Question 5 Complete	Select the function signature that best represents a parser
Mark 1.00 out of 1.00	a. String -> Result ParseError (a, String)
♥ Flag question	O b. [Int] -> Result Int a
	c. String -> Result ParseError a
	○ d. String -> a
	Your answer is correct.
Information Flag question	The next 3 questions are intermediate questions.
1 rag question	Read each question carefully.
Question 6	
Complete	Complete the parser below such that it parses a C\C++ array indexing expression (i.e. [1][2]): Note: there must be at least one indexing expression.
Mark 1.00 out of 1.00	cArrayIndex = Some
₱ Flag question	
	Your answer is correct.
Question 3	Select the false statements about monads in Haskell:
Complete	
	a. Monad defines the function <\$>
Complete Mark 1.00 out of	 a. Monad defines the function <\$> b. Int is an example of Monad
Complete Mark 1.00 out of 1.00	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad
Complete Mark 1.00 out of 1.00	 a. Monad defines the function <\$> b. Int is an example of Monad
Complete Mark 1.00 out of 1.00	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class
Complete Mark 1.00 out of 1.00	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad
Complete Mark 1.00 out of 1.00 Filag question	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class
Complete Mark 1.00 out of 1.00 Flag question Question 4	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class Your answer is correct. Which of the following names would best describe the following parser:
Complete Mark 1.00 out of 1.00 *Flag question Question 4 Complete Mark 1.00 out of	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class Your answer is correct.
Complete Mark 1.00 out of 1.00 Flag question Question 4 Complete	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class Your answer is correct. Which of the following names would best describe the following parser:
Complete Mark 1.00 out of 1.00 Filag question Question 4 Complete Mark 1.00 out of 1.00	a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class Your answer is correct. Which of the following names would best describe the following parser: satisfies (==c)
Complete Mark 1.00 out of 1.00 Filag question Question 4 Complete Mark 1.00 out of 1.00	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class Your answer is correct. Which of the following names would best describe the following parser: satisfies (==c) a. upper b. digit c. lower
Complete Mark 1.00 out of 1.00 Filag question Question 4 Complete Mark 1.00 out of 1.00	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class Your answer is correct. Which of the following names would best describe the following parser: satisfies (==c) a. upper b. digit
Complete Mark 1.00 out of 1.00 Filag question Question 4 Complete Mark 1.00 out of 1.00	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class Your answer is correct. Which of the following names would best describe the following parser: satisfies (==c) a. upper b. digit c. lower
Complete Mark 1.00 out of 1.00 F Flag question Question 4 Complete Mark 1.00 out of 1.00	 a. Monad defines the function <\$> b. Int is an example of Monad c. Maybe is an example of a Monad d. Monad is a type class Your answer is correct. Which of the following names would best describe the following parser: satisfies (==c) a. upper b. digit c. lower

Question 1 Match the concepts: Complete Mark 0.33 out of Mappable types that can also unpack nested structures in results | Applicative \$ 1.00 Mappable types Functor \$ Generalized mappable types Monad \$ Your answer is partially correct. You have correctly selected 1. Question 2 Select all the **false** statements about Input/Output in Haskell Complete Mark 1.00 out of a. To read data from a file we use the read function 1.00 ☐ b. To obtain a line from the standard input, we can write ♥ Flag question name <- getLine putStrLn name $\hfill \square$ c. do notation can be only used with the IO monad $\ \square$ d. Haskell's main function has the signature main :: 10 () Your answer is correct. Question 10 Given the following code: Complete newtype Any = Any Bool Mark 1.00 out of instance Semigroup Any where 1.00 $(Any a) \Leftrightarrow (Any b) = Any (a || b)$ ▼ Flag question instance Monoid Any where mempty = Any False The result of the following expressions is: fold1 (<>) mempty (map (\x -> Any (x `mod` 2 == 0)) [1, 2, 3]) Any True \diamondsuit fold1 (<>) mempty (map ($\xspace x \rightarrow Any (x >= 2)$) [2, 3, 4]) Any True \$ Your answer is correct.

