

Lab 6-8-2024

1. In the first task you need to calculate and verify the hash of a file named "Lab6-8-2024.pdf".
 - a. Upload the file to any online hash calculator service and calculate its hash using SHA-256 hash function.
 - b. Write a piece of code in which you take the online hash as input.
 - c. Import the above mentioned file in your code, and calculate the hash using SHA-256 hash function of hashlib python library.
 - d. Compare both hashes and verify it.
2. Create a text file containing the content of your own choice. Write a piece of code that calculates SHA-256 hash of this file and demonstrate avalanche effect on it.
3. Download the files named message1.bin and message2.bin from the following links:

Message1.bin:
https://drive.google.com/file/d/14KwmJ-cD-bOrGz65Nh7jpJTEyoac3tpq/view?usp=drive_link

Message2.bin:
https://drive.google.com/file/d/1U2K4cOks8Nb78kcJe6u4n8JP0HD2AhWk/view?usp=drive_link

 - a. Import these files.
 - b. Calculate the MD5 and SHA-1 hashes of the downloaded files.
 - c. Describe your findings and the reasons behind them.

Just for laughs: Why wasn't MD5 given a driving license?

Because he caused too many collisions.