



**Unit:**  
**Professional Issues in IT**

**Assignment title:**  
**TBTR Ltd – A Calendar System**

**Autumn 2019**

**Important notes**

- Please refer to the *Assignment Presentation Requirements* for advice on how to set out your assignment. These can be found on the NCC Education website. Click on 'Policies & Advice' on the main menu and then click on 'Student Support'.
- You must read the NCC Education documents *What is Academic Misconduct? Guidance for Candidates* and *Avoiding Plagiarism and Collusion: Guidance for Candidates* and ensure that you acknowledge all the sources that you use in your work. These documents are available on the NCC Education website. Click on 'Policies & Advice' on the main menu and then click on 'Student Support'.
- You **must** complete the *Statement and Confirmation of Own Work*. The form is available on the NCC Education website. Click on 'Policies & Advice' on the main menu and then click on 'Student Support'.
- Please make a note of the recommended word count. You could lose marks if you write 10% more or less than this.
- You must submit a paper copy and digital copy (on disk or similarly acceptable medium). Media containing viruses, or media that cannot be run directly, will result in a fail grade being awarded for this assessment.
- All electronic media will be checked for plagiarism.

## Scenario – TBTR Ltd

TBTR Ltd is a large company that manufactures components for mobile phones. There is a proposal to develop a system to implement a new calendar function for all the company's employees. All employees have a calendar on their PCs at the moment, but only the employees themselves have access to their calendar.

The Managing Director has noticed that both he and the Department Heads have trouble communicating when and where meetings have been arranged. Not everyone who should attend these scheduled meetings actually turn up.

The proposal is that a new calendar system is developed for use across the company. Every employee will have a copy of this new calendar system on their PC. Then the person calling the meeting uses this new calendar system and types in all the names of the meeting participants together with some constraints such as the length of the meeting, roughly when the meeting needs to take place, and possibly where it needs to take place. The system should then check against individuals' calendars and the central departmental calendar and presents the person calling the meeting with a series of dates on which everyone is free all at the same time. Then the meeting could be confirmed and written into people's calendars.

To do this the Managing Director and the Heads of Departments would need access to the employee's calendar, which they do not have at the moment.

An issue during development that would need to be considered would be the gaining of permission to do this.

Any new system will have the involvement of employees of the company. For the new calendar system, the following employees would be involved.

Main participants:

- Managing Director

- Department Heads

- Project Manager

Secondary Participants

- Systems Analysts

- Programmers

- End users

Some people, though, will want to be asked before the calendar entry is made. Perhaps the system could email them automatically and ask that it be confirmed before it is written into the calendar.

There is a suggestion that, because TBTR Ltd is in the business of manufacturing mobile phone components, an app could be developed for the employee's personal mobile phones. This might be the next development of the calendar system, which might be something the company could bring to the market.

## Task 1 – 12 Marks

- a) Computer ethics is involved in the proactive disclosing of the moral properties embedded in computer systems that later lead to ethical issues and dilemmas. Discuss the possible ethical issues **and** dilemmas that the Managing Director **and** the System Analyst should have considered before they chose the path of action described in the scenario i.e. to create a new calendar system. General Data Protection Regulation (GDPR) is one such dilemma that the developers need to be aware of.  
Word Count TWO HUNDRED AND FORTY (240) words. (6 Marks)
- b) Analyse the professional responsibility **and** the standards required by their professional body of the Systems Analyst in developing this new system. You may choose any of the Professional Bodies that currently exist in this field.  
Word Count TWO HUNDRED AND FORTY (240) words. (6 Marks)

## Task 2 – 16 Marks

- a) Part of a *Project Management Lifecycle (PMLC)* is the execution phase. Choose one of the software development process methodologies that can be used for this phase **and** explain how it works. Draw a diagram that represents all the phases in the chosen methodology **and** identify the significance each phase as applied to the scenario. Specifically mention any of the participants from the scenario at each stage. Word Count FOUR HUNDRED (400) words. (10 Marks)
- b) Assess THREE (3) advantages **and** THREE (3) disadvantages of the methodology you have chosen in part (a) if it was to be used to develop the software in the scenario.  
Word Count TWO HUNDRED AND FORTY (240) words. (6 Marks)

## Task 3 – 21 Marks

- a) All projects involve risk. Risk must be acknowledged and controlled. Explain FIVE (5) methods of identifying risks when developing software. Word count TWO HUNDRED (200) words. (5 Marks)
- b) Based on the methods in part a) of this question, further explain any THREE (3) possible risks in the new Calendar System in the scenario. Word Count THREE HUNDRED AND SIXTY (360) words. (9 Marks)
- c) This part of the question is about Risk Management. Risk management can be pro-active or re-active. Clearly explain what is meant by both these terms. Word Count EIGHTY (80) words. (2 Marks)
- d) Describe the risk management (RM) framework within ISO31000. Apply the framework to the scenario. Word Count TWO HUNDRED (200) words. (5 Marks)

## Task 4 – 15 Marks

- a) Discuss FOUR (4) different methods of releasing software into use in the scenario. Don't just describe the methods but make sure you clearly explain how each method would apply to the scenario. Word Count FOUR HUNDRED AND EIGHTY (480) words. (12 Marks)
- b) Taking into account your answer to part a) above, assess which method would be the most feasible for use in the scenario, and why you have chosen this method. ONE HUNDRED AND TWENTY (120) words. (3 Marks)

## Task 5 – 16 Marks

- a) Assess THREE (3) advantages **and** THREE (3) disadvantages of using outsourcing for the development of the new computerised calendar system that TBTR Ltd want to develop. Word Count TWO HUNDRED AND FORTY (240) words. (6 Marks)
- b) Discuss why in-house development may be the best way to develop this new calendar system for TBTR Ltd. Word count FOUR HUNDRED (400) words. (10 Marks)

## Task 6 – 20 Marks

- a) Identify the TWO (2) ways to measure software quality. Explain what each of them are in more detail. Word Count ONE HUNDRED AND SIXTY (160) words. (4 Marks)
- b) Which of these would be beneficial to measure the quality of the newly created TBTR Ltd calendar system. Word Count TWO HUNDRED (200) words. (5 Marks)
- c) There will be a Software Quality Plan Created for each software project which will contain all relevant information for the project. Describe all the processes, techniques and standards within the Software Quality Plan that will have been developed for the new calendar system for TBTR Ltd. Word Count TWO HUNDRED (200) words. (5 Marks)
- d) ISO is once again the primary forerunner in software quality legislation. One of the current ISO standards for software quality is ISO 9126. Explain how this would measure the quality of the new calendar system for TBTR Ltd. Word Count TWO HUNDRED AND FORTY (240) words. (6 Marks)

Total Marks for this assignment is FOUR THOUSAND (4000) words.

## Candidate checklist

Please use the following checklist to ensure that your work is ready for submission.

Have you read the NCC Education documents *What is Academic Misconduct? Guidance for Candidates* and *Avoiding Plagiarism and Collusion: Guidance for Candidates* and ensured that you have acknowledged all the sources that you have used in your work?

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Have you completed the *Statement and Confirmation of Own Work* form and attached it to your assignment? **You must do this.**

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Have you ensured that your work has not gone over or under the recommended word count by more than 10%?

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Have you ensured that your work does not contain viruses and can be run directly?

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