University of the West of Scotland

School of Computing, Engineering and Physical Sciences

MSc Masters Project Specification

Student name: **Oyewale Victor Oyedele**

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Project being undertaken on basis: **FULL TIME**

MSc Programme: **Information Technology with Project Management**

MSc Programme Leader: **Dr. Graeme McRobbie**

Project Title:

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| **Comparative Analysis of project management software using monday.com and Smartsheet for Team Collaboration** |

Research Question to be answered:

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| “How do the features, functionality and performance of **monday.com** and **Smartsheet** compare in supporting effective team collaboration and what are the key differences in their functionalities?”  This research question will help us to build software and guide our investigation into the strengths and weaknesses of these project management software, ultimately helping organizations and end-users make informed decisions as to which software to adopt. |

Outline (overview) and overall aim of project:

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| **Project Overview**: The **Comparative Analysis of project management software using monday.com and Smartsheet for Team Collaboration** aims to evaluate and compare the features, and performance of two popular project management software: **monday.com** and **Smartsheet**.  By building the software to compare the technical features and functionalities of each of the software, we can examine their strengths, weaknesses, and suitability for team collaboration and come up with computing artifacts that will encompass a wide range of tangible outputs that will describe the software features and functionalities and also create prototypes to a common brief to help end users in selecting a suitable and most effective platform.    **Key Aspects of Comparison:**   1. **Features and Functionality**  * Explore the core features offered by both software. * Compare task management, communication, and collaboration capabilities.  1. **Performance Metrics**  * Measure load times, responsiveness, and scalability. * Evaluate how each software handles concurrent users and large projects.  1. **Integration Capabilities**  * Investigate third-party integrations (e.g., Google Drive, Jira). * Analyse ease of integration and functionality.  1. **Customization and Flexibility**  * Explore the level of customization each software provides. * Consider adaptability to different project types and team structures.   **Overall Aim:** The primary goal of this project is to provide valuable insights to assist end-users and organizations in choosing the most suitable project management software for effective team collaboration. This would be achieved by evaluating and comparing the capabilities of monday.com and Smartsheet as project management software, with a particular focus on their impact on improving team collaboration. The aim is to evaluate the strengths and weaknesses of each software to enable effective collaboration among team members working on company projects. This will be achieved by an in-depth analysis and testing of features and functionality using specific case studies. |

**Objectives** (list of tasks to be undertaken to achieve overall aim of the project and to answer the research question posed):

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| 1. **Conduct Literature Review**  * Conduct a thorough review of the literature on project management software, team collaboration, and relevant frameworks for evaluating software effectiveness.  1. **Feature Comparison**  * Identify and document the key features of both **monday.com** and **Smartsheet**. * Compare these features by creating prototypes to understand their similarities and differences.  1. **Research Design / Case Studies**  * Develop research design highlighting case studies or scenarios that simulate real-world situations requiring effective team collaboration.  1. **System Design**  * Design a prototype on monday.com and Smartsheet based on the case studies  1. **Performance Metrics Assessment**  * Measure load times for various project sizes (small, medium, large). * Evaluate responsiveness during concurrent usage (multiple team members accessing the tools simultaneously). * Analyse system performance under different workloads.  1. **Integration Analysis**  * Investigate integrations with other commonly used software (e.g., Google Drive, Jira). * Explore ease of setting up integrations and the functionality provided. * Document compatibility and limitations.  1. **Customization and Flexibility Evaluation**  * Assess the level of customization each tool offers. * Consider adaptability to different project types (small teams vs. large organizations).  1. **Collaboration Features Assessment**  * Evaluate real-time collaboration capabilities (e.g., task assignment, notifications, commenting and discussion, file sharing). * Compare how **monday.com** and **Smartsheet** facilitate effective team communication.  1. **Survey, Data Collection and Analysis**  * Collect data from performance measurements, and integration assessments. * Analyse the collected data to draw meaningful conclusions and create prototypes. * surveys shall be carried out to collect data from stakeholders, which will then be analyzed.  1. **Recommendations and Practical Implications**  * Based on the findings, provide practical recommendations to organizations and end-users: * Which software aligns better with specific use cases? * Consideration for the team size, industry, and collaboration needs.  1. **Conclusion and Contribution**  * Summarize the comparative analysis results gathered. * Revisit the research question and highlight the project’s contribution to informed decision-making. |
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Relationship of proposed project to MSc programme/stream:

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| The proposed **Comparative Analysis of project management software using monday.com and Smartsheet for Team Collaboration** aligns with MSc IT with Project Management program and here is how it relates:   1. **MSc IT with Project Management Programme**:  * The project directly relates to the MSc IT with project management programme or stream that focuses on project management, enterprise architecture, and technology management. * It aligns with coursework related to software tools, project planning, and collaborative work environments.  1. **Relevance to Programme Goals:**  * The project addresses key learning objectives within the MSc programme: * Understanding project management methodologies and tools. * Build and develop project management software and understanding its usage. * Evaluating software solutions for effective team collaboration. * Applying research and analysis skills to practical scenarios.  1. **Integration with Coursework:**  * The project complements coursework related to project management, software development, information system analysis and design or enterprise architecture. * It allows me to apply theoretical knowledge to real-world tools and scenarios.  1. **Practical Application:**  * By building the software to compare monday.com and Smartsheet, I would be able to gain practical insights into selecting appropriate software for team collaboration. * The project bridges theory and practice, enhancing my problem-solving abilities.  1. **Research Component:**  * The project involves research, data collection, and analysis which is essential components of an MSc-level study. * It encourages critical thinking and evidence-based decision-making. |

