

## Min and Max finder in Array

Per *Start Command Prompt with Ruby* paleidus komandą *ruby application.rb* yra klausiama masyvo dydis

```
Start Command Prompt with Ruby - ruby application.rb
C:\Users\s033860\Desktop\ruby>ll
'11' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\s033860\Desktop\ruby>dir
Volume in drive C has no label.
Volume Serial Number is B4EE-6AAC

Directory of C:\Users\s033860\Desktop\ruby

2020-09-26 12:23 <DIR>      .
2020-09-26 12:23 <DIR>      ..
2020-09-08 10:08                82 FirstTask.rb
2020-09-09 19:51 <DIR>      laurynas_zlatkus
2020-09-21 21:17                3,996 laurynas_zlatkus.txt
2020-09-26 15:08 <DIR>      ruby_array_zlatkus
2020-09-26 15:20 <DIR>      ruby_shell_sort_zlatkus
                2 File(s)      4,078 bytes
                5 Dir(s)  24,210,702,336 bytes free

C:\Users\s033860\Desktop\ruby>cd ruby_array_zlatkus

C:\Users\s033860\Desktop\ruby\ruby_array_zlatkus>ruby application.rb
Array size:
5
```

Toliau bus prašoma įvesti masyvo narius

```
Start Command Prompt with Ruby - ruby application.rb
Volume in drive C has no label.
Volume Serial Number is B4EE-6AAC

Directory of C:\Users\s033860\Desktop\ruby

2020-09-26 12:23 <DIR>      .
2020-09-26 12:23 <DIR>      ..
2020-09-08 10:08                82 FirstTask.rb
2020-09-09 19:51 <DIR>      laurynas_zlatkus
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                2 File(s)      4,078 bytes
                5 Dir(s)  24,210,702,336 bytes free

C:\Users\s033860\Desktop\ruby>cd ruby_array_zlatkus

C:\Users\s033860\Desktop\ruby\ruby_array_zlatkus>ruby application.rb
Array size:
5
enter number
4
enter number
8
enter number
6
enter number
5
enter number
2
```

Suvedus visus narius yra apskaičiuojama masyvo min, max, min kiekis, max kiekis ir išvedamas masyvas be min ir be max skaitmenų.

```
Start Command Prompt with Ruby
2020-09-08 10:08      82 FirstTask.rb
2020-09-09 19:51    <DIR>      laurynas_zlatkus
2020-09-21 21:17    3,996 laurynas_zlatkus.txt
2020-09-26 15:08    <DIR>      ruby_array_zlatkus
2020-09-26 15:20    <DIR>      ruby_shell_sort_zlatkus
                2 File(s)      4,078 bytes
                5 Dir(s)  24,210,702,336 bytes free

C:\Users\s033860\Desktop\ruby>cd ruby_array_zlatkus

C:\Users\s033860\Desktop\ruby\ruby_array_zlatkus>ruby application.rb
Array size:
5
enter number
4
enter number
8
enter number
6
enter number
5
enter number
2
Smallest number in array: 2
Biggest number in array: 8
Count of smallest numbers in array: 1
Count of biggest numbers in array: 1
Array without max and min numbers: [4, 6, 5]

C:\Users\s033860\Desktop\ruby\ruby_array_zlatkus>
```

