



SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107



An Autonomous Institution

Accredited by NAAC – UGC with 'A' Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY

19CS503

CRYPTOGRAPHY AND NETWORK SECURITY

Introduction

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INTRODUCTION



Cryptography involves the use of mathematical techniques to secure information, while network security focuses on protecting the integrity, confidentiality, and availability of data as it is transmitted over computer networks.





CIA Triad



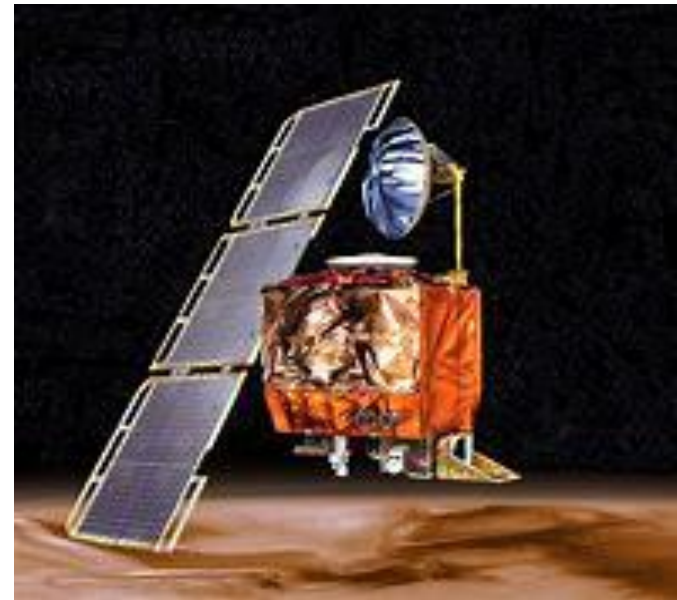


INTEGRITY



Ensuring the accuracy and trustworthiness of data and information in digital systems.

NASA Mars Climate Orbiter
(1998)





CONFIDENTIALITY



Ensuring sensitive information is protected from unauthorized access and remains accessible only to those with proper authorization.

The Uber Data Breach (2016)



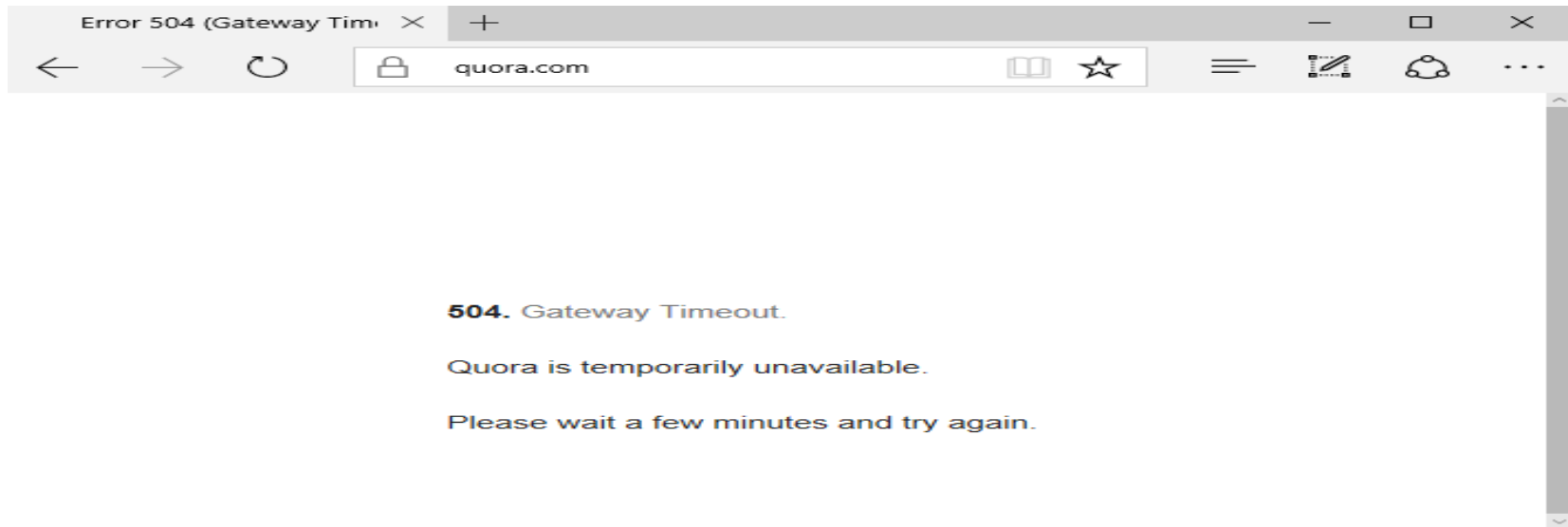


AVAILABILTY



Ensuring systems and resources are consistently accessible and operational, allowing users to reliably access data and services without disruption.

The Amazon Web Services (AWS) Outage (2017)





MCQ



Data encryption primarily addresses which aspect of CIA?

- a) Confidentiality
- b) Integrity
- c) Availability
- d) Authentication



MCQ



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- b) Integrity
- c) Availability
- d) Authentication



MCQ



Which of the following is **NOT** an example of a confidentiality breach?

- a) Unauthorized access to sensitive financial data
- b) Disclosure of personal health records to medical staff
- c) Eavesdropping on a private conversation
- d) Altering data to manipulate financial records



MCQ



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MCQ



A Denial of Service (DoS) attack primarily targets:

- a) Confidentiality
- b) Integrity
- c) Availability
- d) Authentication



MCQ



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MCQ



Multi-factor authentication enhances:

- a) Data confidentiality
- b) Data integrity
- c) Data availability
- d) Data encryption



MCQ



Multi-factor authentication enhances:

- a) **Data confidentiality**
- b) Data integrity
- c) Data availability
- d) Data encryption



Wklqn brx