

TOP 200

COMMON PASSWORDS





Introduction

Analysis of top 200 common passwords of 49 countries in 2020

Why should business and tech leaders analyze passwords?





Questions

1

How many users in each country were found to have used passwords on the list

2

What is the average password length by country?

3

What is the average time to crack the password by country?

4

How complex were the passwords?

5

Was there a big difference in time between cracking a complex password and a non-complex password?

6

Do password get easier to crack over time?



Part 1.

Comparing

Passwords by Countries

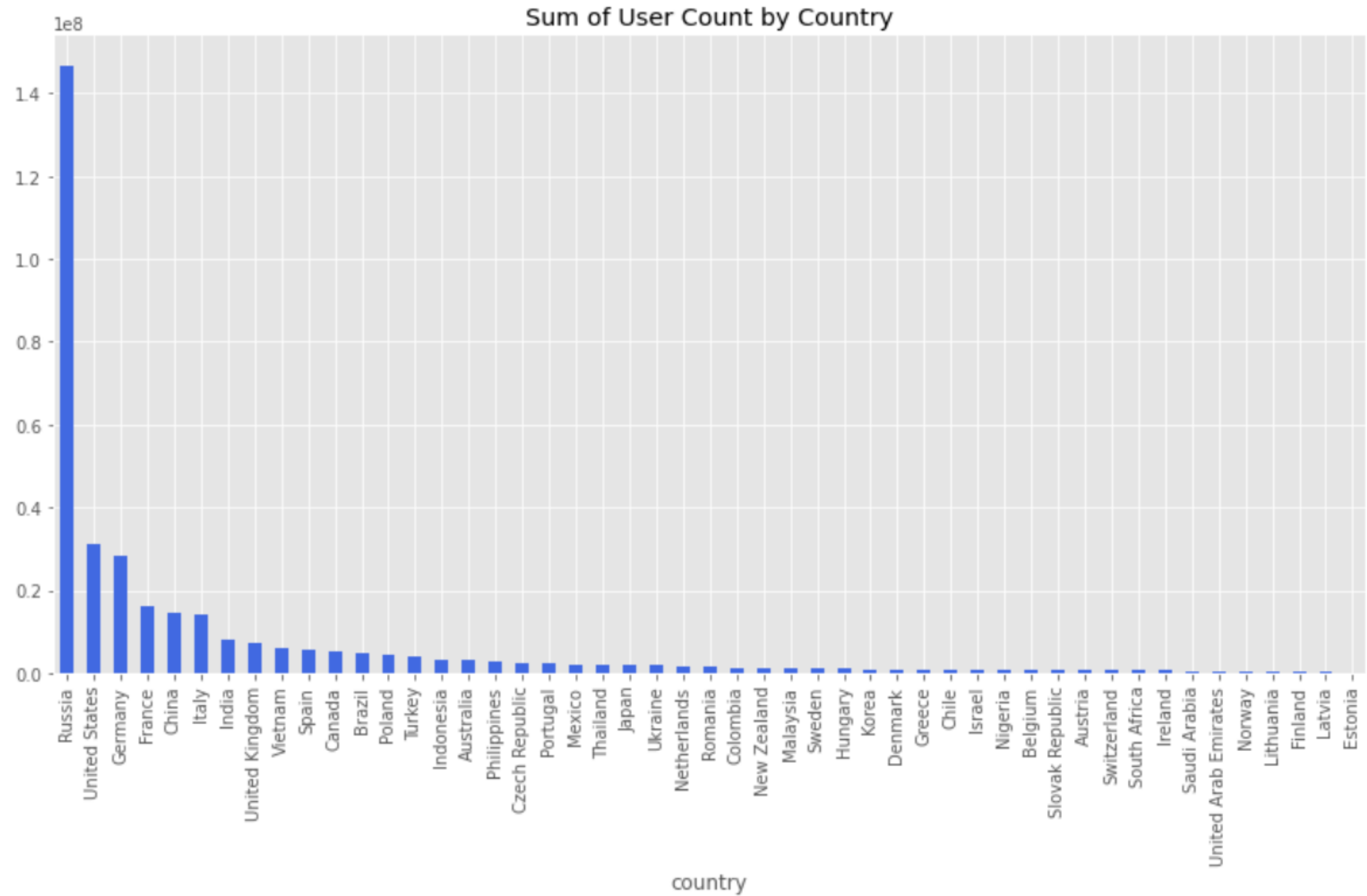
Finding the best, worst, and everyone in
between

01

01.