## Rubocop patirikinimas

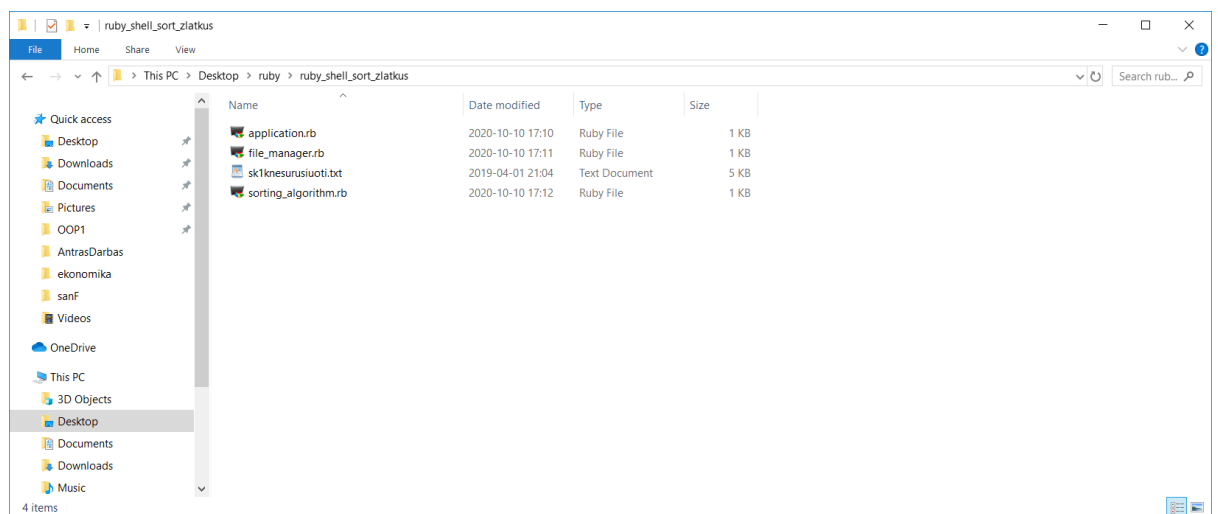
```
C:\Users\s033860\Desktop\RoR\ruby_array_zlatkus>rubocop -A
Inspecting 2 files
..

2 files inspected, no offenses detected

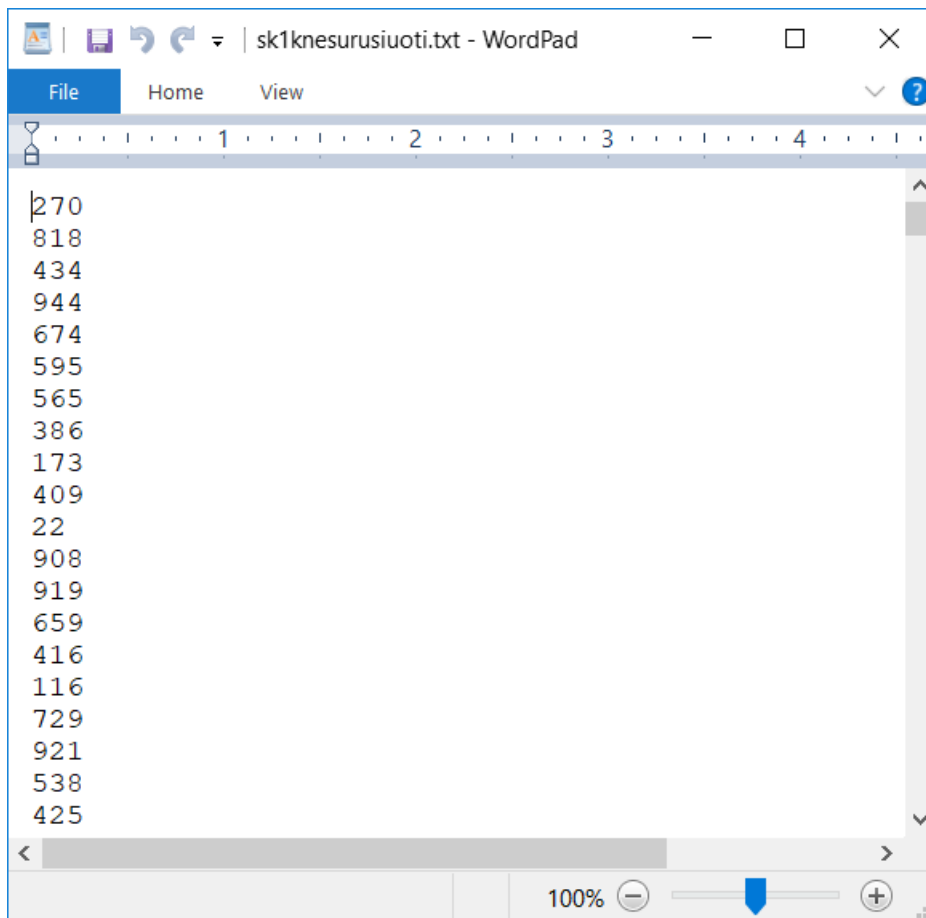
C:\Users\s033860\Desktop\RoR\ruby_array_zlatkus>cd ..
```

## Shell Sort Algorithm

Svarbu jog darbininame aplankale būtu .txt pavidalu paruoštas pavydžiui 1 tūkstančio skaitmenų failas.



Kuriame visi skaitmenys yra nesurūšiuoti.



