Research Methods (SCS3216)

Assignment 2

# Part 1

|  |  |  |
| --- | --- | --- |
| No. | Sentence | Verb tense |
| 1 | Mobile device security has become increasingly important as we become more dependent on mobile devices. | Present perfect |
| 2 | Although many user authentication mechanisms have been presented in the past, studies have shown mobile users preferring usability over security | Present perfect |
| 3 | Mobile devices are becoming more integrated in our lives. | Present continuous |
| 4 | We use it to connect with social media, make mobile payment, carry sensitive information like phone addresses. | Simple present |
| 5 | Researcher and industries have proposed many alternatives to this problem such as OTP. | Present perfect |
| 6 | Apps are collecting some sort of data whenever a person uses a mobile phone. | Present continuous |
| 7 | A researcher has demoed at the RSA Conference that various swiping motion can be used to infer when a user is entering a password. | Present perfect |
| 8 | We further proposed a rhythm based authentication scheme. | Simple past |
| 9 | This study provides the first proof of concept toward secure user-habit-oriented authentication for mobile devices. | Simple present |
| 10 | We will also explore other possible alternative habits to use and study their feasibility on mobile authentication. | Simple future |
| 11 | The original data captured will then be processed using the ‘‘data transformation’’ and ‘‘zero-shrinkage’’. | Simple future |
| 12 | In the authentication phase, we propose a Fuzzy ARTMAP (FAM) based authentication scheme. | Simple present |
| 13 | We will adopt the fast verification algorithm used in the registration phase. | Simple future |
| 14 | For our case, tapping to a music rhythm is a habit for a music lover. | Present continuous |
| 15 | We will explain Registration Process and Authentication in detail based on the obtained original data. | Simple future |
| 16 | Then, we design a new rhythm based authentication scheme. | Simple present |
| 17 | A growing number of smartphones are equipped with a variety of powerful sensors. | Simple present |
| 18 | Studies have shown mobile users preferring usability over security. | Present perfect |
| 19 | Experimental results show that the proposed scheme has high accuracy in terms of false rejection rate. | Simple present |
| 20 | The registration process is performed during a user’s initial log on. | Simple present |

# Part 2

Past perfect continuous

Past perfect

Present perfect continuous

Present perfect

Future perfect continuous

Future perfect

Simple

past

Simple

present

Simple

future

Past continuous

Present continuous

Future continuous

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Past** | | | **Present** | | | **Future** | | |
|  |  | 8 |  | 1,2,5,7,18 | 4,9,12,16,17,19,20 |  |  | 10,11,13,15 |
|  | 3,6,14 |  |

# Reference

J. Seto, Y. Wang and X. Lin, "User-Habit-Oriented Authentication Model: Toward Secure, User-Friendly Authentication for Mobile Devices," in IEEE Transactions on Emerging Topics in Computing, vol. 3, no. 1, pp. 107-118, March 2015, doi: 10.1109/TETC.2014.2379991.