How many users in each country were found to have used passwords on the list in 2020?

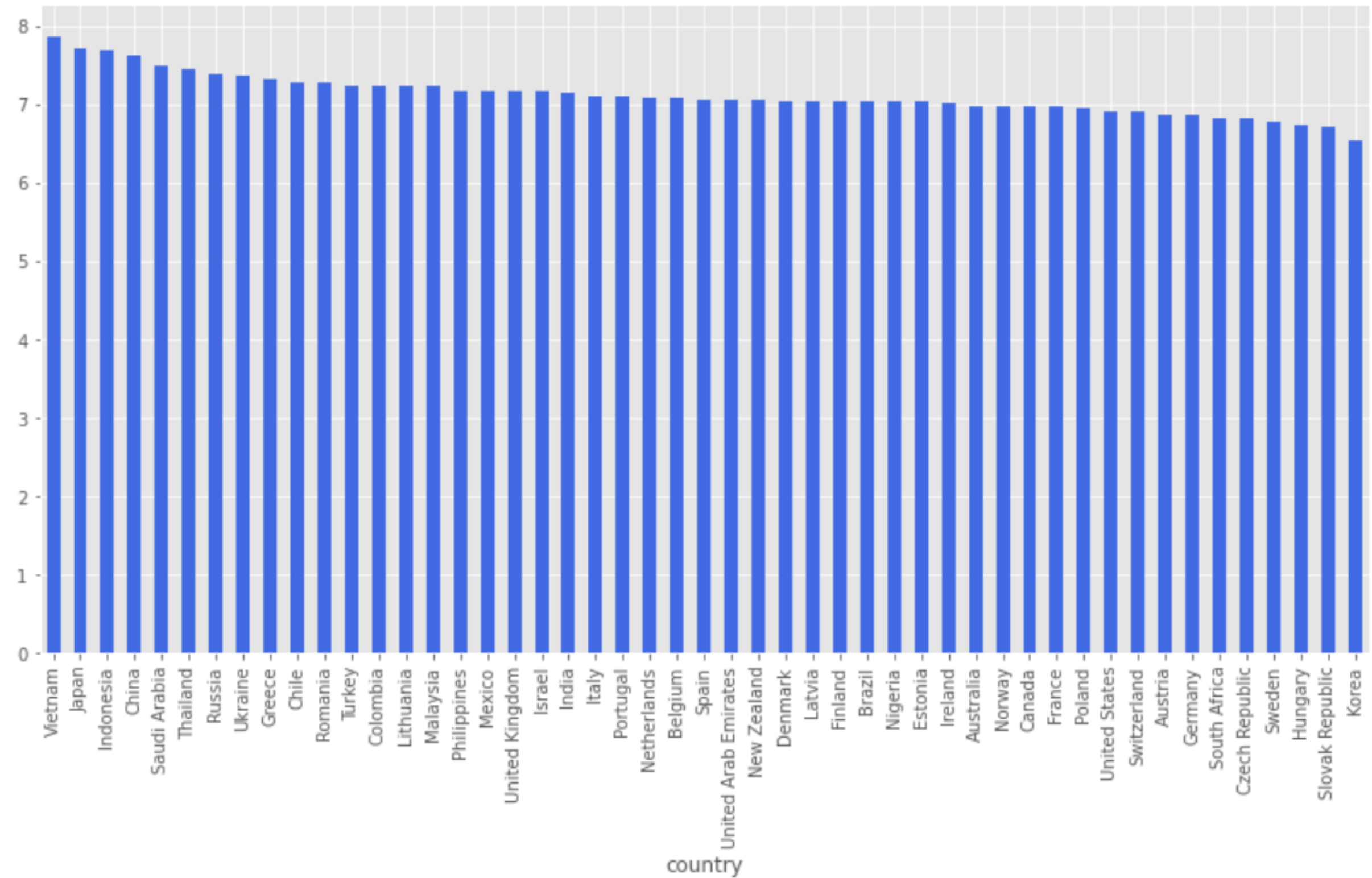
Average: 34685.94



02.

What is the average password length by country in 2020?

