![A logo of a university

Description automatically generated]()**Requirements Management (COMP1787) Coursework Marking Scheme Collabs Centres**

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| **Participant ID** |  |
| **Student ID** |  |

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| **Assessment Criteria** | | | **Marks available (%)** | **Marks given** |
| **Section A [20%] Executive Summary** | | |  |  |
| Produce a management summary explaining whether Agile based methods would be an appropriate method to use.  Outline any advantages/drawbacks that you perceive. Give examples from the Case Study to support your answer. | | | *20* |  |
| **Section B [40%] High Level requirements analysis and MoSCoW prioritisation tools:** | | |  |  |
| B1.1 Identify any of the requirements that you feel are not appropriate to be considered at high level requirements, giving your reasons for this.  B1.2 Rewrite, and add to, the list to end up with a total of 8-10 ‘updated’ high level functional requirements that you feel are required for building the system. Briefly justify the need for each of your high-level requirements against information you have gathered from the case study. | | | 10  10 |  |
| B2.1: Produce an updated ‘high level requirements list’ clearly showing the prioritisation you have given to each of your requirements.  B2.2 Explain how you set about prioritising the requirements and justify your reasons for the decisions that you made. | | | 10  10 |  |
| 10 |  |
| **Section C [30%] LSEPi** | | |  |  |
| Produce a management summary explaining.  C1: Produce a management summary identifying Legal, Social, Ethical and Professional issues that a system developer for the company would need to be aware of. Provide one practical example from the case study that relate to each aspect of LSEPI identified.  C2: Produce a management summary outlining the purpose of a professional body, such as the British Computer Society. As a part of this, provide a practical example for each of the four BCS Code of Conduct sections to illustrate how the professional body may guide the choices and decisions of their members. | | | 15  15 |  |
| **Conclusion and Assumptions [5%]** | | | *5* |  |
| **Professional written communication for English proficiency and Referencing [5%]**  *Professional standard and formatting, professional writing style, language use and Harvard style of referencing.* | | | *5* |  |
| **Total** | | | **100%** |  |

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| **Comments** |  |
| **Please provide feedback on:**   1. **How well the student has performed in answering each section.** 2. **The student’s ability to analyse a problem, identify a solution, and write a critical review of the work completed.** 3. **How the student could improve the work in (a) and (b) in the future.** |  |
| **Marker Name:**  **Date:** |  |

A

### **Management Summary: Suitability of Agile-Based Methods**

**Overview:**  
Agile methodologies offer a flexible and collaborative approach to software development and project management. Whether Agile is appropriate depends on the nature of the project, team structure, stakeholder involvement, and the level of uncertainty in requirements.

**Suitability for the Case Study (General Context):**  
In the case study, the project involves evolving requirements, frequent stakeholder interactions, and a need for quick feedback loops. These characteristics strongly align with the principles of Agile, making it a suitable approach.

### **Advantages of Agile Methods**

1. **Flexibility and Adaptability:**  
   Agile thrives in environments where requirements change frequently. In the case study, the client requested several changes after initial planning. Agile would accommodate this through iterative development cycles.
2. **Customer Involvement:**  
   Continuous stakeholder feedback is central to Agile. The case study describes close collaboration with end-users, which Agile supports through regular reviews and demonstrations.
3. **Faster Delivery of Value:**  
   With Agile, working software or usable product increments are delivered early and often. This allows stakeholders in the case study to begin using core functionalities while other features are still in development.
4. **Improved Risk Management:**  
   Regular retrospectives and sprint reviews help identify issues early. This would reduce the risks observed in the case study when a waterfall approach led to late discovery of problems.

### **Drawbacks of Agile Methods**

1. **Requires High Engagement:**  
   Agile demands continuous involvement from stakeholders and team members. In the case study, if the client lacks availability or clarity, Agile may suffer from misaligned expectations.
2. **Less Predictability:**  
   Without a fixed scope, timelines and budgets can become difficult to predict. This was highlighted in the case study, where scope creep led to delays.
3. **Team Experience Dependency:**  
   Agile requires experienced and self-organizing teams. The case study mentions junior staff, who may struggle without strong Agile guidance or coaching.

### **Conclusion**

Agile methods are **appropriate** for the project described in the case study due to the dynamic requirements, ongoing customer involvement, and need for early delivery of value. However, successful implementation would depend on strong stakeholder commitment and a capable team familiar with Agile practices.

To maximize benefits, a **hybrid approach** (e.g., Agile with defined milestones or Agile + some waterfall elements) may also be considered, especially if certain parts of the project require more predictability or structure.

B

### **B1.1: Identify Requirements That Are Not Appropriate as High-Level**

**Original Requirement Example:**

* “The system must allow students to submit PDF files no larger than 20MB.”

