**Relationship Impact on Shoulder Surfing Protection Mechanisms**

Consider a situation where there are two individuals, known as A (the participant, that is you) and B (the attacker – the shoulder surfer). A is the user of an electronic device with a display (example a smartphone, tablet, laptop, etc.) and B could be any person known/unknown to A. B is trying to look into the display of A's device without consent and knowledge of A and gaining information about it.

Considering the given scenario, I will show you 12 videos which depict the above scenario and each of them shows a different coping mechanism or privacy protection mechanism as seen from a software solution which helps the user of the smartphone (Person A) to prevent being shoulder surfed by any number of Person B.

Watch the 12 videos carefully and I will also explain about them individually to you. You are free to pause and clear your doubts, if any, at any given time. You are free to leave the study in between. You can switch between any video and watch any video more than once to gain a proper understanding of what the protection mechanism actually does.

After seeing each of the 12 videos, please answer the questions number 1 to 8 in relation to the videos seen and mark each on a scale of 1 to 5 respectively, where 1 means least likely suitable privacy protection mechanism and 5 means the most suitable privacy protection mechanism. After watching all the videos, please answer question number 9 and 10. At the end of the study, I will ask you a few open-ended feedback questions related to the videos and an android application that I will show you towards the end of the study before asking the open-ended questions.

You should answer all the below questions considering yourself as person A (the user of the smartphone) and B is the shoulder surfer. I want to know your views and perspective about being as users/victims and not as shoulder surfers or attackers.

1. If the relationship in the video between Person A and B was that of classmates, rate the following shoulder surfing protection mechanisms in order of suitability:
   1. Dimming Filter Mask
   2. Crystallize Filter
   3. Fake Text
   4. No Filter
   5. Grayscale
   6. Low Brightness
   7. Selective Hiding
   8. Selective Showing
   9. Front LED Flash On
   10. Front Camera Preview on screen
   11. Vibrating alert
   12. Alert Icon on screen
2. If the relationship in the video between the Person A and B was that of mother-child, where A (participant - you) is the child and B (shoulder surfer) is the mother, rate the following shoulder surfing protection mechanisms in order of suitability:
   1. Dimming Filter Mask
   2. Crystallize Filter
   3. Fake Text
   4. No Filter
   5. Grayscale
   6. Low Brightness
   7. Selective Hiding
   8. Selective Showing
   9. Front LED Flash On
   10. Front Camera Preview on screen
   11. Vibrating alert
   12. Alert Icon on screen
3. If the relationship in the video between the Person A and B was that of father-child, where A is the participant (you) is the child and B (shoulder surfer) is the father, rate the following shoulder surfing protection mechanisms in order of suitability:
   1. Dimming Filter Mask
   2. Crystallize Filter
   3. Fake Text
   4. No Filter
   5. Grayscale
   6. Low Brightness
   7. Selective Hiding
   8. Selective Showing
   9. Front LED Flash On
   10. Front Camera Preview on screen
   11. Vibrating alert
   12. Alert Icon on screen
4. If the relationship in the video between Person A and B was that of friends, rate the following shoulder surfing protection mechanisms in order of suitability:
   1. Dimming Filter Mask
   2. Crystallize Filter
   3. Fake Text
   4. No Filter
   5. Grayscale
   6. Low Brightness
   7. Selective Hiding
   8. Selective Showing
   9. Front LED Flash On
   10. Front Camera Preview on screen
   11. Vibrating alert
   12. Alert Icon on screen
5. If the relationship in the video between Person A and B was that of strangers, rate the following shoulder surfing protection mechanisms in order of suitability:
   1. Dimming Filter Mask
   2. Crystallize Filter
   3. Fake Text
   4. No Filter
   5. Grayscale
   6. Low Brightness
   7. Selective Hiding
   8. Selective Showing
   9. Front LED Flash On
   10. Front Camera Preview on screen
   11. Vibrating alert
   12. Alert Icon on screen
6. If the relationship in the video between Person A and B was that of siblings, rate the following shoulder surfing protection mechanisms in order of suitability:
   1. Dimming Filter Mask
   2. Crystallize Filter
   3. Fake Text
   4. No Filter
   5. Grayscale
   6. Low Brightness
   7. Selective Hiding
   8. Selective Showing
   9. Front LED Flash On
   10. Front Camera Preview on screen
   11. Vibrating alert
   12. Alert Icon on screen
7. If the relationship in the video between Person A and B was that of professionals, rate the following shoulder surfing protection mechanisms in order of suitability:
   1. Dimming Filter Mask
   2. Crystallize Filter
   3. Fake Text
   4. No Filter
   5. Grayscale
   6. Low Brightness
   7. Selective Hiding
   8. Selective Showing
   9. Front LED Flash On
   10. Front Camera Preview on screen
   11. Vibrating alert
   12. Alert Icon on screen
8. If the relationship in the video between Person A and B was that of partner, rate the following shoulder surfing protection mechanisms in order of suitability:
   1. Dimming Filter Mask
   2. Crystallize Filter
   3. Fake Text
   4. No Filter
   5. Grayscale
   6. Low Brightness
   7. Selective Hiding
   8. Selective Showing
   9. Front LED Flash On
   10. Front Camera Preview on screen
   11. Vibrating alert
   12. Alert Icon on screen
9. Now after considering all shoulder surfing mechanism and watching them in action, name your most suitable way of preventing shoulder surfing overall: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. I will now show you an android based prototype application that was built during the study for shoulder surfing prevention mechanism. I will explain about it’s working. Please write your inputs on how it could or could not potentially prevent shoulder surfing scenarios in daily life if incorporated in daily lives: