

# B

## Survey Instrument

1. Interview Script (Investigator's Copy).
2. Interview Script (Participant's Copy).
3. Participant's Worksheet for Part 2.

## **Interview script (Investigator's copy)**

### **Participant's information**

**Gender:**

**Degree:**

**Major:**

**Year:**

### **Part I - General Questions**

*(The interviewer will ask the following questions to the participant).*

1. How many years have you used computers?
2. How many years have you used the internet?
3. Do you keep a record of your online account/password associations?
4. If so, how? If not, how do you remember the associations between your passwords and accounts?

## **Part II – Password/Account Mappings**

### **Step 1**

*(The interviewer will explain the procedures in step 1 to the participant by reading the following information).*

In this step you will be asked to write down all your passwords in a piece of paper. The purpose of this exercise is to help you with the next procedure of this interview. The sheet containing your passwords will NOT be shown to anyone else including the interviewer. You will be asked to destroy that sheet later at the end of this interview.

*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 1).*

## Step 2

*(The interviewer will explain the concept of password grouping to the participant by reading the following information)*

There are many ways in which people group their passwords. If you have only a few passwords, you may not use any grouping strategy -- in this case we would consider each of your passwords to be in a different group. However if you use similar passwords, you must have some reason to think these passwords *\*are\** similar -- in this case, we hope you will answer our questions about what type (or types) of similarity you use when constructing new passwords that are similar to (but not exactly the same as) one or more of your other passwords.

*(At this point the interviewer will ask the participant if there is anything he/she does not understand about the concept of password grouping. After everything is clearly understood, the participant will be asked the following questions).*

1. Do you use any grouping strategy to manage your passwords?
  
2. If yes, on what basis do you group them?

*(The interviewer will guide the participant by reading the following instructions)*

In this step you will be asked to write your passwords in a table. Please complete the table in Worksheet 2 following the manner in which you normally group your passwords. If you do not use any grouping or similarity to help you organize or remember your passwords, use a DIFFERENT group for EACH password. Below is an example:

<b>Group</b>	<b>Code</b>	<b>Password</b>	<b>Reason/types of similarities used for grouping</b>
1	A	Abcd	Similar length (4-5 characters)
	B	Pass	
	C	Itsme	
	D	Pswd	
	E		
2	A	Do182ad9	Similar length, combination of

			alphabetical/numerical characters
	B	Auckld012	
	C		
	D		
	E		

**The column ‘Reason/types of similarities used for grouping’ is not compulsory at this stage, it is provided for convenience reasons, because in the next step you will be asked why you grouped these accounts together.**

There is no right or wrong way to do this. Everyone uses different ways to group their passwords. Remember, if you have never used any grouping or similarity to help you organize or remember your passwords, use a DIFFERENT group for EACH password.

*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After all the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 2)*

### **Step 3**

*(The interviewer will explain the procedures in step 3 to the participant by reading the following information)*

In this step you will be asked to complete a table to describe each of your passwords. Please use the numbering from step 2. Note that this sheet will be collected by the interviewer at the end of this session. You can find the description of each column of the table below:

#### **Group**

Use the corresponding group number from step 2.

#### **Code**

Use the corresponding code from step 2.

#### **Length**

Count the number of characters in each password.

#### **Perceived security level**

Rank each of your passwords based on your idea of how secure it is. Please use 5 scale points with 1 being the least secure and 5 being the most secure.

#### **Ease of recall**

Rank each of your passwords based on their ease of recall, using 5 scale points with 1 being the easiest and 5 being the hardest.

#### **Reason for grouping**

For each group that you created in Step 2, describe the reason why you group the passwords together. If you do not group your accounts, just leave this blank.

*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After all the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 3)*

## Step 4

*(The interviewer will explain the procedures in step 4 to the participant by reading the following information)*

In this step, you will be asked to list your online accounts in a table. Please write down as many online accounts as you remember. Not unlike your passwords, you might think of some of your accounts to be similar, or are 'clustered' in some ways, and this might influence the strategies in which you treat or manage your accounts.

There are different types of similarity which might contribute to this. If you have thought of any of your accounts to be 'similar' or can be categorized in any way, please complete the table in Worksheet 4 following the manner in which you normally 'group' your accounts. If you do not use any grouping strategies for your accounts or have never categorized your accounts in any way, please use a DIFFERENT group for EACH account.