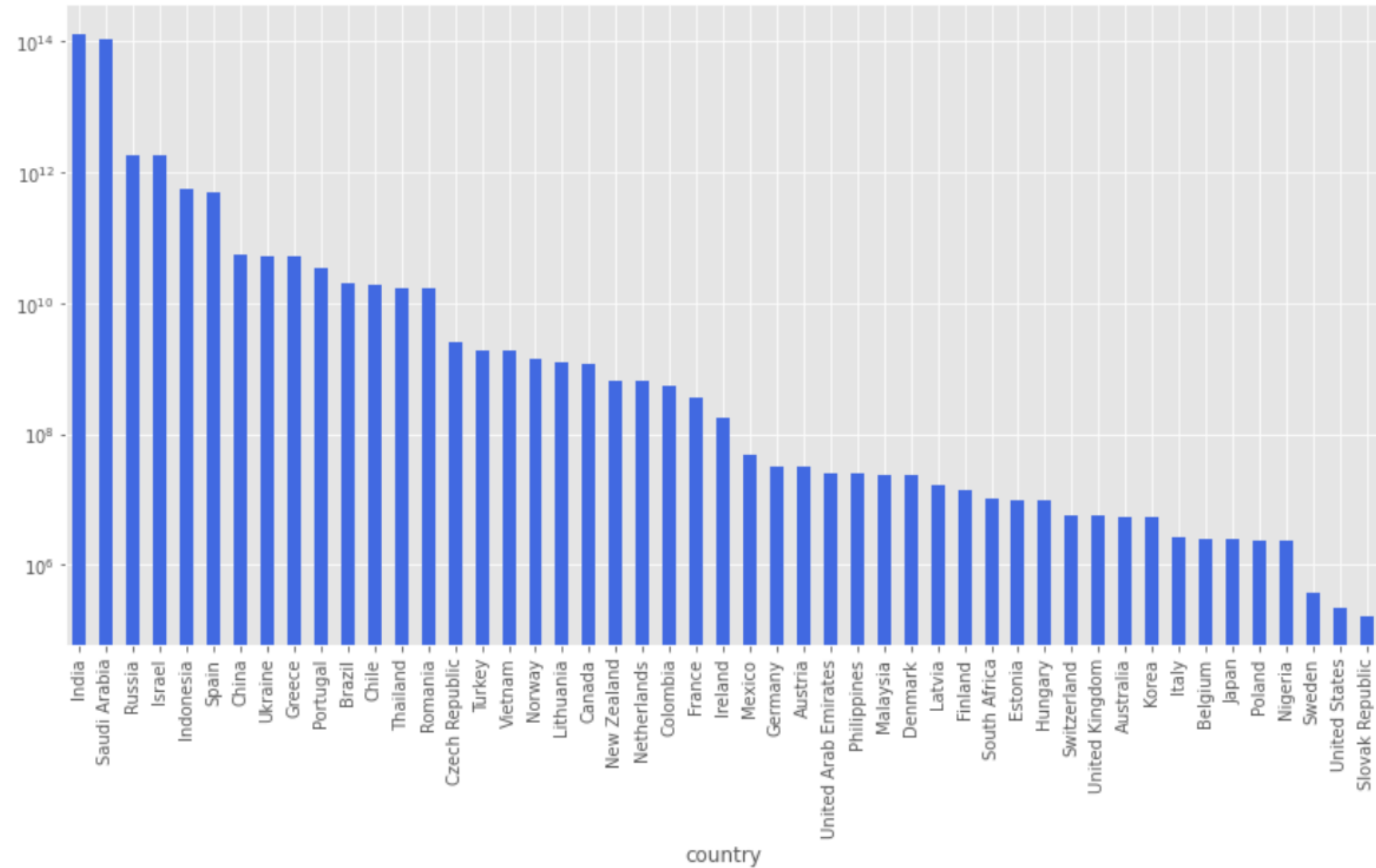
Average: 7.11



03.

**What is the average time
to crack the password
(in seconds) by country?**

Average: 5003708088591.47 seconds
= 15855.79 decades





Part 2.

Top 5

Unique Passwords

Of the Unique passwords in the list, the top five used in 2020 are

01

target123

713609 users

02

1g2w3e4r

713360 users

03

gwer123

713241 users

04

zag12wsx

710667 users

05

tinkle

699420 users

03

Part 3.

Password

Complexity

Using unique passwords from the list



Breakdown

What makes a strong password?

Determined password strength by how complex the password is.

