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| **COMP1787 (2021/2022)** | **Requirements Management** | **Contribution: 100% of course** |
| **Module Leader:**  **Dr. Aditi Rawal** | **Coursework Term 2 (collabs)** | **Deadline Date: 27th April 2022** |
| **This coursework will be marked anonymously YOU MUST NOT PUT ANY INDICATION OF YOUR IDENTITY IN YOUR SUBMISSION** | | |
| This coursework should take an average student who is up to date with tutorial work approximately 50 hours | | |
| **Learning Outcomes:**   1. Analyse and compare current approaches to requirements management within a development environment. 2. Assess the impact of stakeholders and organisational culture on the development of effective requirements and system development. 3. Relate issues associated with risk, quality, and Legal/Social/Ethical/Professional (LSEPI) to a practical scenario. 1 Analyse and compare current approaches to requirements management within a development environment. 2 Assess the impact of stakeholders and organisational culture on the development of effective requirements and system development. 3 Relate issues associated with risk, quality, and Legal/Social/Ethical/Professional (LSEPI) to a practical scenario. 1 Analyse and compare current approaches to requirements management within a development environment. 2 Assess the impact of stakeholders and organisational culture on the development of effective requirements and system development. 3 Relate issues associated with risk, quality, and Legal/Social/Ethical/Professional (LSEPI) to a practical scenario. | | |
| **Plagiarism is presenting somebody else's work as your own. It includes copying information directly from the Web or books without referencing the material; submitting joint coursework as an individual effort; copying another student's coursework; stealing coursework from another student and submitting it as your own work.  Suspected plagiarism will be investigated and if found to have occurred will be dealt with according to the procedures set down by the University. Please see your student handbook for further details of what is / isn't plagiarism.**  **All material copied or amended from any source (e.g., internet, books) must be referenced correctly according to the reference style you have been asked to use. Your work will be submitted for plagiarism checking.  Any attempt to bypass our plagiarism detection systems will be treated as a severe Assessment Offence.** | | |

**Coursework Submission Requirements**

* **An electronic copy of your work for this coursework must be fully uploaded on the Deadline Date using the appropriate link.**
* **For this coursework you must submit a single PDF document. In general, any text in the document must not be an image (i.e. must not be scanned) and would normally be generated from other documents (e.g. MS Office using "Save As .. PDF"). An exception to this is handwritten mathematical notation, but when scanning do ensure the file size is not excessive.**
* There are limits on the file size (see the relevant course Moodle page).
* Make sure that any files you upload are virus-free and not protected by a password or corrupted otherwise they will be treated as null submissions.
* **You must NOT submit a paper copy of this coursework.**
* **All coursework must be submitted as above. Under no circumstances can they be accepted by academic staff**

The University website has details of the current Coursework Regulations, including details of penalties for late submission, procedures for Extenuating Circumstances, and penalties for Assessment Offences.  See <http://www2.gre.ac.uk/current-students/regs>

***Detailed Specification***

**This coursework must be completed as an individual piece of work.**

You must complete this assignment using the given case study (Movie Ville Case Study)  
Start by reading the information given in the case study (which is included in this coursework specification).

**Produce all of the deliverables detailed below.**  
Note that the case study contains a lot of information – please read it carefully.

*Note that your discussions should relate to what you have found in the case study and/or what you have learnt as a result of undertaking the given activities. We want to see your thoughts, ideas, and interpretations. When you refer to information given in the case study make sure that you reference it appropriately in to support your arguments – don’t just copy text from the case study.*

Movie Ville (MV) Case Study

Company overview

Movie Ville is a private movie theatre in a trendy town, North of London and has existed since 1960. The theatre screens both new and classic movies, with a strong focus on artistic and independent films. The theatre was extremely popular during the previous century, but ticket sales began to drop in 2008 when video streaming started becoming increasingly prevalent. In fact, the current availability and high adoption rate of streaming services such as Netflix has caused a 40% drop in the number of patrons visiting the theatre, compared to the figures from 2007.

