

# **Computing and Information Systems**

University of London International Programmes

Introduction to Information Systems CIS108

## **Coursework 1**

**2011–2012**

### **Introduction to Assignment**

In this course, you have been learning the skills required to understand information systems from the viewpoint of a business professional. This assignment gives you the opportunity to explore your understanding of systems analysis, systems thinking, hardware and software, and how businesses deploy these resources in a commercial context.

#### **Assignment Learning Objectives**

- Demonstrate an understanding of why information systems are so essential in business today.
- Illustrate that you understand how to define an information system and propose a new system to a business in terms of technical and business perspectives.
- Demonstrate your understanding of IT infrastructures and the complementary assets required for information technology to provide value to a business.

### **Reading for Assignment**

You should read the case study supplied and chapters 1 to 6 of the recommended text for this course before completing this assignment.

### **Marks for Assignment**

You can obtain a maximum of 25 marks for each of the 4 questions that make up this assignment.

## **Case Study – Julie's Dresses**

Julie Jakes, who lives in London, has been running a business called Julie's Dresses for the last 10 years. Although she makes her dresses from home she sells them to a range of shops across the UK.

Julie Jakes creates the designs and then sews the dresses, often with the help of her mother. When she first began the business 10 years ago all the designing and administration was completely manual and all work was done without computers. Since then things have changed. Julie Jakes went on a computing course and learnt how to use InDesign (a design package) and Photoshop (a photo package). Julie Jakes has bought herself several machines to engrave some of the jewellery with special messages.

In the last three years the business has grown so much that they have had to take on several workers to help out. These workers make dresses, package up orders and send orders off to shops and customers. The workers also help out at trade shows which take place every year. Julie Jakes has also been asked to write a book on her dress designs. This book will be sold in major bookshops and online.

Last week Julie Jakes received a call from one of her major customers, Lewis John Ltd., a chain of department stores which buys many of Julie Jakes' dresses. Lewis John Ltd. has decided to open a new store which will have a large modern dress section. They want Julie Jakes to make a large range of new dresses exclusively for them.

The amount of dresses they want as stock is far in excess of what can currently be made by Julie Jakes. It is clear if she wants to take up their offer she must now move the business from home and set it up as a professional business in its own premises.

Julie Jakes accepted the Lewis John Ltd. offer as it would mean her business could really grow. However, Julie Jakes realised she would need a lot of help expanding her business. Since Julie Jakes knows little about setting up a large business or computer systems, she has hired you to help plan her new business operation.

## **Questions**

Julie Jakes has hired you to write a report answering the following questions.

1. Describe five types of information system that Julie Jakes could employ in order to make the business professional enough to meet the growing demands of its customers.

[25 Marks]

2. Write a 500 word report that defines and proposes a new website to support and promote Julie Jakes. Your report should include a list of 10 key features, a site map and a user interface design for the home page.

[25 Marks]

3. Describe two ways in which Julie Jakes could use internet technologies to build relationships with customers online.

[25 Marks]

4. Propose a new Information systems infrastructure for Julie's Dresses. Your proposal should cover technology, management and organisational costs. It should also include training and other resources needed.

[25 Marks]

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**Computing and Information Systems**  
University of London International Programmes

Introduction to Information Systems

**Coursework 2**

**2011–2012**

## **Introduction to Assignment**

In this course you have been learning the skills required to understand information systems from the viewpoint of a business professional. This assignment gives you the opportunity to explore your understanding of how the social, ethical, technological and business aspects of system development interact with each other.

### **Assignment Learning Objectives**

- Demonstrate an understanding of why the introduction of new information systems may led to resistance to change from workers.
- Illustrate that you understand how to manage the introduction of a new system from social, technical and business perspectives.
- Demonstrate your understanding of why companies are increasingly outsourcing their software projects off-shore and what the advantages and disadvantages are of taking such action.

## **Reading for Assignment**

You should read the case study supplied and chapters 1 to 8 of the recommended text for this course before completing this assignment.

## **Marks for Assignment**

You can obtain a maximum of 25 marks for each of the 4 questions that make up this assignment.