1

Uppercase

"ABCDEFGHIJKLMNOPQRSTUVWXYZ"

2

Lowercase

"abcdefghijklmnopqrstuvwxyz
vwxyz"

3

Number

"1234567890"

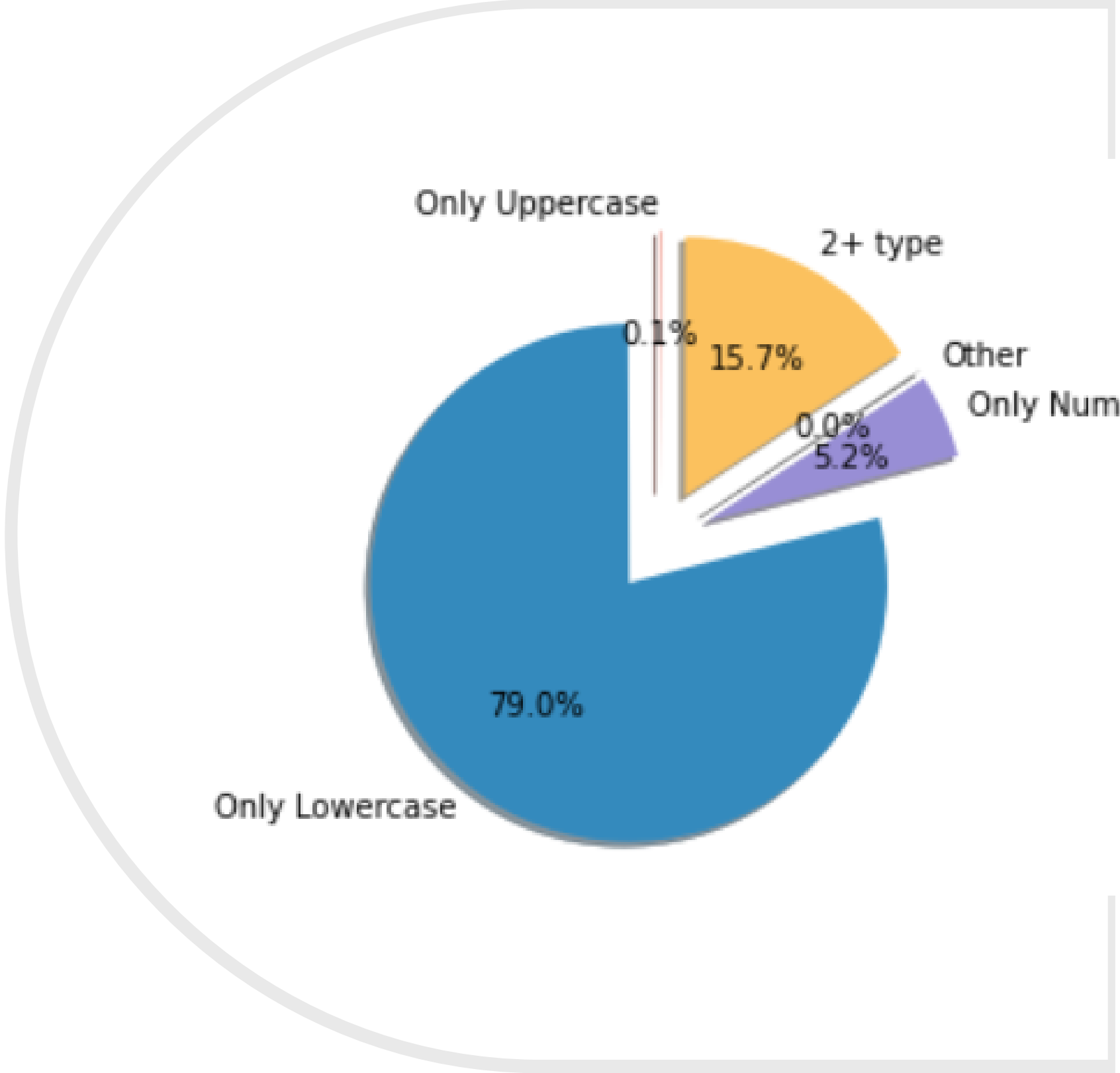
4

Special Character

"!@#\$%^&*()-+?_=
<>/"

