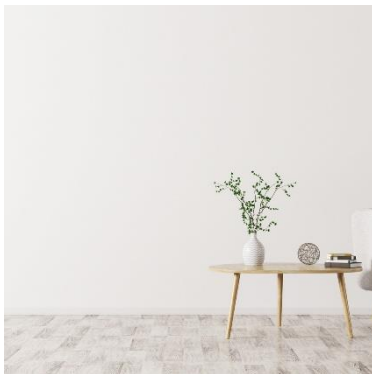




# CS4050 - Information Systems Audit and Control

FAST NUCES – Spring 2024  
BS Computer Science  
Suleman Hasan

# Agenda



Introduction  
Objectives  
Reference Course Book  
Background  
Key Concepts  
Course Outline  
Semester Target





# Introduction

Suleman Hasan

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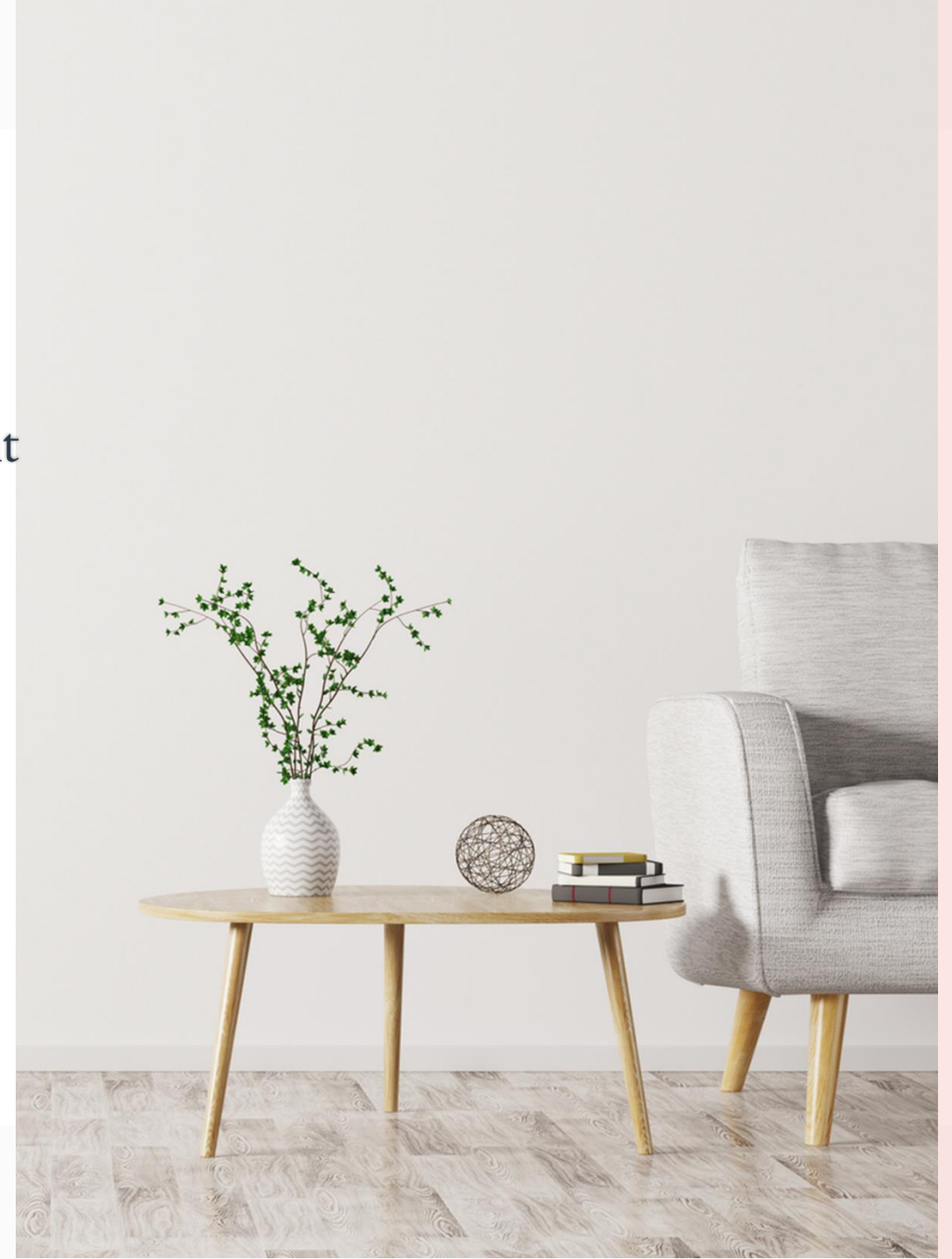
# OBJECTIVES

