Linnéuniversitetet
Kalmar Växjö

Assignment 2 Final Report

Attitude Survery towards passwords

Authors:

Adam RASHDAN ar223hf@student.lnu.se

Rashed QAZIZADA rq222ah@student.lnu.se

Author: Adam RASHDAN & Rashed QAZIZADA

Supervisor: Ola FLYGT

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1 Introduction

In this report we have performed a survey to check the people's behaviour/knowledge about the password security.

1.1 Background

The major issue in today's world is the password security that is being faced by today's generation. At the same time, the older generation is the most vulnerable to password security. Thus, to find out about this, we conducted a survey to know in detail people's attitudes regarding password security. How they use it, and how much complexity they add while deciding the password. To make a successful survey and to cover all the aspects, we decided to log their age, and the knowledge of the people for computer security and information technology. We also need to know about how many people are aware of the importance of password complexity, how they choose their passwords, like password length, mix of numbers, uppercase letters, lowercase letters and special characters. We also want to know the use of online password storage facilities like "Google password", which reflects their trust on such services. There are still people who remember all the passwords by heart, but the complexity of such passwords is low. It is also important to know that how often they open the passwords by entering them manually (rather than using password storing by operating system). And lastly to ask people if they change their password frequently to make your accounts secure.

1.2 Target

The target of this survey is to get response from different people from all ages. We have three major targets in this survey, which are:

- How individuals of various ages pick their passwords and are they mindful of PC security.

- How people remember their passwords, to judge if they are comfortable with the use of complex passwords.

- To ask various people of different ages and backgrounds, to make a better understanding for the behavior of people towards password security.

1.3 Method

We have designed questions and then a survey form was created using "Google Forms". Google Forms provide a good method to create survey questions, share with different people using various shareable links (on social media, personal contacts, WhatsApp). The questionnaire created for this survey is also added in this report (in Empirical Questions section).

2 Hypothesis

In this digital age and with new innovations it is almost must for all that they might be using password, for may be a simple thing, in their life. The use of password is now not limited to young generation, rather it is being used by elders as well. With this development, the cybercrime is also increased making people's information, bank accounts less secure. In this survey, we have made a few assumptions (which also make our hypothesis) for most of the people, which are:

- Most of the people use only one or may be a couple of passwords to manage all their accounts.

- People don't know about password managers, and a few who know about them, don't trust much on these password managers. So, majority uses manual username and password entry for their accounts.

- With a tremendous progression in cell phones, the majority of individuals are utilizing unique mark to open the telephone, which might be a direct result of the ease as opposed to security.

- Most people use insecure passwords, as the length of password is either 12 or less and they also don't use mix of numbers, characters, and special characters.

- Most people are not aware of IT and password security risks.

3 Empirical Questions

Following Empirical questions are used in this survey.