5

Length \geq 12



Of the unique passwords

Majority

had only one type

84.3 % Complexity 1

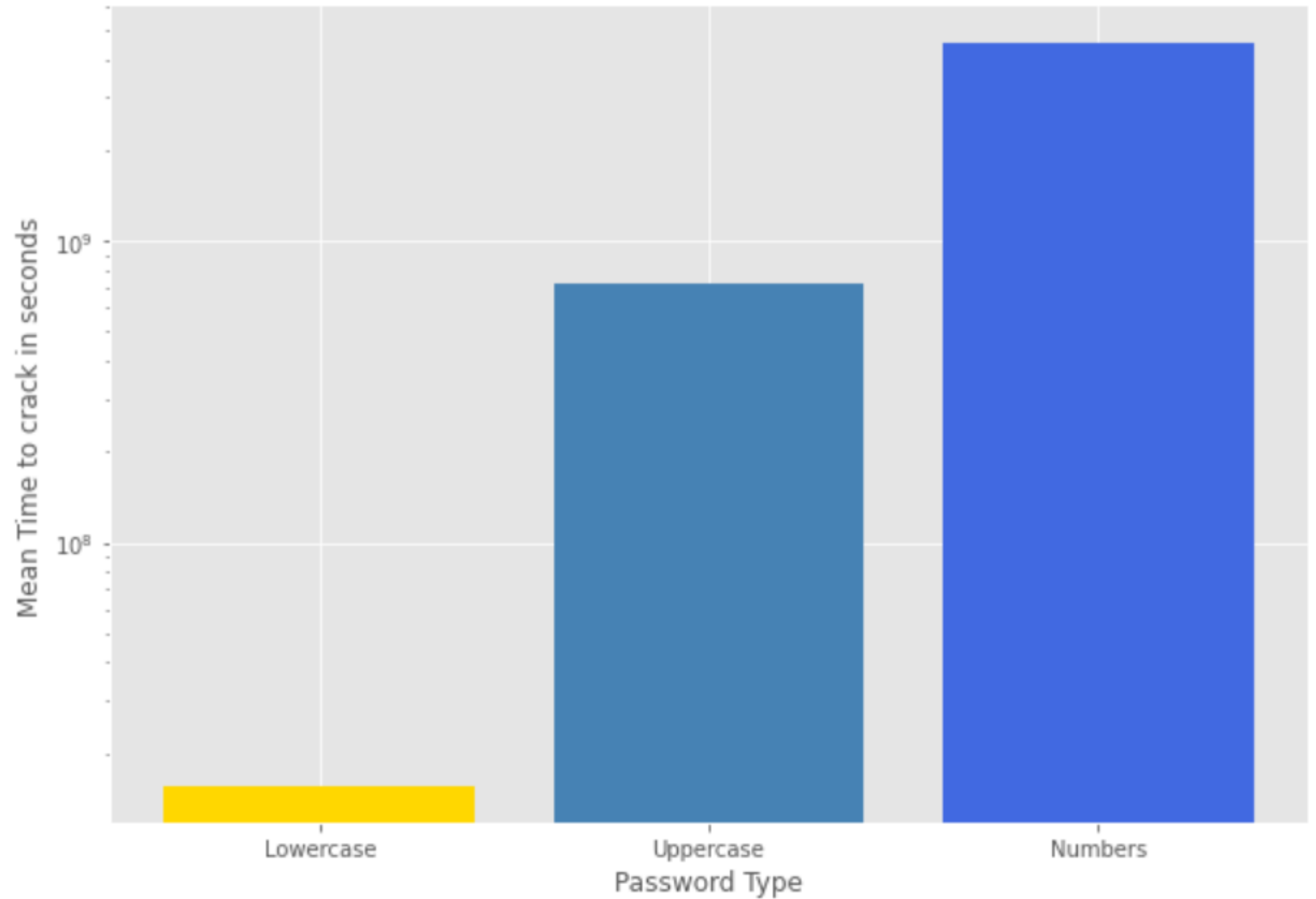


2 Other found

Of the passwords with

Complexity 1

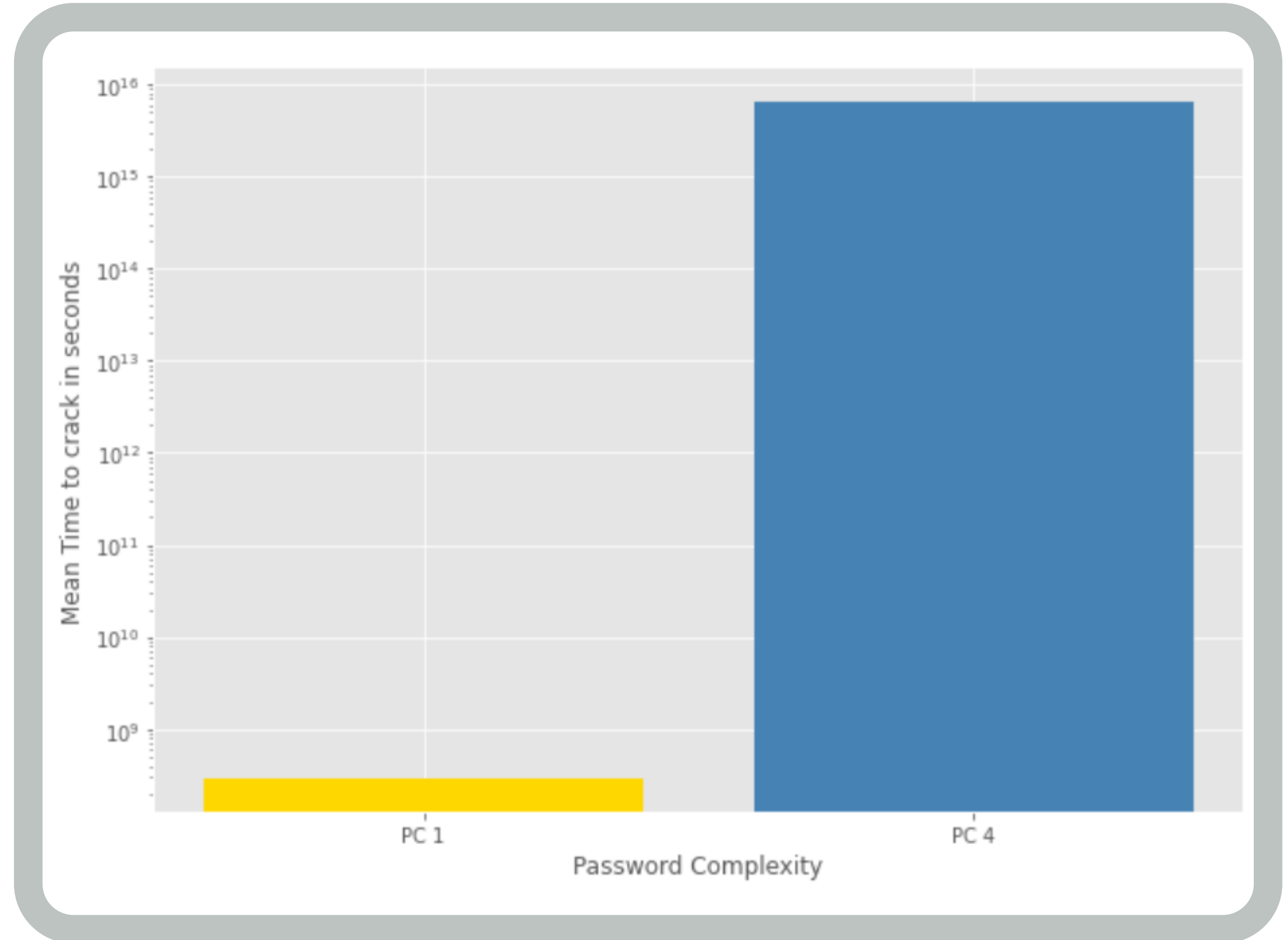
which one took the longest
to crack?



