.exe - ghci
1.hs:6:1: Warning: Tab character
1.hs:7:1: Warning: Tab character
1.hs:8:1: Warning: Tab character
1.hs:9:1: Warning: Tab character
1.hs:10:1: Warning: Tab character
1.hs:11:1: Warning: Tab character
1.hs:12:1: Warning: Tab character
1.hs:13:1: Warning: Tab character
1.hs:14:1: Warning: Tab character
Ok, modules loaded: Main.
*Main> cek 30
'e'
*Main> :load 2.hs
[1 of 1] Compiling GCD (2.hs, interpreted)
2.hs:2:1: Warning: Tab character
2.hs:3:1: Warning: Tab character
Ok, modules loaded: GCD.
*GCD> gcd 10 5
5
*GCD>
```

3. checkEvenOdd x = if even x && x>0
then "Genap Positif"
else if even x && x<0
then "Genap Negatif"
else if odd x && x>0
then "Ganjil Positif"
else "Ganjil Negatif"

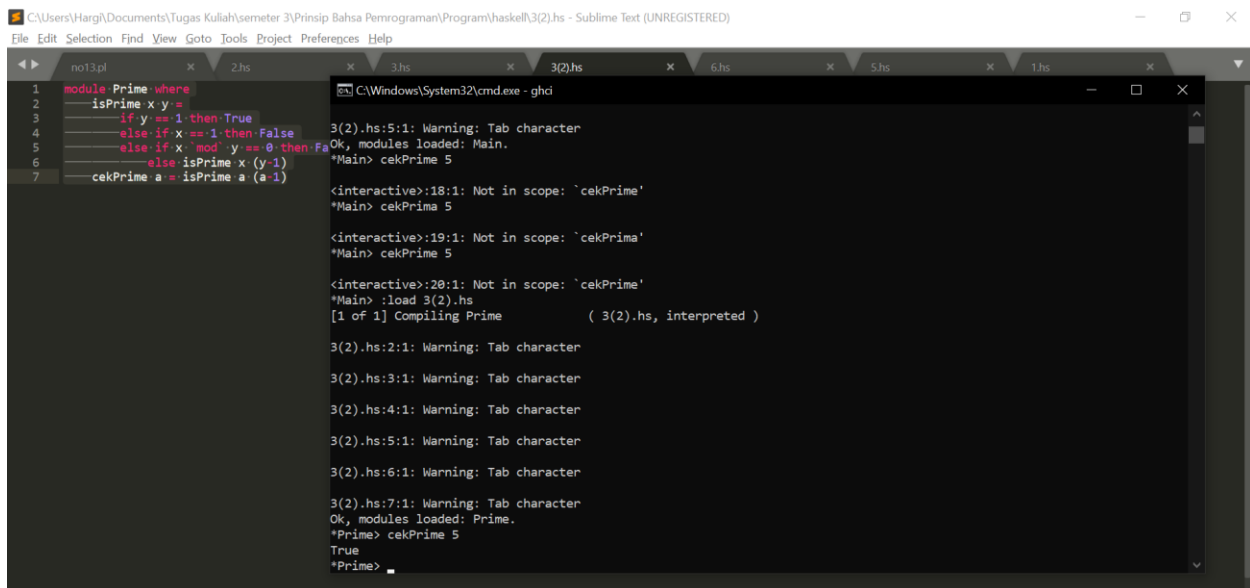
```
checkEvenOdd x = if even x && x>0
then 'Genap Positif'
else if even x && x<0
then 'Genap Negatif'
else if odd x && x>0
then 'Ganjil Positif'
else 'Ganjil Negatif'
C:\Windows\System32\cmd.exe - ghci
1.hs:14:1: Warning: Tab character
Ok, modules loaded: Main.
*Main> cek 30
'e'
*Main> :load 2.hs
[1 of 1] Compiling GCD (2.hs, interpreted)
2.hs:2:1: Warning: Tab character
2.hs:3:1: Warning: Tab character
Ok, modules loaded: GCD.
*GCD> gcd 10 5
5
*GCD> :load 3.hs
[1 of 1] Compiling Main (3.hs, interpreted)
3.hs:2:1: Warning: Tab character
3.hs:4:18: Warning: Tab character
3.hs:5:18: Warning: Tab character
3.hs:6:18: Warning: Tab character
3.hs:7:18: Warning: Tab character
Ok, modules loaded: Main.
*Main> checkEvenOdd 5
'Ganjil Positif'
*Main>
```

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```
4. module Prime where
    isPrime x y =
        if y == 1
            then True
        else if x == 1
            then False
        else if x `mod` y == 0
            then False
        else isPrime x (y-1)
    cekPrime a = isPrime a (a-1)
```



The screenshot shows a Sublime Text editor window with the following Haskell code in a file named 3(2).hs:

```
1 module Prime where
2   isPrime x y =
3     if y == 1 then True
4     else if x == 1 then False
5     else if x `mod` y == 0 then False
6     else isPrime x (y-1)
7   cekPrime a = isPrime a (a-1)
```

