**Launching into Enterprise IT Management**

This was my first module, and it taught me how to research correctly, critique effectively, and question everything critically.

**Unit 1: An Introduction to EIT**

Reflection and Takeaways

This week provided a comprehensive introduction to Enterprise IT, setting the stage for deeper exploration in future lessons. The discussion on EIT's relationship with industry standards and bodies of knowledge highlighted the importance of a structured approach to managing enterprise technology. By understanding EIT's evolution and core components, I will be better equipped to navigate the complexities of modern IT environments and contribute effectively to my organisations.

Research assignment:

*You are tasked with selecting a company/SME that you are familiar with. Identify the main EIT design component that has influenced the development of the business. Was it a positive or negative impact? What, if anything, would you do differently than the company’s original action?*

*If you are not currently working in the industry, select a company/SME that is the subject of a case study – periodicals, such as Computer Weekly, often provide case studies of companies, as do the IEEE.*

*After the tutor has opened the discussion with a post, students are required to offer an****initial post****that demonstrates their answer to the question (in Unit 1), then read and respond to two of their peers' initial posts, making comments and asking questions (in Unit 2), and provide a summary of the discussion, based on your initial post and the feedback from your peers (in Unit 3),****always using an academic tone and backing up your ideas using appropriate citations and references****.*

*From those posts, animation and leadership, application to the real world, and reflection will be assessed. The initial post should be labelled****'Initial Post'****, the two follow-up responses should be labelled****'Peer Response 1'****and****'Peer Response 2'****and the summary post should be labelled as****'Summary Post'****. The initial post, two responses and summary will be judged according to all grading criteria.*

**Unit 2: EIT vs. Shadow IT**

**Reflection and Takeaways**

This week’s unit critically examined the contrast between Enterprise IT and Shadow IT. The discussions highlighted EIT's structured and secure nature compared to the more flexible but riskier Shadow IT. Understanding these differences is essential for balancing innovation with security in an enterprise setting. The unit also emphasised the importance of recognising and managing the risks associated with Shadow IT while considering its potential benefits in driving creativity and responsiveness within an organisation.

As I move forward, this understanding of EIT and Shadow IT will be crucial in developing strategies that leverage the strengths of both approaches while mitigating their respective risks. This knowledge is particularly relevant in today’s dynamic IT environments, where the balance between control and flexibility often dictates the success of IT initiatives.

Research assignment:

*Week 2 of Collaborative Learning Question*

**Unit 3: EIT and Automation**

Reflection and Takeaways

This week provided a deeper understanding of how automation is intertwined with the evolution of computer systems and its critical role in digital transformation. The discussion on programming languages offered practical insights into implementing automation, emphasising the importance of choosing the right tools for specific business needs. Additionally, exploring automation's role in Industry 4.0 and 5.0 highlighted its significance in driving modern industrial and entrepreneurial advancements.

As we continue to explore the interplay between EIT and emerging technologies, the knowledge gained this week about automation will be essential in understanding how to leverage these tools for business innovation and efficiency. The unit underscored the transformative potential of automation, not just as a technical function but as a strategic asset in the digital economy.

Research assignment:

*Week 3 of Collaborative Learning Question 73% (Distinction)*

**Unit 4: A Comparative Study: Practical Automation Exercises using C and Python**

**Reflection and Takeaways**

This week's practical exercises provided valuable insights into the relationship between programming languages and algorithm performance. The hands-on implementation of a sorting algorithm in Python and C allowed students to directly observe the impact of language differences on execution speed and efficiency. The experience of comparing and analysing the performance of these programs underscored the importance of selecting the appropriate language and optimising algorithms based on the specific requirements of a task.

The reading materials, which focused on creating, editing, and debugging automation programs, further supported the practical learning experience. The manuals "Think Python 2e" and "TinyC" provided essential guidance on best practices in programming and debugging, reinforcing the skills needed to implement and optimise algorithms successfully.