## Personal

- ♦ Knowledge Enhancement
- ♦ Time Management
- ♦ Relationship Management
- ♦ Problem Solving
- ♦ Intelligence

## Professional

- ♦ Career Development
- ♦ Network Growth
- ♦ Understanding of Industry Practices
- ♦ Growth Mindset
- ♦ 360° View



# COURSE BOOK

ISACA CISA Review Manual – 27<sup>th</sup> Edition

- 5 Domains
- Our Focus: Audit, Information Systems Auditing, Business Continuity, Corporate Governance Practices
- Reference book for preparing Certified Information Systems Auditing (CISA) Exam





# BACKGROUND

- Historical Perspective
- *Sapiens: A Brief History of Humankind* by Yuval Noah Harari
- Identify Purpose
- Art of *Story Telling*
- Find Your *Ikigai*

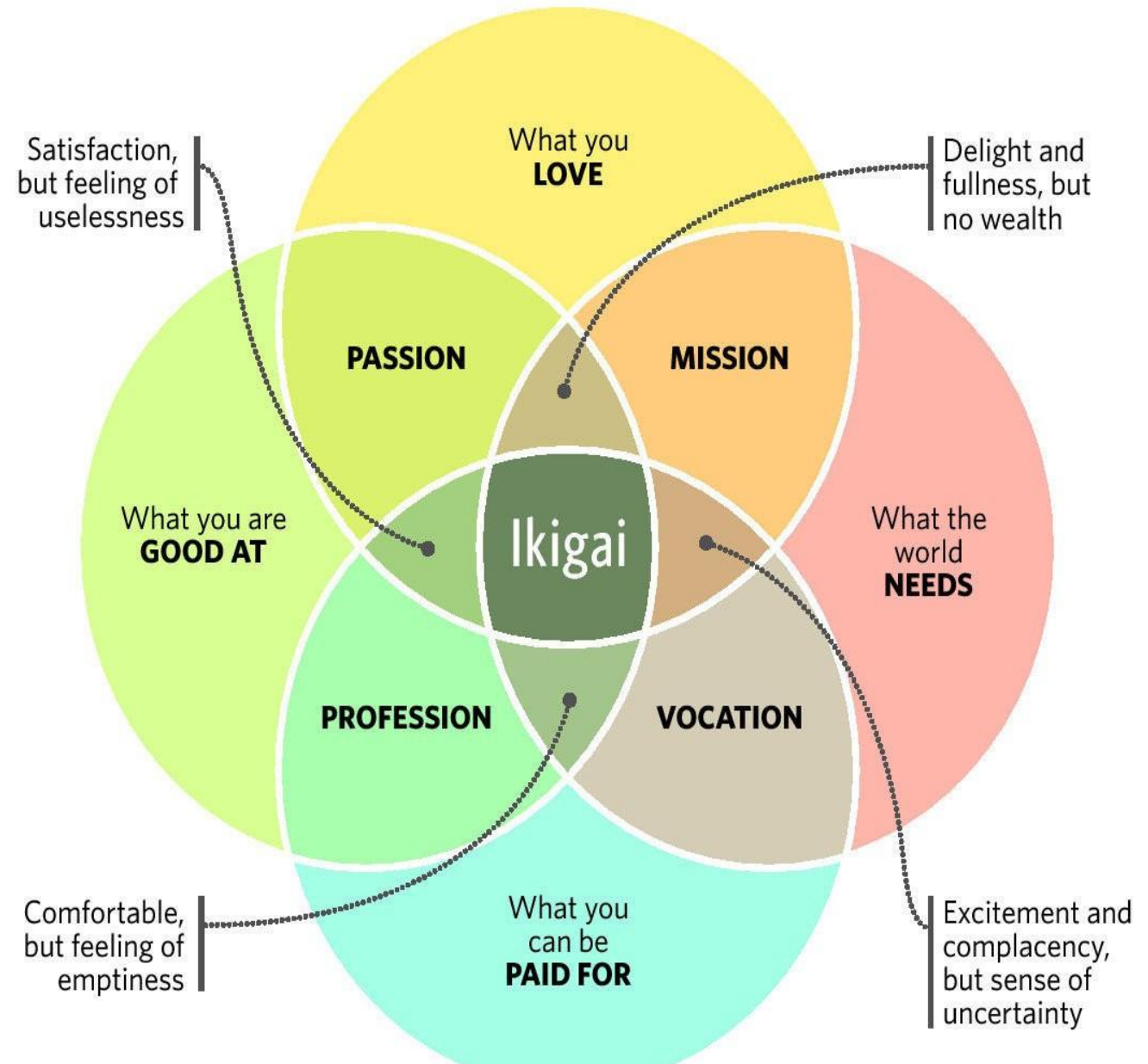


# Find your...

- ❖ True Purpose
- ❖ Reason of Being; and,
- ❖ Define Your
  - ❖ Mission
  - ❖ Vocation
  - ❖ Profession
  - ❖ Passion

