Q1 Test Environment

0 Points

All answers must meet a minimum viable solution to the questions asked to be graded.

I certify that I am in class

- ○ no
- ◉ Yes

and discussed my strategy with the following people:

Lianjang Yang , Naixin Zong, Jaiyu Wu

Q2 Topics

10 Points

List the three topics you will discuss in the last question of this test. (You may want to review that question now so the work you do helps towards that goal.) These topics should come from your reading of our text, videos from Canvas, or your project.

You do **NOT** need to expand on them yet.

Topic 1

The Cloud Computing Pyramid (PaaS, IaaS, SaaS)

Topic 2

Different types of the cloud : Public, Private, and Hybrid Cloud

Topic 3

Features and parts of the cloud (i.e. autoscaling, cloud bursting, VM, VMM, and more)

Q3 Abbreviations

20 Points

Choose 5 of the abbreviations and write out what they stand for. Choose carefully as you will need to use them later.
You do **not** need to expand on the meaning.

2FA	DHS	HSM	OpEx	SOAP
AES	DOS	HTML	OTP	TCB
AMI	DR	HTTP	OWASP	TCP/IP
AWS	DRM	HTTPS	PaaS	TEE
AZ	DSA	IaaS	PIN	TRNG
B2B	DSS	IB	PK	UDDI
B2C	DUK	IETF	PoC	US-CERT
BC	EC2	INFOSEC	QoS	VLSI
C2C	EKE	IoT	REST	VM
CAD	EMR	IP	RFID	VMM
CapEx	ERP	IP	RoT	VPC
CAPTCHA	ESB	LAN	RSA	VPN
COMSEC	FaaS	LFSR	SaaS	WAN
CPS	FIPS	MFA	SDDC	WSDL
CSP	FIT	ML	SDN	WWW
CSRF	FMC	MTBF	SEC	XML
CV	FMR	MTTF	SGX	XSS
CVE	FNMR	MTTR	SHA3	
CVSS	FRR	NFV	SLA	
DARPA	GDP	NIST	SMB	
DBMS	HE	NSA	SMPC	
DDOS	HIP	OEM	SNIA	
DES	HPC	OOB	SOA	

Example: BFF -- Best Friend Forever.

SaaS - Software as a Service

PaaS - Platform as a Service

IaaS - Infrastructure as a Service

VM - Virtual Machine

VMM - Virtual Machine Monitors

Q4 Definitions

20 Points

Choose 5 of the terms below and write out the definition. You must show you know what this is as defined in the context of this class.
Choose carefully as you will need to use them later.

Acceptability
Access Control
Asymmetric Encryption
Attack Surface
Authentication Factor
Auto-scaling
BlockChain
Breach
Cache
Cache Side-Channel Attack
Check Pointing
Checksum.
Ciphertext
Clickjacking

Client-Server
Cloud Bursting
CloudWatch
Cluster
Container
Controllability
CSRF Cross-site request forgery
Cyber-Physical System
Data Provenance
Decryption
Denial of Service Attack
Detection Error Trade-Off
Digital watermarking
Distributed Denial-of-Service
Eavesdropping
Elasticity
Electronic
Encryption
Enterprise Service Bus (ESB
Equal Error Rate
Error
Fab
Failure in Time
False Match Rate
False Non-match
Fault Tolerance
Follow-ME Cloud
Frame Busting
Frame
Gateway
Grid Computing
Hadoop
Hardware Security Module
Hash Checksum
Hash Digest
Hashing
Homomorphic Encryption
Hybrid Cloud
Identity Authentication
Imposter

Interoperability
Key Distribution
Key Generation
Key Management
Latency
Machine Learning
Malleability
Malware
Map-Reduce
Masquerader
Mean Time Between Failures
Mean Time to Failure
Mean Time to Repair
Meltdown
Multifactor Authentication
Network Function Virtualization
Noisy Neighbors
Observability
OpenStack
Optimizations
Phishing
Plaintext
Power Analysis Side-Channel Attack
Private Cloud
Quality of Service
Reliability
Secure Hash Function
Self Service
Service-Oriented Architecture
Side-Channel Attack
Single-Factor Authentication
Software-Defined Data Center
Speaker Identification
Spectre
Spoofing
Streaming
Symmetric
Test Side-Channel
Thick and Thin Clients
Threat Model

Time Machine
Trojan Horse
True Match Rate
True Non-match Rate
Trust Anchor
Trust List
Trusted Agent
Trusted
Trusted Certificate
Trusted Compute Boundary
Trusted Computing
Twin model
Usability
Utility
Verification
Virtual Machine Monitor
Virtual Machines
Virtual Private Cloud
Virus
Vulnerability
Web Service
Workload
Worm
Zombie

Example:
Headache -- A continuous pain in the head.
(Your definitions will likely be longer)

Elasticity - a property of computing & storage facilities in a cloud to expand in view of a growing need and shrink when the need goes away (i.e. similar to autoscale)

Public Cloud - a public cloud that offers its services to a full range of customers. The computing environment is shared with multiple tenants, a free or pay per usage model.