Overall, this week emphasised the importance of practical programming skills and algorithmic thinking in computer science, preparing me to apply these concepts in *real-world scenarios where performance and efficiency are critical.*

*Research assignment:*

*Compare and contrast your selected algorithm implemented in Python, the times from your application using the built-in sort of function (if applicable) with the one demonstrated in class written in a compiled language. Which performs the best? Give reasons for your answer supported by appropriate academic references.*

*You should provide a text file that includes all references (presented in the Essex format), plus your discussion of algorithms. This file should be professionally formatted and proofread.*

***Submission Guidelines***

*For a****Pass****, you should submit a sorted text file (and the Python program that produced it), named using your name and the date it was submitted (for example, JaneDoe-23-1-24). It should also include your name as the first line of the file and your student number as the 2nd line. Additionally, you should insert ten copies of your name randomly throughout the file – these should be in the format JaneDoe01, JaneDoe02, or JaneDoe10.*

*For a****Merit****, you will need to add appropriate commands to the provided program that will allow you to time and compare the performance of your selected algorithm with the original version. Which is the most efficient? Also, compare your timings with those provided by the tutor - which implementation is the most performant? You should explain why the 2nd algorithm performed better than the original. Your alternative algorithm must perform the sort more quickly than the provided initially algorithm.*

*For a****Distinction****, you should create a third application that uses Python’s built-in sort function. Use this to sort the original pitext.txt file – is this faster or slower than your previously selected “fast” algorithm? Add a hash function to create a hash file of your sorted text file. Modify the text file to include your name, date of birth and student number in lines 1 to 3 in the text file. Generate a new hash for the new file. Is this number different from the one you generated initially? Explain why.*

***Learning Outcomes***

* *Critical evaluation of the literature and current developments and challenges in IT service management (QMC).*
* *Systematic and thorough understanding of relevant tools and techniques to analyse and solve problems.*

**Unit 5: Business Systems, Outsourcing and the Cloud**

**Reflection and Takeaways**

This week's unit offered a critical examination of the shifts in business systems, from traditional outsourcing to the growing dominance of cloud computing. The exploration of outsourcing provided a nuanced view of its advantages and disadvantages, helping students understand why some businesses are moving away from it in favour of cloud-based solutions. The discussion on cloud solution providers and cloud-native technologies highlighted the flexibility and innovation that cloud computing brings, positioning it as a key player in modern business infrastructure.

The reading materials, which focused on the offerings of top international outsourcing companies, provided practical examples of how these companies position themselves in the market and the types of services they offer. This contextualised the theoretical knowledge gained during the week, bridging the gap between theory and real-world application.

Overall, this week deepened students' understanding of the evolving landscape of business systems and the strategic decisions organisations must make when choosing between outsourcing and cloud computing. The knowledge gained will be essential for navigating the complexities of modern IT management and making informed decisions about technology adoption in businesses.

Research assignment:

*Week 1 of Individual Programming Exercise*

**Unit 6: A Cost Comparison Between On-premise, Private and Public Cloud Hosting**

Reflection and Takeaways

This week provided a detailed exploration of the financial and technical considerations of choosing between on-premise and cloud hosting solutions. The comparison of costs and the analysis of the "lift and shift" migration process equipped students with practical tools for evaluating hosting options in real-world scenarios. The discussions emphasised the importance of aligning hosting decisions with both budgetary constraints and technical needs, ensuring that the chosen solution supports the business's overall goals.

The reading materials focused on the processes and considerations involved in migrating applications and workloads to the cloud, offering additional insights into the challenges and benefits of cloud migration. These readings complemented the week's discussions by providing concrete examples and case studies illustrating the practical implications of moving to the cloud.

Overall, this week strengthened my ability to critically assess hosting options and make informed recommendations, skills essential for IT professionals tasked with managing enterprise infrastructure in an increasingly cloud-centric world. The knowledge gained will be valuable in future discussions and decision-making processes related to IT infrastructure and cloud computing strategies.

Research assignment:

*Week 2 of Individual Programming Exercise*

**Unit 7: Software Licensing: Commercial vs. Open Source**

Reflection and Takeaways

This week has provided critical insights into the complexities of software licensing, a fundamental cost and strategic consideration for businesses today. The commercial and open-source licensing comparison highlighted the trade-offs organisations must consider when selecting software solutions. Understanding these trade-offs is essential for making informed decisions that balance cost, flexibility, support, and legal considerations.