1. What age group are you in?

    (a) Under 18

    (b) 18 – 25

    (c) 26 – 40

    (d) 41 – 55

    (e) Over 55

2. How many different passwords do you have?

    (a) One that you reuse

    (b) A unique password for all accounts

    (c) A few that you alternate between

    (d) Other

3. How do you remember your passwords?

   (a) I remember all my passwords by heart

   (b) Reuse same password

   (c) Keep them in a file on a computer

   (d) I let my browser remember them

   (e) Keep them in a file in the cloud

   (f) Use a secure password manager

4. How often do you log into an account entering your username and password by hand?

   (a) Less than 2 times a day

   (b) 3 – 5 times a day

   (c) More than 5 times a day

5. How do you unlock your Smartphones?

   (a) Fingerprint

   (b) Face Recognition

   (c) Password

   (d) Numerical Pin-Code

   (e) Combination of Above

   (f) Other

6. How frequently you change your passwords?

   (a) Less than 5 times in six months

   (b) More than 5 times in six months

   (c) Never

   (d) Other

7. What is the average length of your passwords?

   (a) Less than 8 characters

   (b) Between 8 and 12 characters

   (c) More than 12 characters

8. Which of the following do your passwords utilize?

   (a) Uppercase letters

   (b) Lowercase letters

   (c) Symbols

   (d) Numbers

   (e) Phrases

   (f) Combination of above

   (g) Other

9. How experienced do you consider yourself towards IT and Computer security? 1 – 10, 1 Not experienced at all, and 10 experienced.
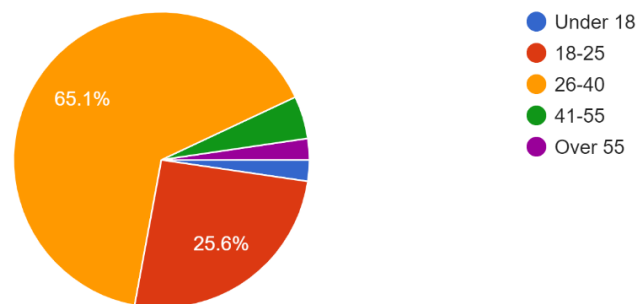
   (a) Your Answer:

4 Results

The survey consisted of 9 questions whose results are compiled here and will be analyzed in next section.

4.1 Personal Question about Age

This is the only question where we asked about the age of the participants.
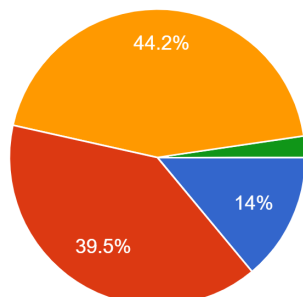
What age group are you in?
43 responses

65.1%

25.6%

- Under 18
- 18-25
- 26-40
- 41-55
- Over 55

4.2 Participant's attitude towards the Password Security

All the below results show the attitude of participant towards the password security.

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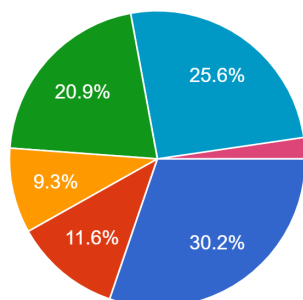Kalmar Växjö

How many different passwords do you have?
43 responses

- One that you reuse
- A unique password for all accounts
- A few that you alternate between
- one unique password for each account

44.2%
14%
39.5%

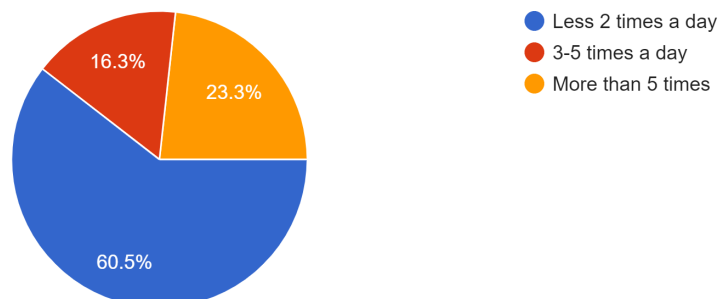## How do you remember your passwords?
43 responses

- I remember all my passwords by heart
- Reuse same password
- Keep them in a file on a computer
- I let my browser remember them
- Keep them in a file in the cloud
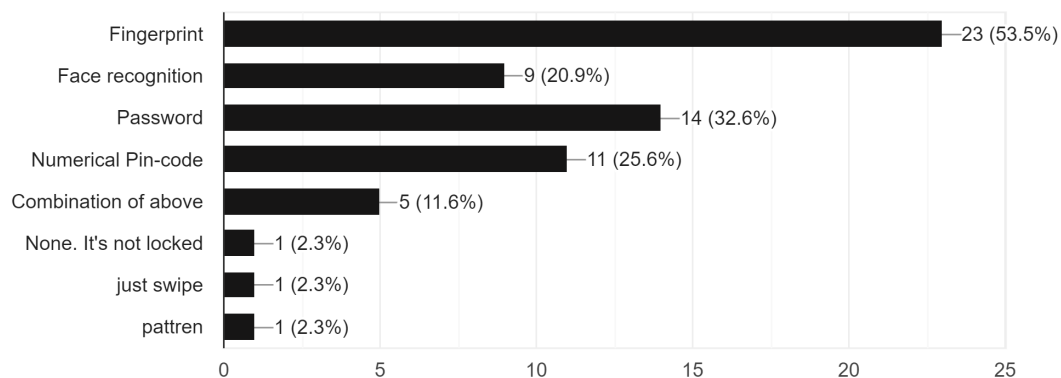- Use a secure password manager
- Password manager