Indicative reading list

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| Amira, M., Mazen, S. & Hassanein, E. (2016). Comparative Study for Software Project Management Approaches and Change Management in the Project Monitoring & Controlling. International Journal of Advanced Computer Science and Applications, 7. Available at: <https://doi.org/10.14569/IJACSA.2016.070236>  Baul, S., Rana, M.R., Adan, S.K., Tafannum, N. & Alam, F. (2022). Analyzing different software project management tools and proposing a new project management tool using process re-engineering on open-source and SAAS platforms for a developing country like Bangladesh. International Journal of Advances in Electronics and Computer Science, 9(7), pp.29-37. doi:10.5281/zenodo.7226788. Available at: <http://iraj.in>  Chin, C.M.M., Spowage, A.C. & Yap, E.H. (2012). Project management methodologies: A comparative analysis. Journal for the Advancement of Performance Information and Value, 4(1). doi:10.37265/japiv.v4i1.102.  Cicibaş, H., Unal, O. & Demir, K. (2010). A comparison of project management software tools (PMST). In: Proceedings of the International Conference on Software Engineering Research and Practice (SERP). pp.560-565.  Daud, M. (2019). A Comparative Analysis of Various Methodologies of Agile Project Management  Verses PMBOK: A Case Study. Print.  Kalaivani, S. & Kavitha, S., (2015). Comparative study on software project management models. International Research Journal of Engineering and Technology (IRJET), 2(4), pp. [online] Available at: <http://www.irjet.net>  Kostalova, J. & Tetrevova, L. (2016). Application of project management methods and tools with respect to the project life cycle and the project type. Business: Theory and Practice, [online] Available at: <https://doi.org/10.3846/bm.2016.03>  Kulkarni, A., Sharma, A., Beig, A., Jose, B. & Bhogan, S. (2023). Comparative analysis of workflow management systems: A comprehensive evaluation. International Research Journal of Engineering and Technology (IRJET), 10(7). Available at: <http://www.irjet.net>  Mishra, A. & Mishra, D., 2013. Software project management tools: A brief comparative view. *ACM SIGSOFT Software Engineering Notes*, 38(3). doi:10.1145/2464526.2464537.  Pasarič, F. & Pušnik, M. (2022). Comparison of project management tools. In: *Proceedings of the Workshop on Software Quality, Analysis, Monitoring, Improvement, and Applications (SQAMIA)*, September 11-14, 2022, Novi Sad, Serbia.  **Resources:**   * Software * Hardware |
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Marking scheme:

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| **Introduction** – 5%  **Context** - literature review – 20%  **Research Design** – 20%  **Implementation (practical work)** – 25%  **Evaluation** – 5%  **Presentation of results** – 5%  **Conclusions and recommendations** – 10%  **Critical self-evaluation** – 10% |

Supervisor:

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| Dr. Rebecca Redden |

Moderator:

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| Dr. Tony Gurney |

Programme Leader:

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| Dr. Graeme McRobbie |

Date specification submitted:

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| 20th May 2024 |

Please complete the ‘ethics’ & pathway confirmation form below for all projects.

**School of Computing, Engineering and Physical Sciences**

**MSc Masters PROJECT – REQUIREMENT FOR ETHICAL APPROVAL & PATHWAY CONFIRMATION**

**SECTION 1: TO BE COMPLETED BY THE STUDENT**

Does your proposed research involve: research with human subjects (including requirements gathering and product/software testing), access to company documents/records, questionnaires, surveys, focus groups and/or other interview techniques? Does your research entail any process which requires ethical approval? (please enter √ in the appropriate box)

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| --- | --- | --- |
| YES | 🗸 | **You must submit an application for approval to the Ethics Review Manager** |
| NO |  | You do not need to submit an application to the Ethics Review Manager |

I confirm that the above project specification aligns with my MSc programme specialist pathway. (please enter √ in the box)

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**Name of Student (Print name):**

**Oyewale Victor Oyedele**

**Signature:**

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Description automatically generated

**Date: 20th May 2024**

**SECTION 2: TO BE COMPLETED BY THE PROJECT SUPERVISOR**

I understand that the above project requires/does not require\* ethical approval (\*please delete as appropriate).

I confirm that the above project aligns with the MSc programme specialist pathway the

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student is enrolled in. (please enter √ in the box)

**Supervisor (print name):** Rebecca Redden

**Signature**: A signature on a white background

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**Date:** 24/05/2024

**IMPORTANT: please note that by signing this form all signatories are confirming that any potential ethical issues have been considered and, where necessary, an application for ethical approval has been/will be made via the Ethical Review Manager software.**

**Any project requiring ethical approval but which has not been given approval will not be accepted for marking.**

**Ethical approval cannot be sought in retrospect.**