### **Case study – The new call centre**

British Telecom is the UK's biggest provider of telecommunications services in the UK. Originally the supplier of domestic telephone services in the UK, they now provide everything from On-demand television services to mobile phones. However, British Telecom is now facing fierce competition from other major suppliers such as Virgin and Sky. They have seen a slump in sales and have had to cut production by half as a result.

A senior management meeting was called to discuss alternative ways to cut costs and increase efficiency. Two proposals were put forward at the meeting. The first proposal was to open a call centre in India to provide customer support and financial services to customers. Companies such as British Telecom are increasingly outsourcing their call centre operations off-shore, where they can capitalise on low-wage regions such as India, China, Eastern Europe, Africa and Latin America. However, this proposal would mean many UK-based workers losing their jobs and the closure of the call centre in the UK.

The second proposal was to invest in a new UK call centre that would increase the efficiency of British Telecom's operations and therefore give it a competitive advantage over its competitors.

After much discussion it was decided to opt for the proposal to invest in a new call centre in the UK. This would be a highly computerised call centre using the latest technology and systems. The new call centre line will also enable British Telecom to produce innovative new services that meet individual, personal orders for customers.

Following the board meeting, an announcement was made to the staff. Rather than greeting the announcement with cheers, the trade union representing the workforce immediately called for a ballot for strike action. They had many fears about the new technology and they also feared for their workers' jobs.

## **Questions**

The Company has hired you as a business consultant to write a report addressing the Union's concerns. Your report will need to address the following questions:

1. The process of introducing new technologies into a business is always difficult. Workers nearly always assume the worst and resistance to change is common. They may think they will become deskilled or even made redundant. Some workers may possibly use more covert ways to show their disapproval such as not using the new system whenever they can avoid it. Using the case study, write a 500 word report on the resistance to change the company may face and the process of deskilling. Provide five examples of ways in which resistance to change may occur and two reasons why deskilling may occur.

[25 Marks]

2. In support of the management team, write a 500 word report explaining the reasons why British Telecom's workforce may benefit from the introduction of the computer systems. Explain how the introduction of new technologies has benefited the employees at four companies you have researched.

[25 Marks]

3. Using the case study for examples, explain what can be done by the management team to ensure resistance to the new changes is kept to a minimum, considering the levels of resistance to change associated with the introduction of the new technology.

[25 Marks]

4. Some of the staff have suggested that the company may benefit from outsourcing its call centre to India. Write a 500 word report comparing the advantages and disadvantages of British Telecom outsourcing its call centre to India.

[25 Marks]



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Computing and Information Systems  
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**Coursework 3**  
**2011–2012**

### Introduction to Assignment

In this course, you have been learning the skills required to understand information systems from the viewpoint of a business professional. This assignment provides you with the opportunity to investigate security issues for software companies.

### Assignment Learning Objectives

- Analyse why information systems need special protection from destruction, error, and abuse.
- Assess the business value of security and control.
- Design an organisational framework for security and control.
- Evaluate the most important tools and technologies for safeguarding information resources.

### Reading for Assignment

You should read the case study and Chapter 9 of the subject guide before completing this assignment.

### Marks for Assignment

You can obtain a maximum of 25 marks for each of the first two questions and 50 marks for the third question.

## **Case Study - Are we Secure?**

Software Systems Solutions is a software company that designs software systems for investment banks. The software they create simulates financial markets and is used to make predictions for future investments by banks.

The software designs used to program systems are top-secret and should never be available to unauthorised personnel. Even when writing software, programmers are not given complete systems design specifications but rather a subsystem design specification for just the part of the software they are currently programming.

Within the company, employees share data via a local area network connected to the internet and a wireless network hub. Since several members of staff have old laptops which cannot connect to WEP secured wireless networks, the wireless network is left unsecured and open so that everyone in the company can use it.

All employees are given personal computers which contain company-approved software. However, employees are also allowed to bring in their own laptops and use them if they prefer. Software Systems Solutions allows staff to work from home on their own personal computers and bring in their work on mobile storage devices such as USB sticks and DVDs.

Although no one is formally responsible for security and there are no formal policies, different members of staff have developed procedures and technical measures to ensure that the company's systems are not compromised.