Question 9 Complete Mark 1.00 out of Flag question Given the following code that generates the hamming numbers: merge3 \times y z = merge (merge \times y) z where merge (u:us) (v:vs) | u < v = u:merge us (v:vs) | u > v = v:merge (u:us) vs | otherwise = u:merge us vs ham :: [Integer] ham = 1:merge3 ham2 ham3 ham5 ham2 = [2*i | i <- ham] ham3 = [3*i | i <- ham] ham5 = [5*i | i <- ham] hammingGen :: Int -> [Integer] hammingGen n = take n ham Select what will be printed for each of the following commands after evaluating: > :sprint ham3 ham3 = 3:_ \$ > :sprint ham2 _ 2:4:_ ham2 =

Question **7** Complete Mark 1.00 out of 1.00

Flag question

The following list comprehension:

```
[(x, y) |x <- [1, 2], y <- ['a', 'b']]
```

- a. Returns [(1, 'a'), (2, 'b')]
- b. Returns: [(1, 'a'), (1, 'b'), (2, 'a'), (2, 'b')]
- O c. Fails to combile because the syntax is invalid
- O d. Fails to combile because x and y have different types

Your answer is correct.

Question 8 Complete Mark 1.00 out of

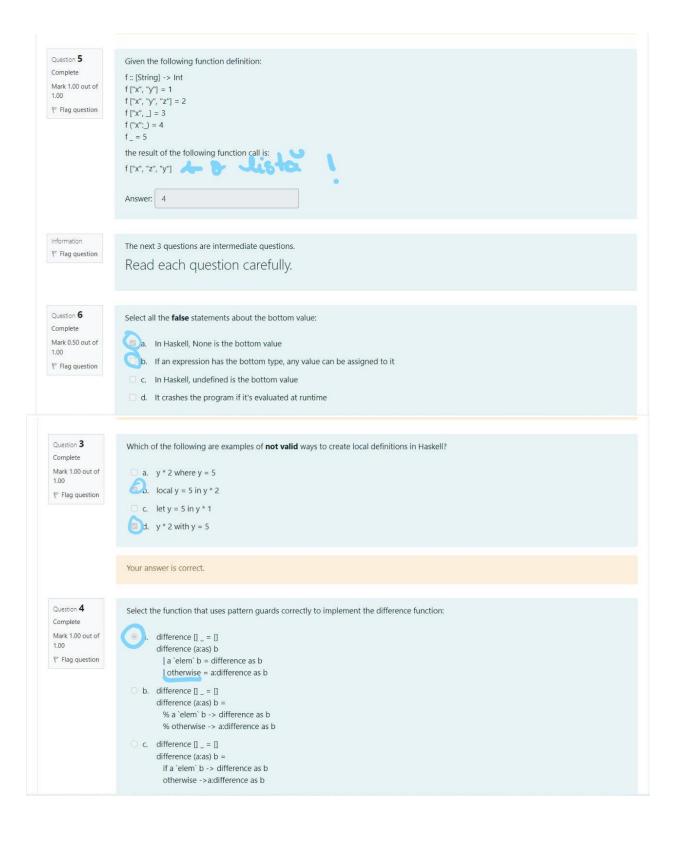
Flag question

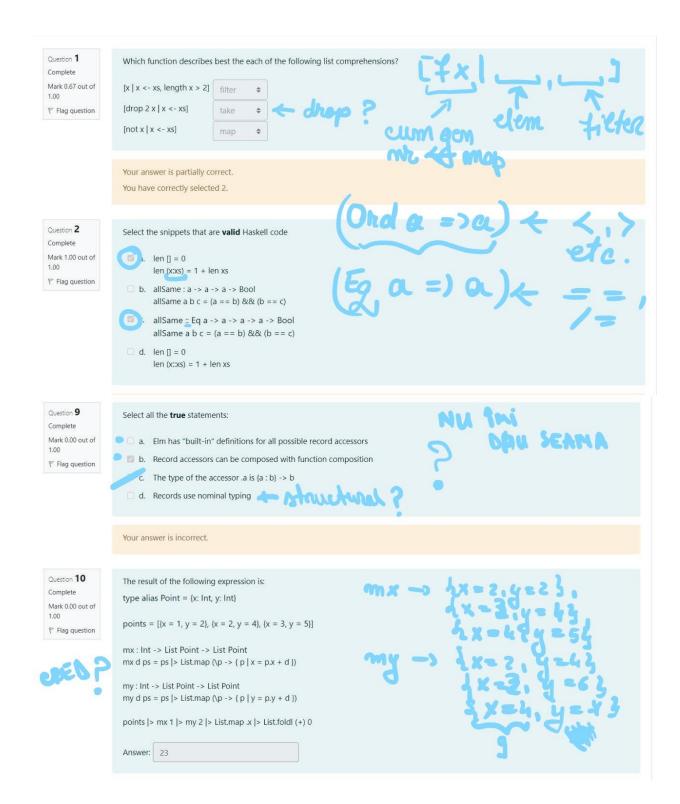
Select all the false statements about type classes

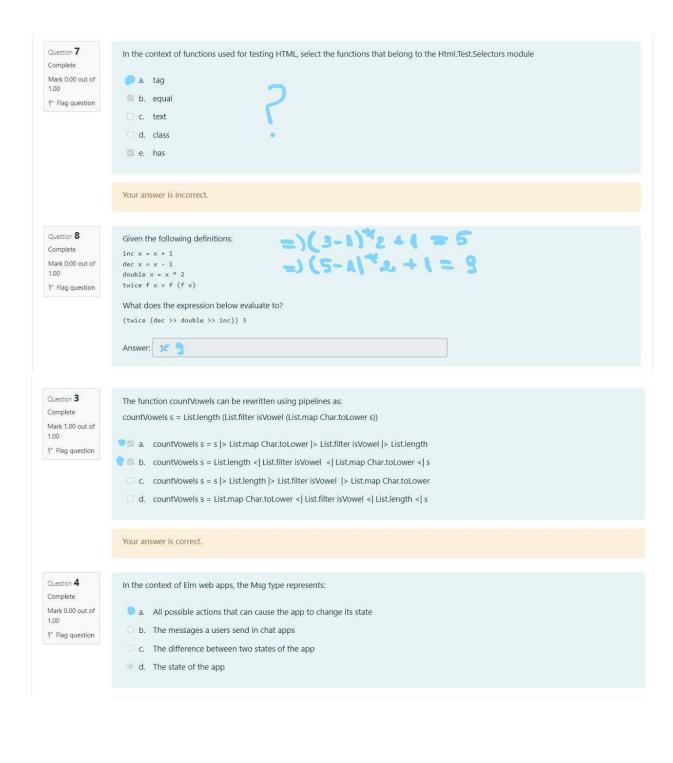
Type classes are used to define classes, a special kind of data definition that includes methods and private fields

b. Type classes are used to abstract common behavior for various types (like Java interfaces) All instance implementations for a type class must be in the module where the type class