25.6%
30.2%
11.6%
9.3%
20.9%

How often do you log into an account entering your username and password by hand?
43 responses

- Less 2 times a day
- 3-5 times a day
- More than 5 times

16.3%

23.3%

60.5%

How do you unlock your Smartphones?
43 responses

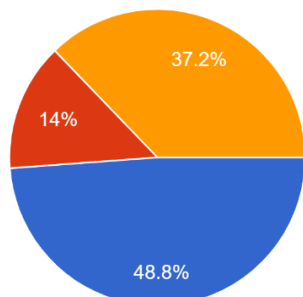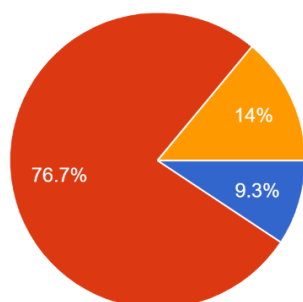|	
Fingerprint	23 (53.5%)
Face recognition	9 (20.9%)
Password	14 (32.6%)
Numerical Pin-code	11 (25.6%)
Combination of above	5 (11.6%)
None. It's not locked	1 (2.3%)
just swipe	1 (2.3%)
pattren	1 (2.3%)

How frequently you change your passwords?

43 responses

- ● Less than 5 times in six months
- ● More than 5 times in six months
- ● Never

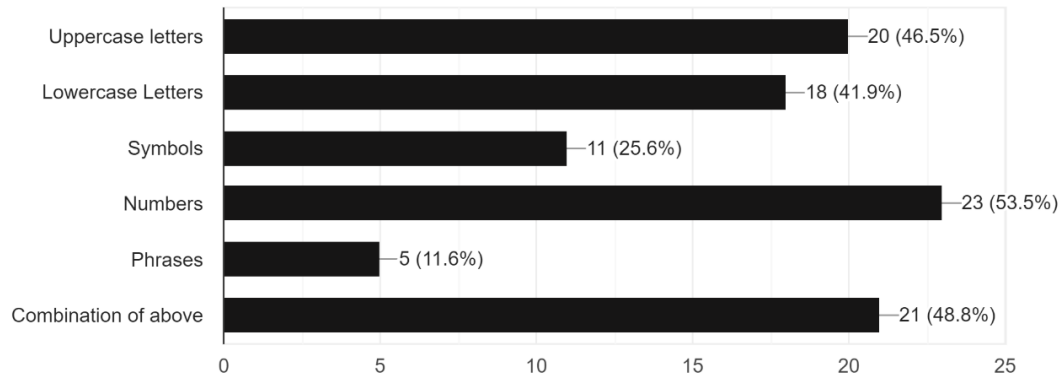What is the average length of your passwords?

43 responses

- ● Less than 8 characters
- ● Between 8 and 12 characters
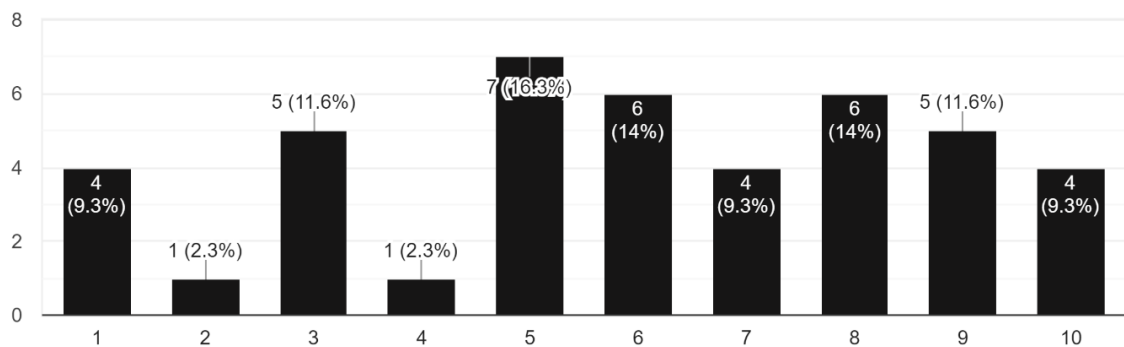- ● More than 12 characters