The discussion on DRM and emerging licensing challenges was particularly relevant, underscoring the evolving nature of software usage rights and the potential impact on business operations. As businesses increasingly rely on digital technologies, navigating these licensing complexities will be crucial for maintaining operational efficiency and legal compliance.

Overall, this week deepened my understanding of the strategic implications of software licensing choices, preparing them to make informed decisions in their future roles as IT professionals and business leaders. The knowledge gained will be valuable in assessing software needs and selecting appropriate licensing models that align with business objectives and technological trends.

Research assignment:

*Week 2 of Individual Programming Exercise 75% (Distinction)*

**Unit 8: A Case Study: Investigating Business and Technical Innovations of Large Corporations and SMEs**

**Reflection and Takeaways**

This week provided a valuable opportunity to apply theoretical knowledge to real-world scenarios through the IBM and Acorn case studies. Analysing how these companies utilised technical and business innovations to navigate the early personal microcomputer market offered deep insights into the factors contributing to success and failure in rapidly evolving industries.

The discussion emphasised the importance of strategic innovation in product development, business operations, and market positioning. Understanding the mistakes made by IBM and Acorn, such as underestimating market dynamics or failing to adapt quickly enough to changes, provided critical lessons for me on the risks and challenges of innovation.

The reading materials, which detailed the histories and developments of IBM and Acorn, offered a richer context for the case studies, allowing me to assess the decisions made by both companies critically. These readings complemented the week's discussions by highlighting the broader historical and technological landscape in which these companies operated.

Overall, this week strengthened students' ability to analyse business and technical strategies in real-world contexts, drawing practical lessons from historical examples. The knowledge gained will be crucial in future roles, where innovating while avoiding common pitfalls will drive business success.

**Unit 9: Communications and Digital Transformation**

Reflection and Takeaways

This week’s exploration of digital communications and their influence on technology adoption provided crucial insights into the foundational elements of modern digital systems. Understanding the evolution of communication technologies and the impact of Claude Shannon's work highlighted the importance of digital communications in developing current and future technologies.

The discussion on pervasive computing and IoT technologies underscored the transformative potential of these innovations in industrial systems. By examining real-world applications of IoT in various industries, I gained practical knowledge that can be applied to enhance industrial efficiency and innovation.

The lecturecast’s focus on BPMN, REST, and BPR provided additional tools for understanding how traditional processes can be digitalised, offering pathways for businesses to adapt to the digital age. The knowledge gained this week will be instrumental in future discussions on digital transformation and integrating advanced technologies into business and industrial systems.

Overall, this week reinforced the critical role of digital communications in shaping modern technology and provided students with a deeper understanding of how these concepts are applied in the real world to drive innovation and efficiency.

*Research assignment:*

**Individual Presentation**

Your Individual Presentation must be submitted by the end of Unit 12.

This presentation is equivalent to 2,000 words. The equivalence stated refers to the amount of effort required to complete the given word count. You are expected to spend the same amount of time on this assessment as you would doing a 2,000-word essay

**Brief**

You are tasked with developing a PowerPoint presentation (of up to 10 slides) that reflects on future technology/techniques and learning styles. In addition to your PowerPoint, you should also create a recording of your individual reflection (20 minutes in length) with a transcript.

Please submit all 3 aspects (the PowerPoint, recording and transcript) to the submission portal below.

**Question**

Consider the statement “Enterprise IT encapsulates ALL the technology trends that will make the greatest impact on Industry in the next five years”. Identify ONE trend that you feel will have the greatest impact over the next five years.

In describing your chosen trend, you should also explain why you think it will have the most impact and how you think it will impact industry and working life. Your slides should have a strong reflective bias focus with critical insights, considering the effects as opposed to the technical aspects of your chosen trend.

For the reflective aspect, consider:

* How did working on the assessments make you feel?
* How did these emotions affect you and your everyday work?
* Have you reviewed the views of others, your prior experience, and correctly referenced literature, in relation to your current behaviour and the work you’ve done?
* Show that you have thought deeply about what exactly produced your learning (or a new way of thinking) while taking this module.