The theatre was founded and run by Bob and Margaret Canton, who initially also managed ticket sales and manned the projectors. They employed an additional person to run the concession stand and do the cleaning. Later, when they were old enough, their children also helped out and their son, David, still works with his parents and has taken over most of the day-to-day management duties of the theatre.

The theatre has 4 film screenings per day and seats 120 people in each of its 3 theatres. The concession stands sells popcorn, soft drinks, and candy.

Six months ago, Bob and Margaret informed David that they planned on retiring and that they wished for him to take ownership of the theatre. He was delighted at this news, as he had always wanted to modernise the facilities and processes. His parents were highly resistant to change, and since they were not computer literate the business was mostly still run using pen and paper!

David recently inherited a large sum of money and has decided to spend some of this on the theatre. He envisions an extremely modern system with online ticket sales, both online and on a mobile application that will allow for paperless tickets. He wants the concession stand to allow patrons to order their snacks on touch screens and simply picking items up and the counter. He even considers installing monitors in the toilets that would allow patrons to keep watching their movies should they visit the restrooms during the screening. He would also like to introduce ordering food and drinks straight from the seats.

David has a passion for technology but is not that familiar with the creation of software systems and decided to hire a consultant, Gunner Satumo, to advise him and drive the projects.

After a lengthy discussion of David’s ideas Gunner suggested that they consider the feasibility of the various systems individually and developing these systems incrementally to result in a highly modernised theatre. He was sceptical about some of the plans and thought that this would curb David’s enthusiasm for overnight modernisation that is likely to be poorly designed, planned and executed. He suggested that a mobile booking application would be a sensible starting point, as this would upgrade the current ticket sales operations and might also attract more customers. After a brief discussion they decided to simply call the app “Movie Ville”.

**The “To Be” system**

During the initial meeting Gunner convinced David that the mobile application for digital movie tickets would be a sensible first project to undertake. He suggested that David involves his current employees to provide advice and opinions and help come up with the main functionalities. David scheduled a meeting and was excited to tell his employees about the changes that will follow.

During the group meeting it was clear that David’s employees were cautiously optimistic about the modernisation of their business and, although the conversation often went off-track to discuss various technological enhancements to the premises, they were able to pin down the main idea for the application.

In essence the new system will allow patrons to register and book theatre tickets using a smart phone or tablet. They will subsequently be issued digital tickets that can then be shown at the door when they arrive at the theatre. Gunner suggested that they schedule a follow-up meeting to pin down the requirements for a new system, which would allow everyone some time to think about the system they envision. The meeting was held the following week and minutes for this meeting can be found in Appendix A. The meeting included various employees, including the current ticket sales and concession personnel, the theatre’s accountant, and the interior designer responsible for decorating the theatre to attract patrons and exhibit merchandise. A contracted systems developer was also invited to the meeting, as he would lead the eventual development team.

Gunner envisions an Agile approach to development, and in particular he feels that DSDM would be an appropriate framework for the development of this system.

Appendix A: Facilitated Workshop Data

**Facilitated Workshop Meeting for Niche**

**Agenda**

1. Introduction and Terms of reference (10 minutes)
2. Requirement’s exercise (20 minutes)
3. Small group discussion exercise (30 minutes)
4. Feedback and outline requirements plan (30-40 minutes)

Minutes of Meeting held in Meeting Room 1

**Present**

Gunner Satumo (Consultant) (Chair) David Canton (Managing Director) Patricia Hatton (Interior Designer) Zaria Guay (Accountant)

Taylor Lessing (Concession)  
Barney Conway (Ticket Sales)  
Manfred Smith (Contracted Systems Developer)  
Melody Kissack (Secretary to the Managing Director) Secretary

**Apologies**None

**Introduction and Terms of Reference**

Gunner Satumo (GS) welcomed all to the meeting and outlined the purpose of the meeting – to identify the main requirements for the new system and set the priority and agenda for the future development.