Relationship between

Complexity and Mean Time to Crack

PC1 vs. PC4



Part 4

Passwords over Time

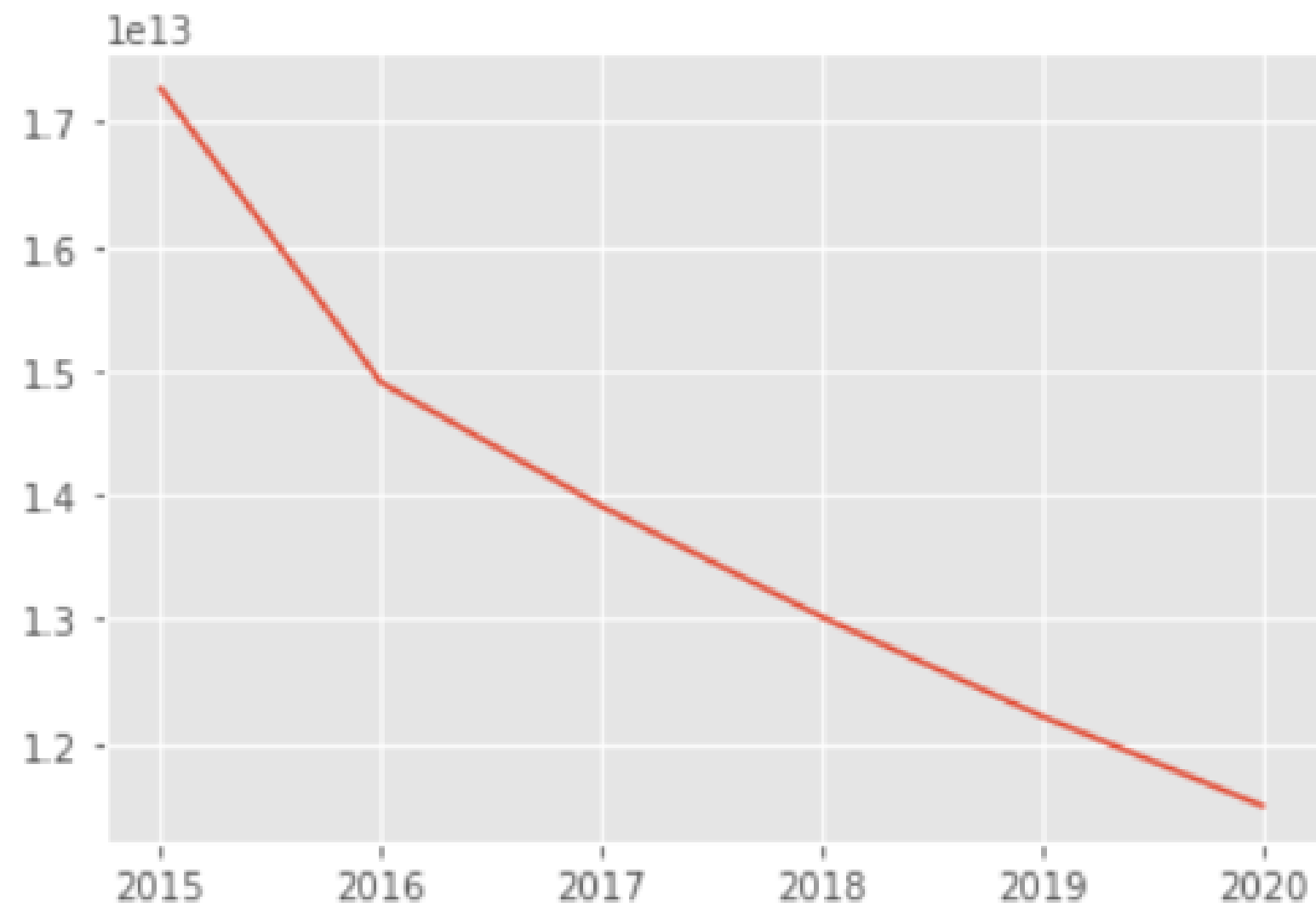