Paleidus programą per *Start command Prompt with Ruby* su komandą *ruby application.rb* yra išvedamas laikas per kiek buvo surikiuoti visi faile esantys skaitmenys.

```
Start Command Prompt with Ruby
C:\Users\s033860\Desktop\ruby>cd ruby_array_zlatkus
C:\Users\s033860\Desktop\ruby\ruby_array_zlatkus>ruby application.rb
Array size:
5
enter number
4
enter number
8
enter number
6
enter number
5
enter number
2
Smallest number in array: 2
Biggest number in array: 8
Count of smallest numbers in array: 1
Count of biggest numbers in array: 1
Array without max and min numbers: [4, 6, 5]
C:\Users\s033860\Desktop\ruby\ruby_array_zlatkus>cd ..
C:\Users\s033860\Desktop\ruby>cd ruby_shell_sort_zlatkus
C:\Users\s033860\Desktop\ruby\ruby_shell_sort_zlatkus>ruby application.rb
Time spent sorting: 0.0308176
C:\Users\s033860\Desktop\ruby\ruby_shell_sort_zlatkus>
```

Rubocop patikrinimas

```
C:\Users\s033860\Desktop\RoR\ruby_shell_sort_zlatkus>rubocop -A
Inspecting 3 files
...
3 files inspected, no offenses detected
```

## Rectangle Claculator

Programa apskaičiuoja duomenis apie stačiakampį. Paleidę programą komanda “ruby main.rb” matome žemiau esančius rezultatus.

```
[Jonas@localhost rectangle_zemaitis]$ ruby main.rb
Staciakampio plotas: 100
Staciakampio perimetras: 40
Staciakampio istrizaines ilgis: 14.142135623730951
Staciakampio susikirtimo koordinates: x=5, y=-5
[Jonas@localhost rectangle_zemaitis]$
```

Mūsų pradiniai stačiakampio duomenys:

```
rect = Rectangle.new(10, 10, 0, 0)
```

,tai yra (ilgis, plotis, x, y [koordinates]).

Rubocop:

```
C:\Users\s033860\Desktop\RoR\rectangle_zemaitis>rubocop -a
Inspecting 3 files
...
3 files inspected, no offenses detected
```

## Ceasar Chiper

Programa naudodama cezario šifravimo būdą užšifruoja duotą tekstą, šiuo atveju:

```
'Labas 99 67'
```

ir gražina užšifruotą tekstą, bei dešifruotą užšifruotą tekstą. Ši programa taip pat yra paleidžiama ”ruby main.rb” komanda ir apačioje matome gautą rezultatą.

```
[Jonas@localhost ceasar_chiper_zemaitis]$ ruby main.rb
Encrypted: Qfgfx%>>%;<
Decrypted: Labas 99 67
[Jonas@localhost ceasar_chiper_zemaitis]$
```

P.S naudojama raktas yra skaičius 5:

```
chiper = CeasarChiper.new(5)
```

Rubocop:

```
C:\Users\s033860\Desktop\RoR\ceasar_chiper_zemaitis>rubocop -A
Inspecting 2 files
..
2 files inspected, no offenses detected
```

## Polindrome finder

Paleidus programą, vartotojo klausiama kiek polindromų jis nori rasti.

```
rytisrazmus@rytiss-MacBook-Pro trecias % ruby polindromes/main.rb
Enter the count of polindromes you want to find
10
```

Gaunamas atsakymas.

```
[rytisrazmus@rytiss-MacBook-Pro trecias % ruby polindromes/main.rb
Enter the count of polindromes you want to find
10
11,22,33,44,55,66,77,88,99,101,
rytisrazmus@rytiss-MacBook-Pro trecias %
```

Rubocop patikra.

```
[rytisrazmus@rytiss-MacBook-Pro trecias % cd polindromes_razmus
[rytisrazmus@rytiss-MacBook-Pro polindromes_razmus % rubocop
Inspecting 2 files
..

2 files inspected, no offenses detected
rytisrazmus@rytiss-MacBook-Pro polindromes_razmus %
```

## Matrix multiplier

Programa skaičiuoja dviejų matricių sandaugą. Abi matricos yra apibrėžtos programos kode.

```
[rytisrazmus@rytiss-MacBook-Pro trecias % ruby matrixes/main.rb
Matrica A:
  1  2  3
  4  5  6
  1  2  3

Matrica B:
  7  8  4
  9 10  3
 11 12  6

Rezultatas
 58 64 28
139 154 67
 58 64 28
rytisrazmus@rytiss-MacBook-Pro trecias %
```

Rubocop patikra.

```
[rytisrazmus@rytiss-MacBook-Pro trecias % cd matrix_multiplication_razmus
[rytisrazmus@rytiss-MacBook-Pro matrix_multiplication_razmus % rubocop
Inspecting 3 files
...

3 files inspected, no offenses detected
rytisrazmus@rytiss-MacBook-Pro matrix_multiplication_razmus %
```