The terminal window shows the execution of the code using the GHCi interpreter. The output is as follows:

```
C:\Windows\System32\cmd.exe - ghci
3(2).hs:5:1: Warning: Tab character
Ok, modules loaded: Main.
*Main> cekPrime 5
<interactive>:18:1: Not in scope: `cekPrime'
*Main> cekPrima 5
<interactive>:19:1: Not in scope: `cekPrima'
*Main> cekPrime 5
<interactive>:20:1: Not in scope: `cekPrime'
*Main> :load 3(2).hs
[1 of 1] Compiling Prime      ( 3(2).hs, interpreted )
3(2).hs:2:1: Warning: Tab character
3(2).hs:3:1: Warning: Tab character
3(2).hs:4:1: Warning: Tab character
3(2).hs:5:1: Warning: Tab character
3(2).hs:6:1: Warning: Tab character
3(2).hs:7:1: Warning: Tab character
Ok, modules loaded: Prime.
*Prime> cekPrime 5
True
*Prime>
```

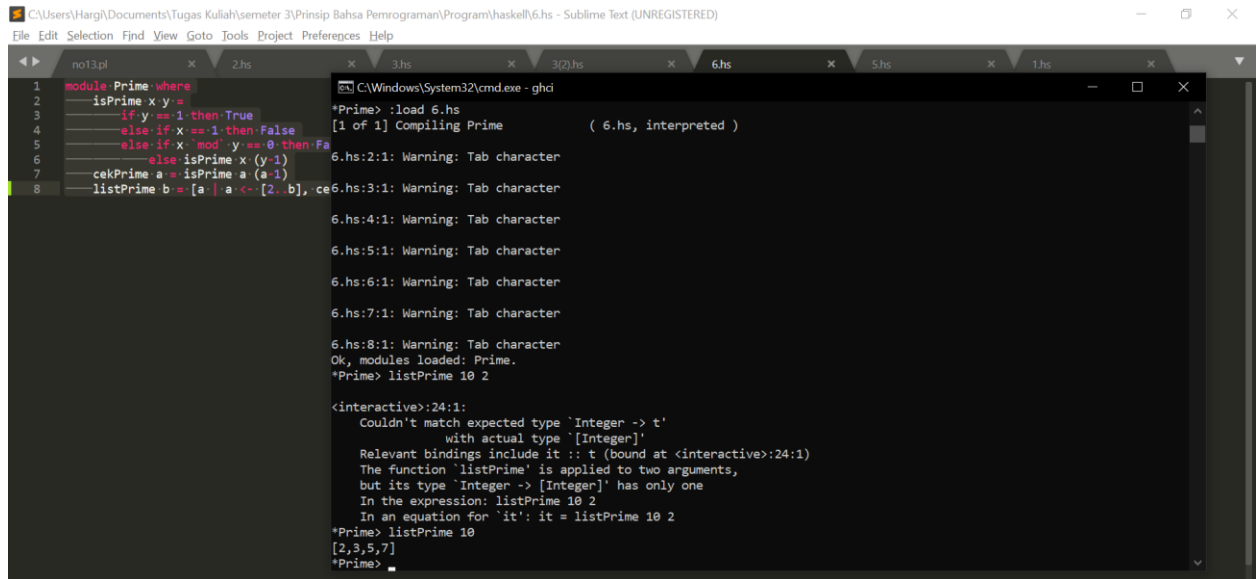
5. —

```
6. module Prime where
    isPrime x y =
        if y == 1 then True
        else if x == 1 then False
        else if x `mod` y == 0 then False
            else isPrime x (y-1)
    cekPrime a = isPrime a (a-1)
    listPrime b = [a | a <- [2..b], cekPrime a]
```

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The screenshot shows a Sublime Text editor window with the title bar "C:\Users\Hargi\Documents\Tugas Kuliah\semester 3\Prinsip Bahasa Pemrograman\Program\haskell\6.hs - Sublime Text (UNREGISTERED)". The editor has a menu bar with "File", "Edit", "Selection", "Find", "View", "Goto", "Tools", "Project", "Preferences", and "Help". There are several tabs open: "no13.pl", "2.hs", "3.hs", "3(2).hs", "6.hs", "5.hs", and "1.hs". The "6.hs" tab is active, showing the following Haskell code:

```
1 module Prime where
2   isPrime x y =
3     if y == 1 then True
4     else if x == 1 then False
5     else if x `mod` y == 0 then False
6     else isPrime x (y-1)
7   cekPrime a = isPrime a (a-1)
8   listPrime b = [a | a <- [2..b], cekPrime a]
```

The right pane shows the GHCi REPL output:

```
*Prime> :load 6.hs
[1 of 1] Compiling Prime          ( 6.hs, interpreted )

6.hs:2:1: Warning: Tab character
6.hs:3:1: Warning: Tab character
6.hs:4:1: Warning: Tab character
6.hs:5:1: Warning: Tab character
6.hs:6:1: Warning: Tab character
6.hs:7:1: Warning: Tab character
6.hs:8:1: Warning: Tab character
Ok, modules loaded: Prime.
*Prime> listPrime 10 2

<interactive>:24:1:
  Couldn't match expected type 'Integer -> t'
    with actual type '[Integer]'
  Relevant bindings include it :: t (bound at <interactive>:24:1)
  The function 'listPrime' is applied to two arguments,
  but its type 'Integer -> [Integer]' has only one
  In the expression: listPrime 10 2
  In an equation for 'it': it = listPrime 10 2
*Prime> listPrime 10
[2,3,5,7]
*Prime>
```