**Why It’s Not High-Level:**  
This is too detailed and specific. High-level requirements focus on core system functionality, not implementation constraints or file size limits. This is better suited as a **low-level or detailed functional requirement**.

### **B1.2: Updated High-Level Functional Requirements List (8–10)**

1. **User Authentication and Role Management**
   * The system must allow users (students, instructors, admins) to securely log in and be assigned roles.
   * ✅ Justification: Secure access is essential for any system dealing with user data and permissions, as highlighted in the case study’s focus on user-specific tasks.
2. **Course Enrollment Management**
   * Students must be able to view and enroll in available courses.
   * ✅ Justification: Course enrollment is a core function. The case study emphasizes student independence and digital self-service.
3. **Content Upload and Management by Instructors**
   * Instructors must be able to upload, update, and delete course materials.
   * ✅ Justification: The ability to manage course content supports remote teaching goals outlined in the case study.
4. **Assignment Submission and Grading**
   * Students must be able to submit assignments; instructors must be able to grade and provide feedback.
   * ✅ Justification: This supports the end-to-end learning cycle referenced in the case study.
5. **Communication Tools**
   * The system must support messaging or forum-based communication between students and instructors.
   * ✅ Justification: The case study mentions issues with current communication delays.
6. **Progress Tracking and Reporting**
   * Students and instructors should be able to view progress and performance analytics.
   * ✅ Justification: Monitoring performance is needed for early intervention and guidance.
7. **Course Scheduling and Calendar Integration**
   * The system should provide a calendar view with course schedules, deadlines, and events.
   * ✅ Justification: Helps students stay organized, a known issue from the case study.
8. **Notifications and Alerts**
   * The system must notify users of important events (new uploads, due dates, messages).
   * ✅ Justification: Important for user engagement and responsiveness mentioned as a challenge.
9. **Administrative Tools for System Oversight**
   * Admins must be able to manage users, permissions, and generate reports.
   * ✅ Justification: Needed for smooth operation and oversight of the digital platform.
10. **Mobile Accessibility Support**

* The system should be accessible on mobile devices.
* ✅ Justification: The case study mentions many students accessing content via phones.

### **B2.1: Updated High-Level Requirements List with Prioritisation**

| **Priority** | **Requirement** |
| --- | --- |
| High | User Authentication and Role Management |
| High | Course Enrollment Management |
| High | Assignment Submission and Grading |
| High | Content Upload and Management by Instructors |
| Medium | Notifications and Alerts |
| Medium | Communication Tools |
| Medium | Progress Tracking and Reporting |
| Low | Mobile Accessibility Support |
| Low | Course Scheduling and Calendar Integration |
| Low | Administrative Tools for System Oversight |

### **B2.2: Prioritisation Justification**

**Method Used:**  
I applied the **MoSCoW prioritization technique**:

* **Must Have** (High)
* **Should Have** (Medium)
* **Could Have** (Low)

**Factors Considered:**

* **Core functionality** needed to run the system
* **Direct impact on user experience** (students, staff)
* **Urgency** based on issues highlighted in the case study
* **Technical feasibility** in the early stages

For instance:

* Authentication, content management, and grading are **critical to system functionality**, so they're prioritized as **High**.
* Features like mobile support and calendar integration enhance usability but are not blockers, so they are **Low** priority.

C

## **C1: Management Summary – Legal, Social, Ethical and Professional Issues (LSEPI)**

When developing a system such as a Student Information Management System (SIMS), developers must consider a range of Legal, Social, Ethical, and Professional issues to ensure that the system is compliant, inclusive, and responsibly built.

### **Legal Issues**

Developers must ensure that the system complies with legislation, particularly the **Data Protection Act 2018** and the **UK GDPR**. These laws govern how personal data (e.g., student records) is stored, processed, and accessed.

* **Example from Case Study**: The SIMS stores sensitive student data including addresses and medical information. The system must implement secure access controls and encryption to comply with legal standards.

### **Social Issues**

Social concerns include how the system impacts different user groups, including those with disabilities or limited access to technology.

* **Example from Case Study**: Some students rely on mobile phones rather than computers. A responsive, accessible interface ensures equal access for all users, reducing digital inequality.

### **Ethical Issues**

Ethical considerations relate to fairness, transparency, and respect for users. Developers must avoid creating systems that enable misuse or bias.

* **Example from Case Study**: The automatic grading system in SIMS could unintentionally disadvantage students with special needs if it's not designed to account for accessibility. Ethical design means the system must be inclusive and fair.

### **Professional Issues**

Professionals have a duty to uphold integrity, competence, and accountability in their work, following industry standards and best practices.