GS confirmed that, following the recent meeting with the general staff at Movie Ville, it was decided that the MV prototype system must be developed as soon as possible, as this would be the first of many technological upgrades that would enhance the theatre’s operations. Once tested, the system should allow for patrons to purchase tickets online and a paperless ticketing system would both streamline sales and be better for the environment. David Canton has set a target of getting a prototype system up and running within 3 months of the start of the project.

GS outlined the activities for the rest of the meeting.

**Requirements List Exercise**

Each person was asked to list their requirements for the new system on a form supplied by GS. The following is a summary of those requirement sheets:

1. David Canton (Managing Director)

- Customers must have accounts to purchase tickets, as I want their details to be able to market to them.

- The user interface must be sleek. Not flashy, but elegant, to show that we have flair.

- The app should be error free. Nothing is more infuriating than an error message.

- People need to be able to choose their seats when making the booking.

- Since we are having people use smart phones, can we track where they are so I can get an idea where my patrons come from?

2. Patricia Hatton (Interior Designer)  
- People can rate a movie after watching it and discuss the movie with other customers using the app.

- We need to have the look and feel of the app similar to the colour schemes of the theatre’s interior to preserve the branding.

- We need to show them maps of the theatre seating areas so they can choose their preferred seats.

- The system should allow people to see upcoming attractions.

- The mobile application can trigger notifications when new movies come out.

- There should be a feedback system where people can make suggestions for improvements to the facilities.

3. Barney Conway (Ticket Sales)

- The app should allow people to choose a movie and buy tickets for that movie by specifying the number of seats.

- If people can choose their own seats, we need to guard against too many single seats being left open. Last minute purchases could suffer if groups cannot sit together.

- We need to think how counter ticket sales will be conducted. Will we also use the application at the counter, or will there be another system that uses the same database?

- The app should generate a digital ticket for all the purchased tickets.  
- The app should allow a PDF download of the tickets to be generated so it can be printed. - Couldn’t we create a website instead of an app? It has a wider audience.

4. Zaria Guay (Accountant)

- The app should generate monthly reports on the number of bookings for each showing so we can draw statistics from this.

- The app should allow people to pay for their transactions in standard ways, such as credit cards and PayPal. They should be able to store payment details for easy future purchases.

- The app should integrate a reward system for buying tickets and referring friends. - The site must be safe and secure.

5. Taylor Lessing (Concession)

- We can probably have people purchase their snacks on the app too and serve it to them in the theatre once they are seated.

- There can maybe be a facility for people to store their preferred snacks so they can order it automatically every time they buy a ticket.

- The app should allow people to make notes on the movies they’ve seen, so they can look at these again.

6. Manfred Smith (Contracted Systems Developer)  
- The app should allow people to create an account and log in.  
- The app should allow people to choose a movie, which will then show a short synopsis. - The app should allow people to purchase tickets for the selected movie.  
- The app should allow people to reserve seats for the selected movie.

# Deliverables:

There are three sections to this coursework. Make sure that you complete all three sections.

**Section A – Produce an Executive Summary (10% of the marks)**

Executive summaries should consider the following components:

* It is a summary of the whole report with the main findings. Think of an executive summary as a more condensed version of your whole report.
* Write it last once you have finished the sections B and C.
* To be written in third person
* Capture the reader's attention.
* Make sure your executive summary can stand on its own.

Your answer should be in the region of 500-750 words.

**Section B – High level requirements analysis and MoSCoW prioritisation (45% of the marks)**

Appendix A of the case study provides details (including minutes) of a Facilitated Workshop session and attended by a number of the key staff in the organisation.

At the end of the session a list of ‘high level requirements’ was produced.

Some of the members of the workshop did not seem to understand the format of well-defined high-level requirements. It was clear from the requirements sheets that a couple of individuals did not put effort into the exercise, and it was found that some of the items listed were slightly rude or inappropriate!

The collection of requirements listed in Appendix A is an inappropriate set of requirements for developing a system, as a number of the requirements do not meet our criteria for a ‘high level requirement’.

