

# Capstone Presentation

## CIDM-6395

Spring 2024



# About Me

- Graduate Background
- Why a MSCISBA?
- Future Goals
- Continue Innovating and Evolve



# BuildAPC

*“Your PC Your Way”*



# Overview of BuildAPC

- Problem Domain
- What makes BuildAPC different?



# Architecture Design and Software Engineering Principles



# Software Engineering

- Understand the why behind BuildAPC, its problem domain and user-centric vision.
- Usage of Python Django and Django ORM
  - Web Development
  - Task Handling
  - Business Logic
  - Clean-code base
- Agile Software Engineering Practices
- Test Driven Development – Reflection of Roman Numerals KATA assignment
  - CIDM-6330 “Software Engineering / Systems Development”



# Networking and Cybersecurity



# Networking and Cybersecurity considerations for BuildAPC

- Disaster Response Planning
  - Cybersecurity Incident Detection
    - WireShark, NMAP, Nessus Application use case implementation
  - Cybersecurity Incident Management
  - Business Continuity Plan
    - Ransomware Recovery Plan Project CIDM-6340
- If Django ORM architecture had to be changed to another language or codebase, we still considered additional SQL Security measures.
- HTTPS encryption protocols
- External Third-Party Security Audits





# Data Management

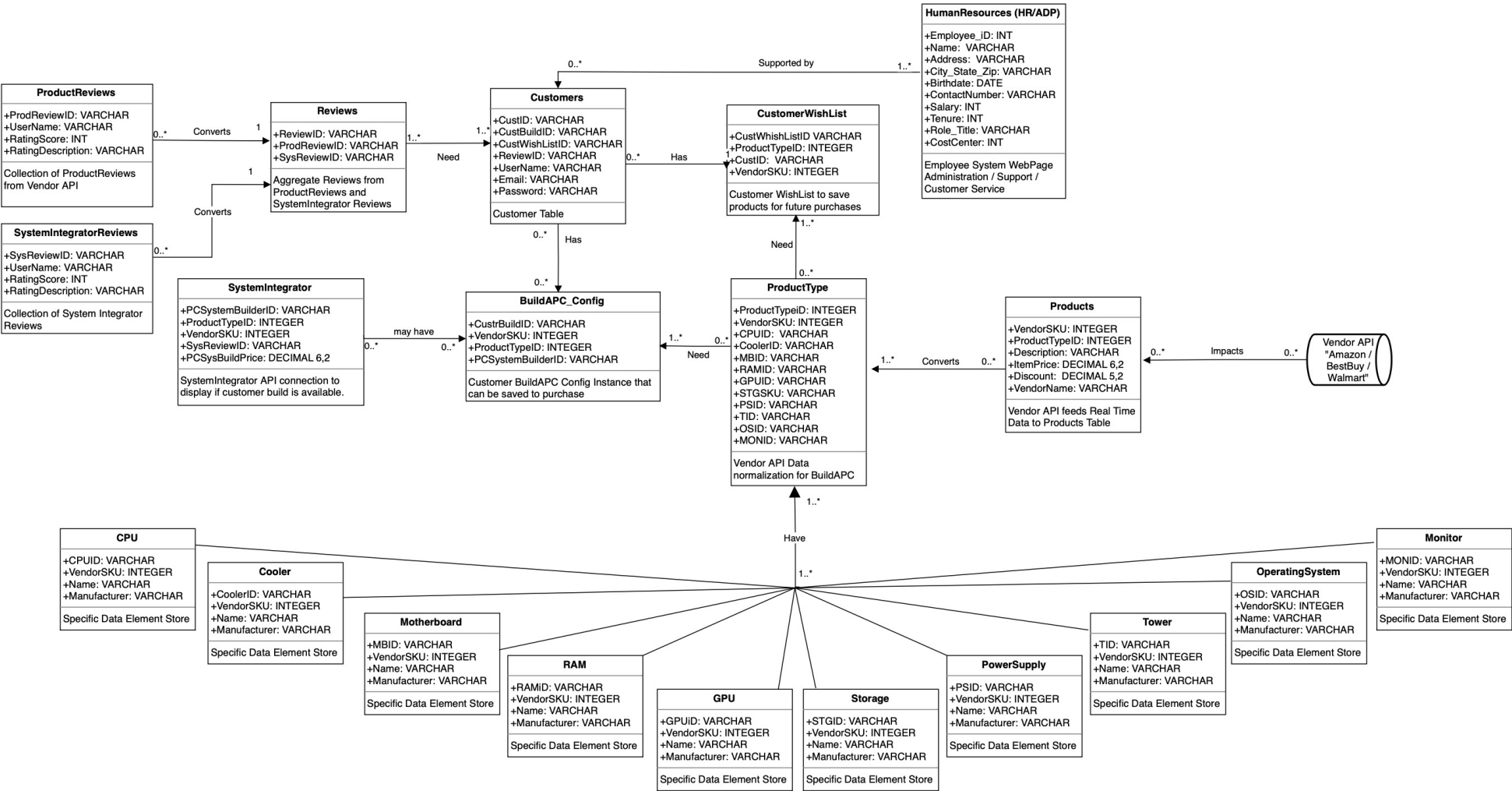


# Data Management

- Proficiency in SQL and database management through Django ORM.
- BuildAPC's Data Management Plan
- Referential Integrity focus
- “Garbage In – Garbage Out” Methodology
  - Build the foundation right the first time.



# BuildAPC Class Diagram



# Business Analytics



# Business Analytics

- Business Analytic Tools
  - Rapid Miner – Data Science
    - Predictivite Analytics
    - Prescriptive Analytics
  - Tableau – Visualization
    - Forecasting + Trend Analysis
    - Daily Business Workflow Reporting
  - SQL – Diagnostic analytics
- Data-Driven Decision Making



# BuildAPC Demo



Thank you!