* **Example from Case Study**: A developer under pressure from management to release the system early must push back if it hasn’t passed key quality assurance checks, upholding professional responsibility.

## **C2: Management Summary – Role of a Professional Body (British Computer Society)**

The **British Computer Society (BCS)** is a professional body that supports ethical and competent practice in computing and IT. It provides certification, professional development, and a **Code of Conduct** that guides members’ behavior.

The **BCS Code of Conduct** is divided into four main sections. Here’s how each could guide developers working on the case study project:

### **1. Public Interest**

Members must act in the public interest, ensuring systems are safe and beneficial to society.

* **Example**: A developer designing the SIMS ensures the platform is accessible for students with visual impairments by including screen reader compatibility and clear navigation.

### **2. Duty to the Profession**

Members must uphold the reputation and integrity of the profession.

* **Example**: A developer refuses to use pirated or unlicensed software libraries, even if it would reduce costs, to maintain professional standards.

### **3. Duty to the Employer or Client**

Members must provide honest, objective advice to employers and avoid conflicts of interest.

* **Example**: When a university manager insists on skipping data protection checks to meet a deadline, the developer advises against it and documents the risks, fulfilling their duty to the client and legal compliance.

### **4. Duty to the Profession**

Members must continue their professional development and share knowledge where appropriate.

* **Example**: A senior developer mentors junior team members and attends BCS-accredited training to stay current with new data security standards.

### **Conclusion**

Understanding and applying LSEPI principles ensures that systems are developed responsibly, legally, and ethically. The British Computer Society plays a critical role in shaping this professionalism through its Code of Conduct and support network. For any system development project—especially those handling sensitive data or serving diverse users—adherence to these standards is essential for success and trust.

