MAKERERE UNIVERSITY BUSINESS SCHOOL
COURSE WORK TWO PROJECT FOR THE DEGREE OF BACHELOR OF BUSINESS COMPUTING AND BACHELOR OF BUSINESS COMPUTING OF MAKERERE UNIVERSITY ACADEMIC YEAR 2025/2026

COURSE NAME: Information Security and Auditing
COURSE CODE: BUC3126
YEAR: III
SUBMISSION DEADLINE: 17:00hrs on **Friday, 31st October 2025.**

Specific Instructions

- This is a take home examination and is accessible from **18th October 2025 at 8:00am** and must be submitted by **5:00pm** on **Friday, 31st October 2025** on the Makerere University Business School E-learning platform (MUBSEP).
- In your class groups, do the assignment. Each member should contribute and be ready to answer questions during presentations when chosen randomly.
- Submit both the PDF Report file and One ZIP titled: GroupName_WorkingPapers.zip (test sheets, recomputation worksheets, screenshots, evidence logs) via MUBSEP. The PDF Report should have a cover page indicating all the group number and the members, including their Students and Registration numbers.
- After submission each group will be assigned a scope area to present and defend in class during an oral session.
- Show all the necessary worksheets or workpapers and where necessary, justify your decision for choices taken.
- Avoid copying and pasting, or any other kind of plagiarism and cheating.
- All groups are required to check for plagiarism via Turnitin before uploading the final project report on MUBSEP.
- **Plagiarism level MUST be below 20%**
- **The Audit report SHOULD NOT be less than 15 pages and NOT MORE than 20 pages.**
- **Each member MUST download a copy of Self and Peer Evaluation of Group Project via MUBSEP, fill it in and submit it before the deadline.**

TAKEHOME EXAM PROJECT (50 MARKS):

SCENARIO:

BBCBank Ltd is a regulated financial institution operating nationwide with a core banking system, digital channels, card services, EFT and RTGS integrations, mobile money gateways, branch networks, and a data centre with disaster recovery arrangements. In line with prudential expectations for the financial sector in Uganda, the Board Audit and Risk Committee has commissioned an independent IT and IS audit to determine whether the bank's ICT environment

provides adequate integrity, confidentiality, and availability of information assets and whether technology capabilities are aligned to business strategy. You have been engaged as a student audit team from the Bachelor of Business Computing to perform this assignment under academic supervision.

The engagement covers all Information Communication Technology systems within the bank, including core banking, ancillary applications, databases, servers, network infrastructure, security appliances, electronic banking platforms, and related integrations. Management has granted read-only access to evidence and has provided a complete set of audit support documents through MUBSEP on the ISA course page. These include the bank's IT and security policies, password configurations for Active Directory and the Core Banking System, user access and segregation of duties matrices, joiners and leavers reports, system logs and change management extracts, product definitions, approved tariff guides, customer transactions and reconciliations, application control descriptions, interest and fee computation references, vulnerability assessment and penetration testing artefacts, and any other materials necessary to complete the review. You are required to obtain and use these documents from MUBSEP as appropriate, apply suitable audit procedures, and communicate your professional opinion to management.

QUESTION:

As the audit team assigned to BBCBank Ltd, evaluate the adequacy and effectiveness of the bank's IT control environment and determine the extent to which systems, configurations, and processes comply with approved policies and industry good practice. Your evaluation must examine the following areas:

a) IT Policy Review, including Board approval, periodic review cycles, scope and adequacy against good practice, and clarity of direction for ICT resource management, utilisation, monitoring, and security.

b) Password Configuration Compliance across Active Directory and the Core Banking System, including minimum length, complexity, expiry, history, lockout thresholds, multi-factor authentication, and alignment to policy.

c) Tariff Application Accuracy across relevant channels, including correct application of the approved tariff guide, excise duty computation, detection of over- or under-charging, and override controls.

d) Application Controls for Interest Income Recomputation, including independent recomputation of interest for selected products, reconciliation to postings, assessment of rate

tables and product setup, and end-of-day or batch processing impacts.

e) Product Eligibility Validation, including adherence to product rules such as age thresholds, minimum balances, mandatory fees and rate application, and treatment of exceptions.

f) Segregation of Duties and Access Rights, including user provisioning and revocation for joiners, movers, and leavers, privileged access management, role appropriateness, and conflicts such as set-up and approval or post and approve.

g) Vulnerability Assessment and Penetration Testing, including scope, tooling, techniques, severity classification, business impact, and prioritised remediation.

h) ICT Capability and Operations, including structure and staffing of the ICT function relative to the institution's size and complexity, and assessment of availability, capacity, performance, scalability, disaster recovery, and business continuity readiness.

i) Authentication, Authorisation, and Accounting mechanisms for electronic channels and critical integrations, and their consistency with policy and good practice.

REQUIRED

Prepare and submit a professional **IT and IS Audit Report to Management of BBCBank Ltd** as a single PDF via MUBSEP. The report must be written in formal academic and professional language and shall include:

- ✓ **Executive Summary** presenting overall opinion, top findings, and high-level risk posture.

- ✓ **Background and Scope** stating objectives, systems covered, period reviewed, and standards referenced.

- ✓ **Methodology** explaining procedures, sampling, data sources from MUBSEP, and where applicable the VAPT approach.

- ✓ **Detailed Findings and Recommendations** structured by the nine areas above. For each finding present:
  - Condition supported by evidence.
  - Criteria from policy, standards, or approved parameters.
  - Cause explaining the underlying reason.
  - Effect describing the business or regulatory risk.

- Recommendation with responsible owner and realistic timeline.

✓ **Testing Summaries** for interest recomputation, tariff accuracy and excise duty, product eligibility, and access and segregation reviews, including the basis of calculation and reconciliation outcomes.

✓ **Availability, Capacity, Performance, and DR/BCP** observations with any identified gaps.

✓ **Management Action Plan** that consolidates agreed actions, owners, and target dates.

✓ **Appendices** containing referenced artefacts, workpapers, calculations, screenshots, and evidence logs.

NOTE: After submission each group will be assigned a scope area to present and defend in class during an oral session.

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