



## MIS761 Cyber Security Strategies Trimester 2 2024

### DEMO EXAM

<b>DUE DATE AND TIME:</b>	The start date and time will be as per the University Exam T2 2024 Exam timetable available via <a href="#">StudentConnect</a> .
<b>PERCENTAGE OF FINAL GRADE:</b>	50%
<b>HURDLE DETAILS:</b>	Not Applicable
<b>SUGGESTED WRITING TIME:</b>	2 hours
<b>WORD COUNT:</b>	2000 words

### Instructions

- This end of unit assessment task is available for 24 hours, with a suggested writing time of 2 hours. You may choose when to complete the task within this time frame.
- You are allowed to access all resources during the assessment, except for contract cheating sites, artificial intelligence content generation sites, resources that undermine the purpose of the assessment, and help from peers or others (unless specified otherwise in the assessment instructions). It is important that you complete this task individually. Your submission will be reviewed to detect contract cheating, collusion, and/or plagiarism.
- The end of unit assessment task will be released in the CloudDeakin unit site under a dedicated End of Unit Assessment module at the date and time scheduled in the University Exam T2 2024 Exam timetable.
- This end of unit assessment task constitutes **50%** of your assessment in this unit.
- This end of unit assessment task comprises **4** questions. You are required to answer **ALL 4** questions.
- Download the assessment paper and review the questions. You are required to type all your answers into a separate single Microsoft Word document (.docx). Save your answer document on your computer using the following naming convention: **[Student ID]\_[Unit Code]\_EOUA**. For example: **216123123\_UNITCODE\_EOUA**. Once completed, submit the answer document to the **End of Unit Assessment Submission folder** on the CloudDeakin unit site.
- Late submissions and/or submissions in a file format other than Microsoft Word (.docx) **will not** be marked.
- **Remember to save your work regularly.** If you encounter any technical issues with CloudDeakin, please contact the [IT Service Desk](#) online or via phone (1800 463 888; +61 5227 8888 if calling from outside Australia) and record your ticket number. This evidence is necessary for any [Special Consideration](#) application due to technical issues during the end-of-unit assessment period.

# MIS761 Cyber Security Strategies

## Trimester 2 2024

### Final Assessment Task – End of Unit Assessment

#### Case Study

The following is an extract from an advertising publication.

#### Background:

From humble beginnings in 1999, *eResults*' initial core business of business computer systems sales and consulting servicing has now grown. Business partners Rod Coogan and Steve Dyson, together with their fifteen staff, tailor business, information management and cybersecurity solutions for small to medium and large business organisations drawn from across education, health, local government, legal and financial sectors in the Geelong region. Since 2014, *eResults* has offered a complete IT service focusing on establishing and installing business information systems, networking performance servers, data storage, Cloud service setups, website development, in addition to advising clients about managing information, privacy, creating workplace policies and establishing resilient cybersecurity and contingency planning practices. *eResults* strives to be an environmentally sustainable organisation. It is actively committed to '*closing the loop*' in terms of responsible and secure recycling all their cardboard, paper, soft and hard plastics, toner cartridges etc., including secure disposal of all their obsolete e-waste products. The business is also involved in advising customers of environmentally sustainable practices.

Reliable information technology is critical for businesses to thrive in a competitive market. *eResults* is highly focused on the specific requirements of their customer businesses including keeping up with the latest cybersecurity trends and demands. In summary, *eResults* provides the following services:

- **Managed Services** – Designed to improve the computer systems reliability and keep their staff productivity, secure and protected against all contingencies. Managed Services can assist by (remotely) managing your IT infrastructure and/or end-user systems.
- **Virtual Support Services** – *eResults* offer a complete range of website and email hosting, business software applications and backup and cloud services. With the development of faster Internet via the NBN, businesses can migrate their software to '*the cloud*'. *eResults* can help you plan and make this transition, ensuring that your business always stays online.
- **Desktops, Laptops and Notebooks** – As a Dell partner, *eResults* supply Dell's corporate range of computing hardware at very competitive pricing.
- **Servers and Networks** - From small workgroup servers to large corporate storage, *eResults* have the right solution for business. Our network consultants are ready to help design and implement solutions from start to finish, whether it is a small local area network or wide area network across many sites, we have a team of long-standing partners and staff with the experience and resources.
- **Accessories** – *eResults* also offer a wide range of accessories and peripherals from other reputable brands such as Dell, LogiTech and Microsoft to name a few. Accessories and peripherals we offer

include monitors, keyboards, mice, external drives, network switches, storage, video conference equipment, notebook docks, carry cases and software solutions to name a few!

You are a recent Deakin graduate and the newest member of the *eResults* team. As part of your initial training and induction you have been shadowing Rod during on-site visits with SME (Small-to-Medium Enterprises) customer businesses over the last month to acquaint yourself with the *eResults* approach.