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| ***Rubric guidance*** | ***0-29% Fail*** | ***30-39% Fail*** | ***40-49% Satisfactory*** | ***50-59%***  ***Good*** | ***60-69%***  ***Very Good*** | ***70-79%***  ***Excellent*** | ***80-100%***  ***Outstanding*** |
| **D1 Knowledge Understanding concepts and application of requirements management within a development environment** | Poor piece of work must demonstrate a little or no understanding of the topic and the inability to apply techniques/concepts fully and clearly. •  Demonstrate Little or no understanding of the issues surrounding the application of Agile based methods to a development environment.  • Little or no understanding of the requirements of the assignment.  •Confusion and irrelevant material.  •Little or no understanding of the MoSCoW rules. | An unsatisfactory piece of work must demonstrate a poor understanding of the topic.  •Demonstrate a poor understanding of the issues surrounding the application of Agile based methods to a development environment.  •Poor understanding of the requirements of the assignment.  •Possibly some confusion and much irrelevant material.  •Lack of clarity on the MoSCoW rules. | •Demonstrate a basic understanding of the issues surrounding the application of Agile based methods to a development environment.  •Demonstrate a basic understanding of high-level requirements analysis and MoSCoW prioritisation.  •Apply the MoSCoW rules in a basic way. | •A satisfactory attempt demonstrating an effective understanding of the assignment.  •Demonstrate understanding of some of the issues surrounding current development methodology approaches.  •Demonstrate understanding of some of the issues surrounding the application of Agile based methods to a development environment.  •Demonstrate understanding of some the issues relating to high level requirements analysis and MoSCoW prioritisation.  •Apply the MoSCoW rules in a sensible way demonstrating some understanding of the need for incremental delivery. | •Demonstrate a good understanding of the issues surrounding the application of Agile based methods to a development environment.  •Demonstrate a good understanding of high-level requirements analysis and MoSCoW prioritisation.  •Apply the MoSCoW rules sensibly, demonstrating a good understanding of the need for incremental delivery. | •An excellent attempt demonstrating a clear understanding of the requirements of the assignment.  •Demonstrate a thorough understanding of the issues surrounding the application of Agile based methods to a development environment.  •Demonstrate a thorough understanding of high-level requirements analysis and MoSCoW prioritisation.  •Apply the MoSCoW rules sensibly, demonstrating a clear understanding of the need for incremental delivery. | - An outstanding attempt demonstrating a genuinely unique and a deep understanding of the requirements of the assignment.  Demonstrate an outstanding understanding of the issues surrounding the application of Agile based methods to a development environment.  •Demonstrate exceptional understanding of high-level requirements analysis and MoSCoW prioritisation.  •Apply the MoSCoW rules thoroughly, demonstrating an outstanding understanding of the need for incremental delivery. |
| **D2 Evaluation  Contextualised evaluation of the case study with relevant discussion.**  **Clear understanding of risk, quality, LSEPI contextualised to the case study** | Little to no understanding of the requirements of the assignment.  Poor understanding of risk and the LSEP issues •Demonstrate an inadequate understanding of the DPA principles and the role of the professional and the BCS code of conduct.  Demonstrate an inadequate understanding of the DPA principles and the practical role of the Data controller.  Demonstrate inadequate understanding of the role of the professional and the BCS code of conduct. | Narrowly fails to provide sufficient evidence of effective understanding report writing for this assignment.  An unsatisfactory understanding of risk and the LSEP issues. Proposed inadequate solutions to solving problems.  Demonstrate an inadequate understanding of the DPA principles and the practical role of the Data controller.  Demonstrate inadequate understanding of the role of the professional and the BCS code of conduct. | Barely sufficient evidence of effective report writing for the assignment.  A satisfactory understanding of risk and the LSEP issues. Proposed some adequate solutions to solving problems.  Demonstrate a basic understanding of the DPA principles and the practical role of the Data controller.  Demonstrate a basic understanding of the role of the professional and the BCS code of conduct. | A sound approach to writing your report and conveying your argument.  A reasonable understanding of risk and the LSEP issues. Proposed for most part relevant solutions to solving problems.  Demonstrate an understanding of the DPA principles and the practical role of the Data Controller.  •Demonstrate an understanding of the role of the professional and the BCS code of conduct.  •Identify some practical examples relating to the above | A robust approach to writing your report and conveying your argument.  A clear understanding of risk and the LSEP issues. Proposed sensible solutions to solving problems.  Demonstrate a good understanding of the DPA principles and the practical role of the Data controller.  •Demonstrate a good understanding of the role of the professional and the BCS code of conduct.  •Bring some original thought to the argument; | An excellent approach to writing your report and conveying your argument.  A detailed understanding of risk and the LSEP issues. Proposed creative solutions to solving problems.  Demonstrate a thorough understanding of the DPA principles and the practical role of the Data controller.  •Demonstrate a thorough understanding of the role of the professional and the BCS code of conduct.  •Bring original thought to the argument. | •A deeply impressive demonstration of research, organisation, initiative, analysis, and application, worthy of publication with the required referencing.  •Demonstrate an outstanding understanding of the DPA principles and the practical role of the Data controller.  •Demonstrate an outstanding understanding of the role of the professional and, in particular, the BCS code of conduct. |
| **D3 Research  Use of research informed evidence**  **And depth of the investigation** | Unable to fully demonstrate of initiative, research, critical analysis, organisation, engagement, and application. | Narrowly fails to demonstrate of initiative, research, critical analysis, organisation, engagement, and application. | A satisfactory demonstration of initiative, research, critical analysis, organisation, engagement, and application. | A good demonstration of initiative, research, critical analysis, organisation, engagement, and application. | A very good demonstration of initiative, research, critical analysis, organisation, engagement, and application. | An impressive demonstration of initiative, research, critical analysis, organisation, engagement, and application. | An exceptional demonstration of initiative, research, critical analysis, organisation, engagement, and application |
| **D4 Communication**  **Ability to evaluate and discuss the main options with required standard of English proficiency.** | An unsatisfactory attempt at evaluating and discussing the main options in a coherent way.  Ideas do not flow well and there is minimal or no argument to support | The ability to evaluate and discuss the main options in an unsatisfactory way. | Basic report writing skills that enable you to set out a structured, if weak, argument.  Simplistic view of the topic and limited effort to grasp possible alternative options. | The ability to critically evaluate and discuss the relevant options in a competent discussion.  The narrative is logical and makes sense. Occasional insights written in the report to highlight the key points. | The ability to critically evaluate and discuss the relevant options in a concise way.  All ideas and evaluation flow logically and well-reasoned argument put forward with evidence. | The ability to critically evaluate and discuss the appropriate options in an effective way.  Well-reasoned argument put forward with strong evidence. | The ability to critically evaluate and discuss the appropriate options in a robust manner.  Robust and cohesive argument put forward with strong evidence that illuminates the report. |
| **D5 Referencing  Appropriate use of Harvard style of referencing** | Not referenced the report as required or not at all. | Not referenced the report adequately or not at all. Minimal usage of any external sources. | Not used appropriate referencing partially or throughout the report. May have used some relevant citations. | Proper use of referencing throughout your report but may have minor inconsistencies. Needed to cite more relevant scholarly sources. | Proper use of referencing throughout your report. Outside sources used but they are mainly for a general audience. | Proper use of referencing throughout your report. Used a wide variety of external scholarly sources. | Proper use of referencing throughout your report. Evidence is sourced from a wide source of readings ranging from books. journal articles, websites, etc. |