For example, each night the central server is backed up onto tapes which are stored in the same room as the server. Once every three months, Mr Stevens, a long-term employee of Software Systems Solutions, replaces any old or faulty tapes with new ones and checks to see that any backups can be correctly restored from tape.

There is a general belief in the company that its information systems are safe and not vulnerable to attack. Following a request from Software Systems Solutions' insurance company to carry out a security audit, you have been hired by Software Systems Solutions to assess how vulnerable their information systems are to technical, organisational, and environmental threats from internal and external sources.

## **Questions**

1. Using the scenario above, identify five computer systems-based threats to Software Systems Solutions' company network. For each threat you should identify and explain how it occurs and what preventative measures can be put in place to guard against it. For each threat, also provide an example of where such a threat has led to a security issue for a real-world company.

[25 Marks]

2. Write a 500-word report explaining the security risks associated with employees being allowed to bring in their own laptops and mobile storage devices such as USB sticks and DVDs with data on when they have worked from home.

[25 Marks]

3. The manager of Software Systems Solutions is responsible for ensuring that all possible risks to electronic commerce operations are noted in a security policy document. Write a 500-word report that describes the contents of a security policy document and what it should detail. This report should contain an Acceptable Use Policy (AUP) that outlines acceptable and unacceptable uses of hardware/telecommunications equipment.

[50 Marks]

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**Coursework 4**  
**2011–2012**

### Introduction to Assignment

In this course, you have been learning the skills required to understand information systems from the viewpoint of a business professional. This assignment provides you with the opportunity to explore the development of software to support business processes, including marketing, manufacture, finance and human resources.

### Assignment Learning Objectives

- Define and describe business processes and their relationship to information systems.
- Describe the information systems supporting the major business functions: sales and marketing, manufacturing and production, finance and accounting, and human resources.
- Evaluate the role played by systems serving the various levels of management in a business and their relationship to each other.

### Reading for Assignment

You should read the case study supplied and chapters 6, 7, 8 and 10 of the subject guide before completing this assignment.

### Marks for Assignment

You can obtain a maximum of 50 marks for the first question and 25 marks for each of the second and third questions.



## **Case Study - Best Properties UK**

Best Properties UK is a large estate agent based in central London. Best Properties UK has been letting flats, houses and commercial properties since 1960. Best Properties UK employs 30 people who work directly with clients, helping them to find houses and secure their rentals. Best Properties UK prides itself on its research into the properties it offers for rent and on its excellent personal customer service.

Whenever a landlord approaches Best Properties UK to let their house, a full report is compiled for the property. In addition, the house is visited, photographed and a Best Properties UK property description is written up. Once a house report has been completed it is sent to all the local newspapers and posted on several property websites to notify the public of the new house on offer.

When a potential tenant approaches Best Properties UK, they are interviewed to find out their exact requirements for a new property. Tenants are asked not only what kind of property they are looking for but also what other types of property they would consider.

Each morning, staff at Best Properties UK carry out "property matching". This is the process of trying to match potential tenants to properties Best Properties UK are currently trying to let. Each tenant profile is analysed and matched to properties which staff think might be considered by potential tenants.

When a potential tenant finds a property they wish to rent, Best Properties UK arrange for a visit to the house. Following this a contract is written up as part of the rental agreement.

Once the rental is completed Best Properties UK will receive a fee totalling 2% of the value of the contract. They file away all the paperwork that was used during the rental process. Finally all details of the house are removed from all publicity materials and online websites.

## **Questions**

1. Using your knowledge of the internet, write a 500-word proposal outlining the advantages and disadvantages of Best Properties UK creating an online version of their business. Propose a set of the business processes needed to allow a customer to rent a house online using the Best Properties website. Also draw a value chain containing primary and secondary activities that would need to be performed by Best Properties UK.

[50 Marks]

2. Using your understanding of resistance to change and the case study above, write a 500-word report informing the Best Properties management team of ways in which it could minimise the levels of resistance to change associated with the introduction of the new website.

[25 Marks]

3. By applying your knowledge of different types of information systems and the case study of Best Properties UK, write a 500-word report describing the different types of information systems you believe Best Properties UK is (or should be) using, and provide examples of what they would be using each type of system for.

[25 Marks]

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