### Customer Business Case Study Details:

**Just Pastry** is a quality pastry wholesaler that produces the best value premium *pastries* available online with free delivery anywhere in Australia. Owner and master patissier, Regina, guarantees the quality and freshness of the pastries, which are baked fresh. Regina founded **Just Pastry** in 2014 based on her passion and enthusiasm for premium quality pastries.

**Just Pastry** consists of a local pickup and delivery service for Geelong area customers. **Just Pastry's** clients can order a variety of fresh pastries online from **Just Pastry** via their unique B2B website. The customer experience starts online when placing an order and customers can expect to receive a personal confirmation email of their order directly from Regina. The pastries are baked and packaged within 24 hours and dispatched for delivery to the customer's door, fast! All **Just Pastry** pastry orders are baked fresh to ensure maximum freshness and quality. For advice selecting pastries, Regina is happy to be the customer's first port of call.

However, with the business growing exponentially in popularity and orders there are some concerning issues appearing with the largely manual business processes used with managing local and online orders. This includes efficiently and securely handling of customer details and the management of information, while maintaining a secure online presence that is beginning to concern Regina.

Therefore, Regina has engaged *eResults* to undertake an analysis of her business to develop a couple of whole-of-business solutions to improve her business processes by:

1. electronically automating as many business processes as possible within the business including payment transactions.
2. ensuring that any relevant cybersecurity issues related to protecting her business data and that of her customers are addressed.
3. considering the Cloud as an option for managing her business.
4. setting up contingency alternatives for her business in case things go awry and her business is hacked.

In response, Rod from *eResults* has spent the last few days working with Regina and her staff analysing the business with the view of developing appropriate whole-of-business options for Regina to consider. From Rod's initial analysis, he has outlined several areas of concern and tasked you with providing advice and suggestions in response to his following questions.

## Question 1.

Cybersecurity awareness training is crucial to all business operations using the Internet and mobile devices. Rod knows that the actions of staff could represent a significant weakness to the cybersecurity of **Just Pastry**. This is because sometimes people are careless or make mistakes or can take advantage of opportunities. Therefore, people can sometimes be the '*weakest link*' in the chain of cybersecurity.

- a) Rod wants you to identify and describe four (4) examples of potential cybersecurity risks directly related to human activities (i.e., the things people do) that might present a potential threat to ongoing cyber secure activities of **Just Pastry** for staff awareness training purposes.

[10 Marks]

Answer below here

- b) Rod's experience tells him that businesses constantly face an important dilemma when they must choose whether to have strong information security or whether to provide strong employee privacy. One example of this dilemma relates to the personal use of external sites by staff at work and the need for secure information systems in the workplace. If the **Just Pastry** information systems are to be highly secure, then employee actions when using external sites at work may need to be monitored closely. Discuss the dilemma and the key issues involved and explain how this dilemma can be resolved with a '*balanced*' Internet Acceptable Use policy. You will need to justify your answer using examples to demonstrate how the policy would function.

[15 Marks]

Answer below here

## Question 2.

When considering *Cloud Services* as a possible solution for ***Just Pastry***, Rod notes that there are three (3) cloud services to consider here.

- a) Please provide a brief description of each of the following cloud service models, including identifying an example and justifying the capabilities provided by each cloud service that would be beneficial to ***Just Pastry***.
- Software as a Service (SaaS)
  - Platform as a Service (PaaS)
  - Infrastructure as a Service (IaaS)

[15 Marks]

Answer below here

- b) Considering the common transformation challenges faced by organisations when they are adopting Cloud services, describe three (3) such challenges related to ***Just Pastry***.

[10 Marks]

Answer below here

### Question 3.

There are various information security risks faced by small-to-medium enterprises (SMEs) engaged in electronic business. Two of the key risks faced by business is *phishing* and *ransomware* attacks, in either case Rod knows that these acts would result in potentially ruining the **Just Pastry** business and their reputation.

- a) Briefly describe what *phishing* is and explain why it is so difficult for society, business and individuals to manage this risk. Identify and discuss two (2) different measures that can help to manage the phishing risk for **Just Pastry**.

[10 Marks]

Answer below here

- b) Briefly describe what *ransomware* is and explain why it is so difficult for society, business and individuals to manage this risk. Identify and briefly discuss three (3) different measures that can help to manage the *ransomware* risk for **Just Pastry**.

[10 Marks]

Answer below here

- c) Rod is insistent that all staff access to all the new business systems, social media and mobile devices will require 2-factor authentication. For training purposes, write a brief '**plain language**' non-technical explanation of what 2-factor authentication is and how it works.

[10 Marks]

Answer below here



#### Question 4.

Experience tells Rod that aiming to enhance the protection of the online services against cyber-attacks, **Just Pastry** needs to identify all security weaknesses of the utilised web applications and mitigate the risk of misusing the network services.

- a) What is the difference between vulnerability assessment and penetration testing?

[10 Marks]

Answer below here

- b) Which assessment method would you recommend for **Just Pastry**? Explain and justify your answer for Rod.

[10 Marks]

Answer below here

**- END OF EXAMINATION -**