**Remember, a high-level requirement should be a functional requirement that can be delivered to the user as part of an incremental approach using a timebox (or number of timeboxes).**

Using the information given throughout the case study to help you, complete the following:

B1:  Review the ‘high level requirements’ list given at the end of Appendix A and identify any of the requirements that you feel are not appropriate high-level requirements, giving your reasons for this.

B2:  Rewrite, and add to, the list to end up with a total of 8-10 ‘updated’ high level 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.

B3: Use the MoSCoW/Timebox rules to prioritise the requirements in your updated ‘high level requirements list’.

Your answer to section B should be in the region of 750-1000 words

**Section C – Legal, Social, Ethical and Professional issues (30% of the marks)**

C1: MV needs to start considering Legal, Social, Ethical and Professional Issues (LSEPI) in relation to its day-to-day operations. They also need to appoint a Data Controller. Produce a management summary explaining (a) the role of the Data Controller within the organisation and (b) any legal, social, ethical, and professional issues that MV may be faced with. As a part of your answer to (b) provide **one** practical example from the case study that relates to each aspect of LSEPI. Your answer to C1 should be in the region of 500-750 words.

C2: Produce a management summary outlining the purpose of the BCS Code of Conduct. As a part of this, provide a practical example for **one** of the four BCS Code of Conduct sections to illustrate a professional issue that a System developer contracted to MV may need to consider. Your answer to C2 question should be in the region of 500-750 words.

You are expected to use citations in the preferred Harvard style of referencing.

**Conclusion and assumptions made (10% of the marks) –** Make sure to provide a strong conclusion.

**Harvard Style of Referencing: - 5% of the marks**

***Assessment Criteria (Breakdown):***

Section A - Executive Summary- 10%

Section B - High level requirements analysis and MoSCoW prioritisation45%

Section C - Legal, Social, Ethical and Professional issues30%

Conclusion and assumptions: -10%

Harvard Style of referencing: - 5%

***Grading Criteria***

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| 80% + | * 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. * 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. * A deeply impressive demonstration of research, organisation, initiative, analysis, and application, **worthy of publication** with the required referencing. |
| 70%- 79% | * 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. * 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, in particular, the BCS code of conduct. * Bring original thought to the argument; |
| 60%- 69% | * 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. * 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, in particular, the BCS code of conduct. * Bring some original thought to the argument; |
| 50%- 59% | * 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 an understanding of the DPA principles and the practical role of the Data Controller. * Demonstrate an understanding of the role of the professional and, in particular, the BCS code of conduct. * Identify some practical examples relating to the above |
| 40%- 49% | * 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. * 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, in particular, the BCS code of conduct. |
| Below 39% | * 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 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, in particular, the BCS code of conduct. |

The fundamental goal of requirements management is to keep track of changes to requirements. It is critical to have a formal control, authorisation, and management structure in place during this time. Managing their development, ensuring compatibility with other documents and models, dealing with changes, and interacting with them are all examples of this. This is true of any configuration that needs to be handled, but it is especially true in the case of iterative development and the fact that modifications are unavoidable. Organizations do not accept change passively, they are always changing in reaction to new events, threats, and opportunities. Change is not inherently bad, but uncontrolled change will impede the delivery of high-quality solutions and result in unacceptable scope escalation. I'll go through several requirements management strategies in the next sections, as well as some of the best methods for dealing with the difficulties listed above.

First I will talk about the need for a framework. The system development function's primary goal is to design the project's system in the most exact and thorough manner feasible in order to obtain good results. A system's development life cycle is a key step in providing the system with the ideal growth environment. What a systems development approach should provide. It is an attempt to describe in great detail the generic development framework, the stages that are required to complete the development process, the steps that are optional, the sequence in which the steps should be completed, the tools and techniques needed to complete these processes, and so on. We require the following end-deliverables. There is some consensus. All software engineers believe that the most essential thing is to have some form of framework within which to arrange your project, not whatever approach you choose. Today's developers have a far more realistic perspective: you must modify your recipe to the ingredients you have on hand as well as consumer preferences.