Of the unique passwords in the list, has the crack time changed from the past years?



04

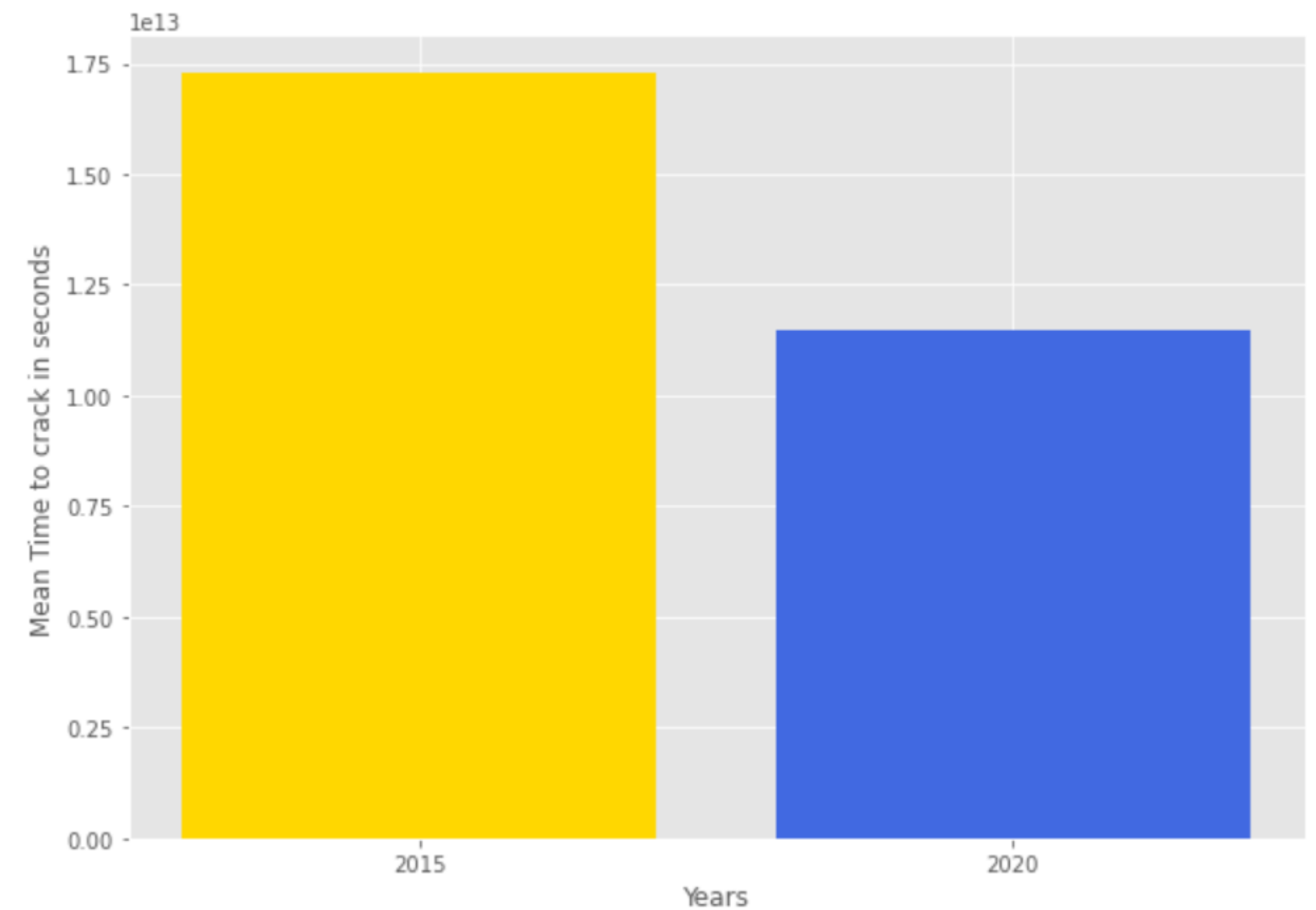
Average Crack Time for the Unique
Password Set Over

