



Bahria University
Discovering Knowledge

BAHRIA UNIVERSITY (Karachi Campus)

Department of Software Engineering
ASSIGNMENT#02 – Fall 2024

COURSE TITLE: **Information Security**
Class: **BSE – 7A&7B**
Course Instructor: **DR. OSAMA REHMAN**
Due Date: **23-Dec-2024**

COURSE CODE: **CSC-407**
Shift: **Morning**
Date: **17-Dec-2024**
Marks: **7.0 Marks**

Instructions:

1. Attempt all questions.
2. This is an individual effort task.
3. Write your full name, registration number and section on the title page.
4. Only handwritten answers are accepted (applicable on writing descriptions in Q1, Q2).
5. Questions#1 and 2 are CEPs having attribute of no obvious solution.

Q1. OTP bypass in on the rise and is used by hackers to gain access into personal accounts of users. Investigate this phenomenon and write a short report (1~2 pages) on how attackers are bypassing OTP requirements (*a fundamental approach for 2FA*). Also discuss the set of tools and techniques being utilized by the attackers.
[CLO#4, CEP, 4.0 marks]

Q2. Take a set of 10 MS Word files having some text saved in it. Generate the Hash values of each file by using SHA256 hash algorithm and generate a database in Excel sheet that would save the hash values of these 10 files. Ask anyone else, e.g. family members or friends, to pick up any 3 files randomly and make a minor change in the content (*e.g. single character change*) without you knowing of which files have been changed. By using the same SHA256 hashing technique, find out which files have been changed, while reporting the old hash values and new hash values along with the name of changed files.

Note: Upload all files and database records into LMS along with the assignment solution.

[CLO#3, CEP, 3.0 marks]

Good Luck!