Below is an example of how the table should be completed:

Group	Code	Account	Reason/types of similarities used for grouping
1.	A	Hotmail	Free web based e-mail
	B	Gmail	
2.	A	Online banking	Valuable/very important material
	B	Personal health record	
3.	A	Trademe	Online auction account
	B	E-bay	

**The column 'Reason/types of similarities used for grouping' is not compulsory at this stage, it is provided for convenience reasons, because in the next step you will be asked why you grouped these accounts together.**

The numbering will be used for identifying the accounts in the next step. Do not show the sheet containing your account names to anyone including the interviewer. You do not need to write down your login/user names. Remember, if you do not use any grouping strategies for your accounts or have never categorized your accounts in any way; please use a DIFFERENT group for EACH account.



*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After all the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 4)*

## **Step 5**

*(The interviewer will explain the procedures in step 4 to the participant by reading the following information)*

In this step you will be asked to describe all your online accounts by completing a table. Use the table from Step 4 to help you in this task. You can find the description of each column of the table below:

### **Group**

Use the corresponding group number from step 4.

### **Code**

Use the corresponding code from step 4.

### **Reason/types of similarities used for grouping**

For each group that you created in Step 4, describe the reason why you group the accounts together. If you do not group your passwords, just leave this blank.

### **Value of information**

Rank each account based on the value of the information it holds using 5 scale points with 1 being the least valuable and 5 being the most valuable.

### **Frequency of use**

Rank each account based on how often you use it using 5 scale points with 1 being the least frequent and 5 being the most frequent.

### **Password (Number)**

Please use the numbering system that you have used in step 2 and 3 to indicate which of your passwords is associated with each account. For example '1A' for password in group 1 with assigned code 'A'. **DO NOT WRITE YOUR ACTUAL PASSWORD.**

### **Password reuse (Y/N)**

Choose Y if the password which is used for this account is also used for other account(s). Choose N if you use a unique password that has not been used for any other account(s).

### **Reason why password is reused/not reused**

If you chose (Y) in the previous column, please describe the reason by selecting ONE from the following (You only need to write down the number corresponds to your selection in the worksheet, except when you select 'other'):

1. This account belongs to the same category as the other account(s) which use the same password.
2. This account belongs to the same domain (leisure/work/family) as the other account(s) which use the same password.
3. I use this account in the same frequency as the other account(s) which use the same password.
4. The information that is stored under this account is of similar value/importance to the information stored under the other account(s) which use the same password.
5. I only have one password and I use it for all my accounts.
6. I have several passwords and I randomly assigned them to my accounts.
7. I reuse password for this account because it is easy to remember.
8. Other (please describe).

If you chose (N) from the previous column, please describe the reason by selecting ONE from the following (You only need to write down the number corresponds to your selection in the worksheet, except when you select 'other'):

1. The account provider has password format restrictions, so I had to change my password to meet their restrictions.
2. The information stored under this account is of high value/importance.
3. I created a random password for this account.
4. I created a unique password to avoid confusion with my other account(s).
5. The password was assigned by the account provider.
6. I try to avoid password reuse because I believe it is not secure.
7. Other (please describe)

*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After all the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 5).*

*(After Worksheet 5 has been completed, the participant will be asked to separate Worksheet 1, 2 and 4, from the booklet and destroy those sheets using a paper shredder provided by the interviewer and to hand the rest of the booklet to the interviewer. The interviewer will then give \$20 to the participant as a compensation for his/her time and effort).*

## **Interview script (Participant's copy)**

### **Part I - General Questions**

*(The interviewer will ask the following questions to the participant).*

1. How many years have you used computers?
2. How many years have you used the internet?
3. Do you keep a record of your online account/password associations?
4. If so, how? If not, how do you remember the associations between your passwords and accounts?

## **Part II – Password/Account Mappings**

### **Step 1**

*(The interviewer will explain the procedures in step 1 to the participant by reading the following information).*

In this step you will be asked to write down all your passwords in a piece of paper. The purpose of this exercise is to help you with the next procedure of this interview. The sheet containing your passwords will NOT be shown to anyone else including the interviewer. You will be asked to destroy that sheet later at the end of this interview.