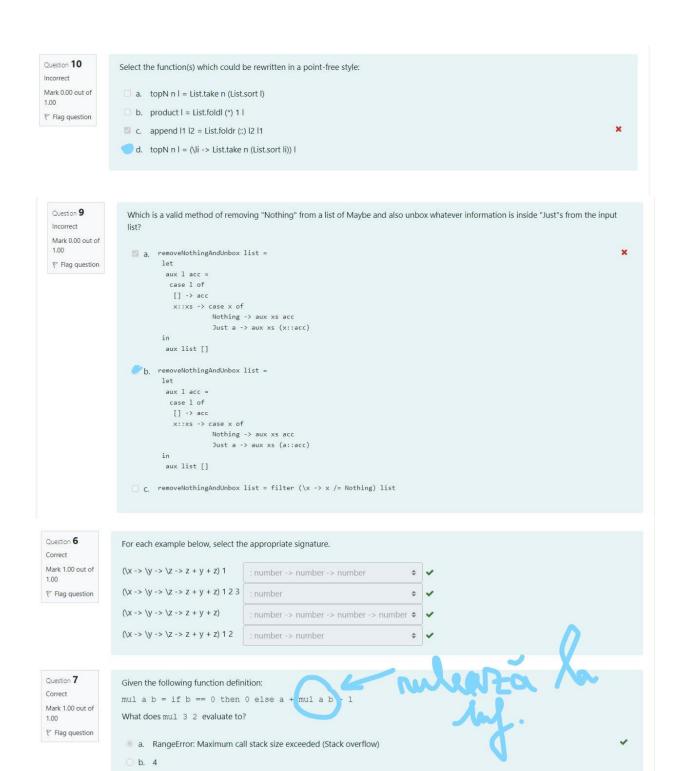
 $\hfill \Box$ d. We can implement type classes defined by the standard library for our own types



