Problem Sheet 4.1: Lists Comprehension

List Comprehension

This week, since you have your graded assignments, there are only a few simple exercises on list comprehensions, rewriting the functions you wrote last week with `map` and `filter`. When you are finished, it might be a good idea to reflect on the three different ways of writing these functions: recursively, using `map` and `filter`, and using list comprehension. All three styles are important to learn, and will be more or less suited to implementing certain functions.

a) Rewrite the function `toLowerSt` using list comprehension.

```
*Main> toLowerSt "Hello World"
"hello world"
```

b) Rewrite the function `onlyLetters` using list comprehension.

```
*Main> onlyLetters "2 Fast 2 Furious"
"FastFurious"
```

c) Using the `Data.Char` functions `isDigit` and `isLetter`, and the `filter` function, implement the function `onlyNumsOrLetters` using list comprehension.

```
*Main> onlyNumsOrLetters "2 Fast 2 Furious"
"2Fast2Furious"
```

d) Implement the function `onlyLettersToLowers` using list comprehension. Once you are done, think about whether the function you wrote corresponds to `onlyLettersToLower` or `onlyLettersToLower2`.

```
*Main> onlyLettersToLower "2 Fast 2 Furious"
"fastfurious"
```