Cloud Bursting - process to request and access resources beyond an enterprise's boundary, typically reaching into a public cloud from a private cloud, when user load increases.

Workload - in cloud computing, workload is the amount of work that the computer system has been given to do at a given time i.e. CPU bound or memory bound workloads.

Interoperability - Interoperability is the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.

Q5 Discussion

50 Points

In this section, you will discuss the three topics listed above. Ensure that each topic is developed and that you can show an understanding of the topic and how it relates to the other topics you have picked.

Your topics should include references to your abbreviations and definitions from above.

Your goal is to bring together these topics, words, and definitions to show a fuller knowledge of your chosen area.

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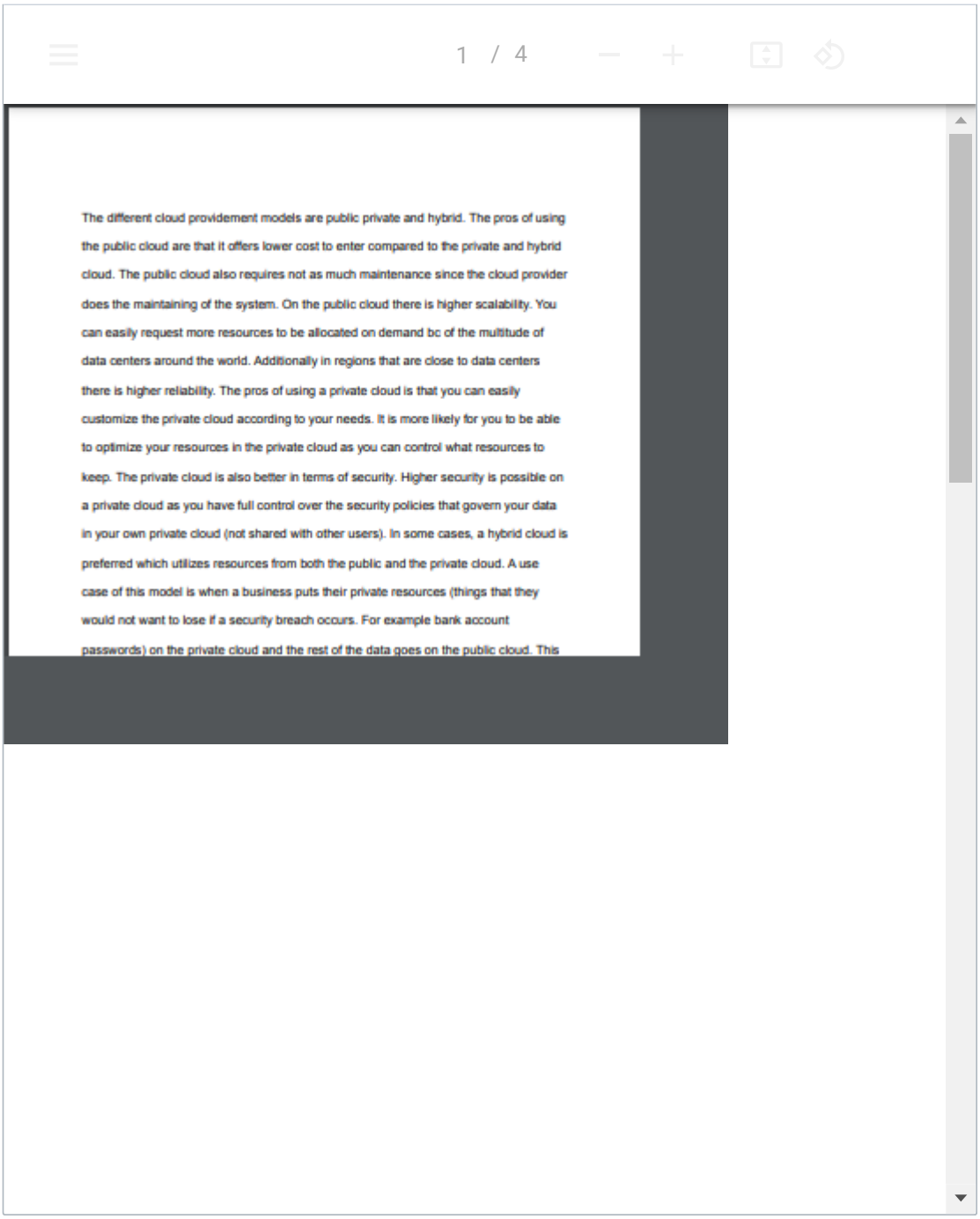

Midterm Exam

GRADED

STUDENT

Mualla Argin

TOTAL POINTS

100 / 100 pts

QUESTION 1

Test Environment **0** / 0 pts

QUESTION 2

Topics **10** / 10 pts

QUESTION 3

Abbreviations **20** / 20 pts

QUESTION 4

Definitions **20** / 20 pts

QUESTION 5

Discussion **50** / 50 pts