Which of the following do your passwords utilize?

43 responses

How experienced do you consider yourself towards IT and Computer security?

43 responses

5 Analysis

In our survey, a total of about 43 persons responded to our queries. In our survey we didn't included the gender questions as we wanted to keep it anonymous. Majority of participants, 39 (90.7%) in total were from age group 18 – 40, and we have only 4 participants (9.3%)

from other groups. The main inquiry was the experience towards information technology and security. For our survey we consider 7 as an experienced number. Thus, around 19 participants (which is about 44%) see themselves to be capable. Which is a not a good considering the age of persons who responded. 4 participants considered as non-specialist in information technology and password security and same number view themselves as professionals or most experienced.

Considering the smartphone security a large portion of individuals (23 which is 53.5%) use fingerprint to unlock the phone. While about 20.9% (9 persons) unlock their phone using face recognition. While the persons who unlock their phone using password or PIN code are about 58.2%, which are 25 out of 43. As far as the complexity of the password is concerned, only 14% (6 persons) use password which is more than 12 characters long. If we consider persons who choose password length between 8 – 12, the number is 33 which is about 76.7% of the total responses. While considering the complexity in terms of mix of characters and numbers, about 48.8% persons use mix of characters and numbers, which is quite a good number. But the critical thing is, there are still 23% persons who use password which only contain numbers.

Frequent change of password is critical for the security. In our survey, 37.2% (16 persons) said that they often change their passwords, which is a good number. While 48.8% responses said that they don't change password often in a period of six months. The other extreme is that 14% admitted that they never change their password.

As far as, the number of passwords and remembering the password is concerned, 44.2% people say that they have few passwords which they use for different accounts. While 39.5% responses said that they use one single password for all the accounts. There was only 1 response, where they said that he/she uses a unique secret phrase for each record. Most people 13 out of 43, remember their password by heart. And about 30.2% of people said that they use their browser or computer save the password for them. While the persons who trust on password managers are very less, only 1 person, which is clearly not a good number.

6 Conclusion

To concluded, we can safely say that approximately all the assumptions that we made in our theory or the hypothesis are correct. We said that individuals don't use different password for different accounts. In the survey results we can show a large portion of individual prefer that they use same password or a couple of passwords for all their accounts. Which could be because, most people also prefer to remember the password by heart. If they have many different passwords, it is hard for them to remember the password and also which password is going to be used for which account. The other problem that people are facing is the storage of password. As mentioned above that most percentage of people remember their password by heart, while others use their browsers and windows to save their passwords. While if we see the survey results, we can safely say that people don't trust the password managers.

The other hypothesis we created for the smartphones, where we say that a large portion of individuals unlock their phones using their fingerprint. We observed that a large portion of individuals are relaying on fingerprint and face recognition, which could be because of security as well as easiness. But there are still quite good number of persons who decide to utilize passwords and pin codes to open their smartphones.

The other hypothesis was about the password security. We said that individuals don't use a secured password. Which can be seen from the survey results that more than eighty percent people use password which is in range from 0 – 12. Which is quite a surprising number. The other thing which was not correct in our hypothesis is that most people use mix of uppercase, lowercase and numbers. This may be because of the advancement in software, as the modern tools don't allow us to use straight numbers, characters etc. All the issue which we highlighted and proved in our survey are based on the last question which asks about the knowledge about IT and password security. Most people don't have much knowledge the security which makes everyone vulnerable to the threats.

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