**Instructions**

For this assignment, you are required to record a **20-minute presentation**, along with a **transcript**of the audio file. The presentation should include your demonstration. Your slides should not be wordy or repeat, verbatim, the oral presentation. Visuals, illustration, statistics, charts, tables and indication of key pointers are welcome. In assessing the presentation for marking, emphasis will be place on the oral content. However, clarity of the visual presentation will also be taken into account.

**Release Note:**Appendices should not be used to extend the core report as reports should stand alone, complete and concise, without the appendices. They should really only be used if required, and only for supplementary and/ or supporting information. One key part of the exercises in this module is the need to be to be able to express ideas succinctly, concisely and with necessary brevity.

**Learning Outcomes**

* Critical evaluation of the literature and current developments and challenges in the field of IT service management (QMC).
* Systematically identify and manage scientific and technical risk and uncertainty associated with IT service management and its applications.

**Unit 10: The Digital Transformation Process**

Reflection and Takeaways

This week’s focus on practical application gave me a deeper understanding of digitalisation. The use of BPMN and UML to represent digital processes was emphasised, highlighting their importance in creating clear, structured, and effective digital transformation designs.

The hands-on demonstration of design creation using a popular design package was particularly valuable, as it allowed me to apply the concepts I had learned in previous units directly. This practical experience reinforced my ability to visualise and execute digital transformation projects, preparing them for real-world applications.

The design review process was also a vital component of the week’s learning, encouraging me to think critically about my work and that of others. This exercise helped improve the specific designs and fostered a mindset of continuous improvement and attention to detail—essential qualities for success in digital transformation initiatives.

The reading materials, which focused on reflections on approaches to information systems design, further enriched the week’s discussions by providing theoretical insights and best practices that could be applied to the practical exercises.

Overall, this week provided a comprehensive and practical understanding of digital transformation, equipping me with the skills and knowledge needed to approach digitalisation challenges effectively. The combination of theory, practical application, and critical reflection made me well-prepared to undertake digital transformation projects in my future career.

*Research assignment:*

Week 1 of Individual Presentation

**Unit 11: Future Trends**

Reflection and Takeaways

This week’s exploration of emerging trends in Enterprise IT was crucial for understanding the IT field's dynamic and rapidly changing nature. The discussions emphasised the importance of staying informed about technological advancements and anticipating their impacts on enterprise systems.

The critical evaluation of AI, security, and Web 3.0 gave me the tools to assess future trends effectively, helping me prepare for strategic decision-making in my career. Understanding these trends' potential benefits and risks will be essential for developing robust and forward-looking EIT strategies.

The lecturecast further enriched the learning experience by providing structured analyses of each trend, allowing me to compare and contrast them to facilitate deeper understanding and critical thinking.

Overall, this week reinforced the importance of foresight and adaptability in Enterprise IT, equipping me with the knowledge to navigate and leverage emerging trends in their professional roles. Predicting and responding to these trends will be vital for maintaining a competitive edge in the evolving IT landscape.

*Research assignment:*

Week 2 of Individual Presentation

**Unit 12: The Great Debate**

Reflection and Takeaways

The final week’s debate provided a dynamic and engaging conclusion to the course, allowing students to apply their accumulated knowledge in a practical, competitive setting. Defending a chosen trend through a presentation honed our critical thinking, persuasive communication, and strategic analysis skills.

The collaborative nature of the group discussion and vote reinforced the importance of teamwork and the ability to reach consensus on complex issues. This experience will be valuable in professional environments where strategic decisions often require input from multiple stakeholders and a collective agreement on the best course of action.

Overall, this week encapsulated the course's critical themes by challenging students to reflect on and project the future of Enterprise IT in a rapidly evolving technological landscape. The ability to identify, justify, and advocate for the most influential trends will be crucial for students as they progress in their careers, ensuring they remain at the forefront of technological and business innovation.

*Research assignment:*

Week 1 of Individual Presentation 50% Pass

Reflective thinking

Programming:

I made significant growth in this area. It took away the fear of programming, by no means am I a programmer now, but I find myself writing programmes to automate simple tasks. Long may it continue. My confidence in this area is growing.