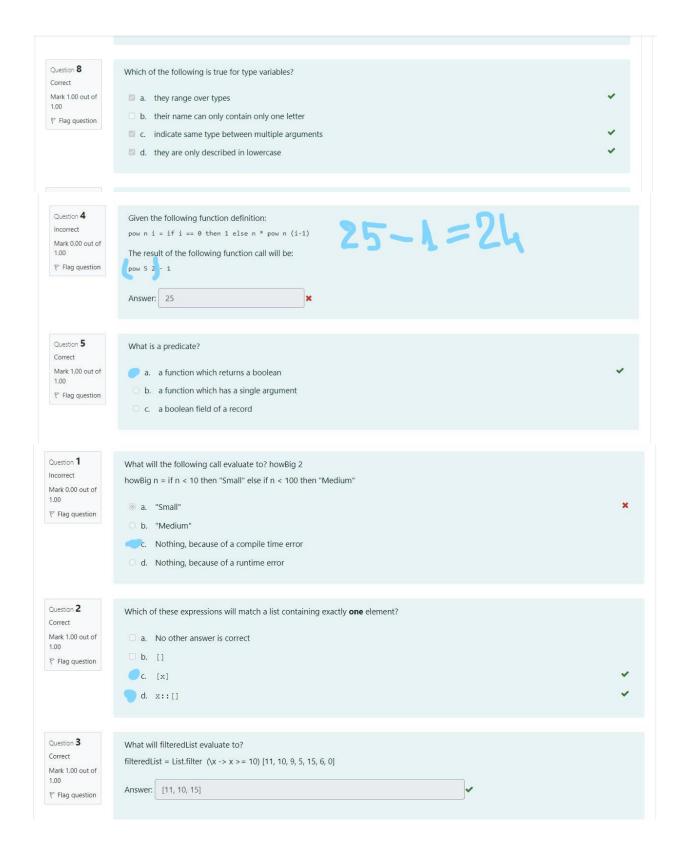




Question 6 Given the following definitions: Complete type CalculationError = FirstNaN | SecondNaN Mark 0.00 out of divNums : Float -> Float -> Result CalculationError Float F Flag question if isNaN a then Err FirstNaN else if isNaN b then Err SecondNaN else Ok (a / b) If we want to write a function that calls divNums and returns Result String Float, we have the following options: a. Use a case expression to transform the error b. Use Result.withDefault c. Use Result.mapError d. Use Result.map Question 1 To get the value that is inside the Just variant of Maybe or provide a default value, we can: Complete Mark 1.00 out of a. Use the Maybe.unwrap function b. Use an if expression Flag question Solution of the Maybe.withDefault function 🕽 🔯 d. Use a case expression Your answer is correct. Question 2 The following code snippet: Complete view = div [] [style "color" "red", text "Some text"] Mark 0.00 out of a. Will render the text "Some text" with red color F Flag question O b. Will generate invalid HTML that causes the browser to show an error © c. Will render the text "Some text" with black color, because the style is not applied correctly d. Will fail to compile Your answer is incorrect. Question 5 Given the following function definition: se exec de 2 oui Complete f x a b = x |> a |> b |> b Mark 1.00 out of 1.00 The result of the following expression is: Flag question f 3 (\x -> x + 5) (\x -> x * 2) Answer: 32



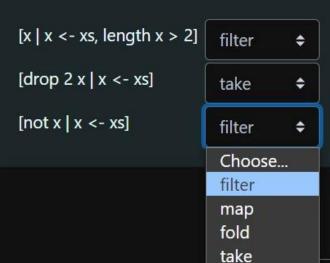
O c. 6



Which of the following are examples of **not valid** ways to create local definitions in Haskell?

- \blacksquare a. local y = 5 in y * 2
- b. y * 2 where y = 5
- □ c. let y = 5 in y * 1
- \square d. y * 2 with y = 5

Which function describes best the each of the following list comprehensions?



Select all the **true** statements about type classes

- a. Type classes are used to abstract common behavior for various types (like Java interfaces)
- b. We can implement type classes defined by the standard library for our own types
- c. Type classes are used to define classes, types that also have methods and private fields
- d. All type class implementations for a data type must be in the module where the data is defined

Select all the true statements about type classes

- a. Type classes are used to organize related types in a file
- b. Any type class can be implemented for any type
- c. All type class implementations for a data type must be in the module where the data is defined
- d. Type classes are used to define a common interface for a set of operations that can be performed on various types

Select all the **true** statements about the bottom value:

- a. In Haskell, undefined is the bottom value
- b. In Haskell, Nothing is the bottom value
- c. The bottom value can be assigned to any type
- d. The compiler won't compile (i.e. will show an error) programs that contain the bottom value

Given the following code:

```
newtype Any = Any Bool
instance Semigroup Any where
  (Any a) <> (Any b) = Any (a || b)
instance Monoid Any where
  mempty = Any False
```

The result of the following expressions is:

```
fold1 (<>) mempty (map (\x -> Any (x `mod` 2 == 0)) [1, 2, 3])

fold1 (<>) mempty (map (\x -> Any (x >= 2)) [2, 3, 4])

Choose... ◆

Choose...

Any True

True

False
```

Select the function that uses pattern guards correctly to implement the difference function:

```
a. difference [] _ = []
difference (a:as) b =
% a `elem` b -> difference as b
% otherwise -> a:difference as b
b. difference [] _ = []
difference (a:as) b =
if a `elem` b -> difference as b
```

```
• c. difference [] _ = []
difference (a:as) b
| a `elem` b = difference as b
| otherwise = a:difference as b
```

otherwise ->a:difference as b

Clear my choice

```
Given the following code that generates the hamming numbers:
merge3 x y z = merge (merge x y) z where
    merge (u:us) (v:vs)
        | u < v = u : merge us (v:vs)
        | u > v = v:merge (u:us) vs
        | otherwise = u:merge us vs
ham :: [Integer]
ham = 1:merge3 ham2 ham3 ham5
ham2 = [2*i | i \leftarrow ham]
ham3 = [ 3*i | i < - ham ]
ham5 = [ 5*i | i <- ham ]
hammingGen :: Intererl
                 Choose...
hammingGen n =
                 2:4:6:_
                5:_
                              ch of the following commands after evaluating:
Select what will I
                 2:4:_
hammingGen 4
                 5:10:_
> :sprint ham2
                 Choose... $
ham2 =
> :sprint ham5
                 Choose... $
ham5 =
```