*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 1).*

### **Step 2**

*(The interviewer will explain the concept of password grouping to the participant by reading the following information)*

There are many ways in which people group their passwords. If you have only a few passwords, you may not use any grouping strategy -- in this case we would consider each of your passwords to be in a different group. However if you use similar passwords, you must have some reason to think these passwords \*are\* similar -- in this case, we hope you will answer our questions about what type (or types) of similarity you use when constructing new passwords that are similar to (but not exactly the same as) one or more of your other passwords.

*(At this point the interviewer will ask the participant if there is anything he/she does not understand about the concept of password grouping. After everything is clearly understood, the participant will be asked the following questions).*

1. Do you use any grouping strategy to manage your passwords?
2. If yes, on what basis do you group them?

*(The interviewer will guide the participant by reading the following instructions)*

In this step you will be asked to write your passwords in a table. Please complete the table in Worksheet 2 following the manner in which you normally group your passwords. If you do not use any grouping or

similarity to help you organize or remember your passwords, use a DIFFERENT group for EACH password. Below is an example:

Group	Code	Password	Reason/types of similarities used for grouping
1	A	Abcd	Similar length (4-5 characters)
	B	Pass	
	C	Itsme	
	D	Pswd	
	E		
2	A	Do182ad9	Similar length, combination of alphabetical/numerical characters
	B	Auckld012	
	C		
	D		
	E		

**The column ‘Reason/types of similarities used for grouping’ is not compulsory at this stage, it is provided for convenience reasons, because in the next step you will be asked why you grouped these accounts together.**

There is no right or wrong way to do this. Everyone uses different ways to group their passwords. Remember, if you have never used any grouping or similarity to help you organize or remember your passwords, use a DIFFERENT group for EACH password.

*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After all the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 2*

### Step 3

*(The interviewer will explain the procedures in step 3 to the participant by reading the following information)*

In this step you will be asked to complete a table to describe each of your passwords. Please use the numbering from step 2. Note that this sheet will be collected by the interviewer at the end of this session. You can find the description of each column of the table below:

#### **Group**

Use the corresponding group number from step 2.

#### **Code**

Use the corresponding code from step 2.

#### **Length**

Count the number of characters in each password.

#### **Perceived security level**

Rank each of your passwords based on your idea of how secure it is. Please use 5 scale points with 1 being the least secure and 5 being the most secure.

#### **Ease of recall**

Rank each of your passwords based on their ease of recall, using 5 scale points with 1 being the easiest and 5 being the hardest.

#### **Reason for grouping**

For each group that you created in Step 2, describe the reason why you group the passwords together. If you do not group your accounts, just leave this blank.

*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After all the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 3).*

### Step 4

*(The interviewer will explain the procedures in step 4 to the participant by reading the following information)*

In this step, you will be asked to list your online accounts in a table. Please write down as many online accounts as you remember. Not unlike your passwords, you might think of some of your accounts to be similar, or are 'clustered' in some ways, and this might influence the strategies in which you treat or manage your accounts.

There are different types of similarity which might contribute to this. If you have thought of any of your accounts to be ‘similar’ or can be categorized in any way, please complete the table in Worksheet 4 following the manner in which you normally ‘group’ your accounts. If you do not use any grouping strategies for your accounts or have never categorized your accounts in any way, please use a DIFFERENT group for EACH account.

Below is an example of how the table should be completed:

Group	Code	Account	Reason/types of similarities used for grouping
3.	A	Hotmail	Free web based e-mail
	B	Gmail	
4.	A	Online banking	Valuable/very important material
	B	Personal health record	
3.	A	Trademe	Online auction account
	B	E-bay	

**The column ‘Reason/types of similarities used for grouping’ is not compulsory at this stage, it is provided for convenience reasons, because in the next step you will be asked why you grouped these accounts together.**

The numbering will be used for identifying the accounts in the next step. Do not show the sheet containing your account names to anyone including the interviewer. You do not need to write down your login/user names. Remember, if you do not use any grouping strategies for your accounts or have never categorized your accounts in any way; please use a DIFFERENT group for EACH account.

*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After all the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 4)*

## Step 5

*(The interviewer will explain the procedures in step 4 to the participant by reading the following information)*

In this step you will be asked to describe all your online accounts by completing a table. Use the table from Step 4 to help you in this task. You can find the description of each column of the table below:

### **Group**

Use the corresponding group number from step 4.