## Ikigai

A JAPANESE CONCEPT MEANING "A REASON FOR BEING"





- # Concepts
- Lit
  - k Management
  - vernance, Risk and Compliance (GRC)
  - tegy
  - iness Intelligence
  - ys and Regulations
  - meworks, Standards, Policies, Procedures and Processes





# Audit

**Audit** is an examination and evaluation of the area under scope to formulate an independent opinion on the accuracy, validity and completeness of the information expressed.

Audit provides **assurance** to the stakeholders, investors and related parties on the overall wellbeing of the organization/ area/ process/ department which is audited.

# Risk Management

**Risk** implies future uncertainty about deviation from expected earnings or expected outcome.

**Risk Management** is the process of identifying, assessing and controlling different types of risks to an organization's capital and earnings. Four basic ways risk management strategies or risk treatment options are:

- Risk acceptance
- Risk transference
- Risk avoidance
- Risk reduction

## RISK MANAGEMENT PROCESS





# GRC

**Governance:** The means by which an organization is directed and controlled

**Compliance:** Ensuring you follow the appropriate guidelines and use proper, consistent practices in accordance with the laws of the land and organization's policies



# Strategy and Business Intelligence

A strategy describes how the ends (goals) will be achieved by the means (resources). Strategy can be intended or can emerge as a pattern of activity as the organization adapts to its environment or competes. It involves activities such as strategic planning and strategic thinking

Business intelligence (BI) is a technology-driven process for analyzing data and delivering actionable information that helps executives, managers and workers make informed business decisions



# Laws & Regulations

Laws and regulations are similar as they both try to specify and organize what that authorizing body feels is appropriate behavior

Laws and regulations are rules that are established by the federal, provincial, or local government or their appropriating agency

Often, regulations are written to implement the specifics of a particular law

# Frameworks, Standards, Policies, Procedures & Processes

A **framework** is a conceptual structure defined by the governance of an organization to set out policies within the company

A **standard** specifies uniform uses of specific technologies or configurations

**Policy** relates to a decision of the governing body of an organization. A policy is typically an internal organizational decision that aids how it functions. A policy is a formal statement of a principle that should be followed by its intended audience

A **procedure** provides detailed mandatory steps (sometimes in the form of a checklist) someone needs to follow to achieve a recurring task or comply with a policy. These procedures can include step by step instructions or statements telling you where something needs to go

A **process** is a series of progressive and interdependent steps by which an end is attained



# Typical Audit Process

PROJECT KICKOFF

EXIT MEETING

- *Audit Notification*
- *Gather Information*
- *Prepare & Finalize Risk based audit program*

- *Objectivity*
- *Solicit input*
- *Audit plan, timing & resourcing*

- *Conduct interviews*
- *Review process/doc*
- *Testing*

- *Audit Results*
- *Resolve concerns*
- *Discuss corrective actions*

- *Draft report*
- *Corrective action plan*
- *Final Report*
- *Followup*

PLANNING

FIELDWORK

REPORTING

# Course Outline

Domains	Chapters	% in CISA Exam
1	Information Systems Auditing Process	21
2	Governance and Management of IT	17
3	Information Systems, Acquisition, Development & Implementation	12
4	Information Systems Operations & Business Resilience	23
5	Protection of Information Assets	27

# Chp. 1: Information Systems Auditing Process

## Part A: PLANNING

- 1.1 IS Audit Standards, Guidelines and Codes of Ethics
- 1.2 Business Processes
- 1.3 Types of Controls
- 1.4 Risk-based Audit Planning
- 1.5 Types of Audits and Assessments

## Part B: EXECUTION

- 1.6 Audit Project Management
- 1.7 Sampling Methodology
- 1.8 Audit Evidence Collection Techniques
- 1.9 Data Analytics
- 1.10 Reporting and Communication Techniques
- 1.11 Quality Assurance and Improvement of the Audit Process