

KAUNO TECHNOLOGIJOS UNIVERSITETAS
INFORMATIKOS FAKULTETAS

Programavimo kalbų teorija (P175B124)
Laboratorinių darbų ataskaita

Atliko:

IFF-6/6 gr. studentas

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Priėmė:

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TURINYS

1. Paveikslėlių sąrašas.....	2
2. Haskell (L3).....	3
2.1. Darbo užduotis.....	3
2.2. Programos tekstas.....	3
2.3. Pradiniai duomenys ir rezultatai.....	4

1. Paveikslėlių sąrašas

Pav. 1. Pasirinkta užduotis.....	4
Pav. 2. užduoties sprendimas Haskell.....	6
Pav. 3. Pradiniai duomenys.....	6
Pav. 4. Programos vykdymas.....	7
Pav. 5. Gauti rezultatai.....	7

2. Haskell (L3)

2.1. Darbo užduotis

Atlikti išsirinktą užduotį Haskell programavimo kalba. Pasirinkta užduotis:



10107 What is the Median?

Median plays an important role in the world of statistics. By definition, it is a value which divides an array into two equal parts. In this problem you are to determine the current median of some integers. Suppose, we have five numbers $\{1, 3, 6, 2, 7\}$. In this case, 3 is the median as it has exactly two numbers on its each side. $\{1, 2\}$ and $\{6, 7\}$. If there are even number of values like $\{1, 3, 6, 2, 7, 8\}$, one value cannot split this array into equal two parts, so we consider the average of the middle values $\{3, 6\}$. Thus, the median will be $(3+6)/2 = 4.5$. In this problem, you have to print only the integer part, not the fractional. As a result, according to this problem, the median will be 4 !

Input

The input file consists of series of integers X ($0 \leq X < 2^{31}$) and total number of integers N is less than 10000. The numbers may have leading or trailing spaces.

Output

For each input print the current value of the median.

Sample Input

```
1
3
4
60
70
50
2
```

Sample Output

```
1
2
3
3
4
27
4
```

Pav. 1. Pasirinkta užduotis

2.2. Programos tekstas

```
import System.IO
import Control.Monad
import Data.Function
import Data.List

main = do
  let list = []
  handle <- openFile "input.txt" ReadMode
  contents <- hGetContents handle
  let singlewords = words contents
```

2.3. Pradiniai duomenys ir rezultatai

```
1
3
4
60
70
50
2|
```

Pav. 3. Pradiniai duomenys

```

Ignas@Ignas:~/Desktop/KTU/KTU/3 kursas/II semestras/Programavimo kalbu teorija/lab 3$ ghci
GHCi, version 8.0.2: http://www.haskell.org/ghc/  :? for help
Prelude> :l
Ok, modules loaded: none.
Prelude> :l 3
[1 of 1] Compiling Main                ( 3.hs, interpreted )
Ok, modules loaded: Main.
*Main> :r
Ok, modules loaded: Main.
*Main> main
*Main> 

```

Pav. 4. Programos vykdymas

```

1
2
3
3
4
27
|4

```

Pav. 5. Gauti rezultatai