### **Code**

Use the corresponding code from step 4.

### **Reason/types of similarities used for grouping**

For each group that you created in Step 4, describe the reason why you group the accounts together. If you do not group your passwords, just leave this blank.

### **Value of information**

Rank each account based on the value of the information it holds using 5 scale points with 1 being the least valuable and 5 being the most valuable.

### **Frequency of use**

Rank each account based on how often you use it using 5 scale points with 1 being the least frequent and 5 being the most frequent.

### **Password (Number)**

Please use the numbering system that you have used in step 2 and 3 to indicate which of your passwords is associated with each account. For example '1A' for password in group 1 with assigned code 'A'. **DO NOT WRITE YOUR ACTUAL PASSWORD.**

### **Password reuse (Y/N)**

Choose Y if the password which is used for this account is also used for other account(s). Choose N if you use a unique password that has not been used for any other account(s).



### **Reason why password is reused/not reused**

If you chose (Y) in the previous column, please describe the reason by selecting ONE from the following (You only need to write down the number corresponds to your selection in the worksheet, except when you select 'other'):

1. This account belongs to the same category as the other account(s) which use the same password.
2. This account belongs to the same domain (leisure/work/family) as the other account(s) which use the same password.
3. I use this account in the same frequency as the other account(s) which use the same password.
4. The information that is stored under this account is of similar value/importance to the information stored under the other account(s) which use the same password.
5. I only have one password and I use it for all my accounts.
6. I have several passwords and I randomly assigned them to my accounts.
7. I reuse password for this account because it is easy to remember.
8. Other (please describe).

If you chose (N) from the previous column, please describe the reason by selecting ONE from the following (You only need to write down the number corresponds to your selection in the worksheet, except when you select 'other'):

1. The account provider has password format restrictions, so I had to change my password to meet their restrictions.
2. The information stored under this account is of high value/importance.
3. I created a random password for this account.
4. I created a unique password to avoid confusion with my other account(s).
5. The password was assigned by the account provider.
6. I try to avoid password reuse because I believe it is not secure.
7. Other (please describe)

*(At this point, the participant will be asked if there is anything that he/she does not understand about the instructions. After all the instructions are clearly understood, the participant will be asked to proceed by completing Worksheet 5).*

*(After Worksheet 5 has been completed, the participant will be asked to separate Worksheet 1, 2 and 4, from the booklet and destroy those sheets using a paper shredder provided by the interviewer and to hand the rest of the booklet to the interviewer. The interviewer will then give \$20 to the participant as a compensation for his/her time and effort).*

## Participant's Worksheets for Part 2

**WARNING: DO NOT WRITE YOUR NAME, UNIVERSITY ID, LOGIN NAMES OR ANY OTHER FORM OF IDENTIFICATION ANYWHERE IN THIS BOOKLET.**

## Worksheet 1

Please write down all your passwords (as many as you can remember) in the space below. The purpose of this exercise is to help you with the next procedures of this interview. **DO NOT SHOW THIS SHEET TO ANYONE INCLUDING THE INTERVIEWER.** You will be asked to destroy this worksheet at the end of this interview.

## Worksheet 2

Please complete the table below following the instructions in Step 2. DO NOT SHOW THIS SHEET TO ANYONE INCLUDING THE INTERVIEWER. You will be asked to destroy this worksheet at the end of this interview.

Group	Code	Password	Reason/types of similarities used for
1	A		
	B		
	C		
	D		
	E		
	F		
2	A		
	B		
	C		
	D		
	E		
	F		
3	A		
	B		
	C		
	D		
	E		
	F		
4	A		
	B		
	C		
	D		
	E		
	F		
5	A		
	B		
	C		
	D		
	E		
	F		
6	A		
	B		
	C		
	D		
	E		
	F		
7	A		
	B		
	C		
	D		
	E		
	F		

8	A		
	B		
	C		
	D		
	E		
	F		
9	A		
	B		
	C		
	D		
	E		
	F		
10	A		
	B		
	C		
	D		
	E		
	F		
11	A		
	B		
	C		
	D		
	E		
	F		
12	A		
	B		
	C		
	D		
	E		
	F		
13	A		
	B		
	C		
	D		
	E		
	F		
14	A		
	B		
	C		
	D		
	E		
	F		
15	A		
	B		
	C		
	D		
	E		
	F		