Past 5 Years

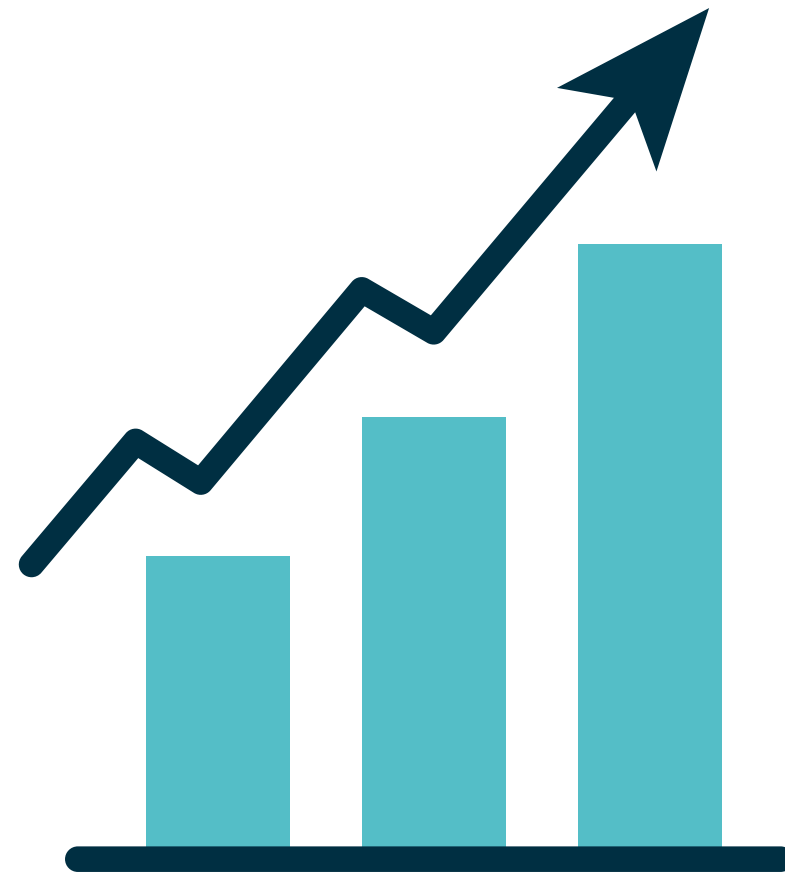


-50.23 %

change from 2015 to 2020



Report Summary



Part 1

Comparison by Countries

Part 2

Top 5 unique passwords of 2020

Part 3

Password Complexity vs. Time to Crack

Part 4

Password Strength Over Time



Future Work

If I had more time and data

1

Question One

See how the average password length changes over time

2

Question Two

See if there is any correlation between top trending words/hashtags and passwords