

UCLan Coursework Assessment Brief

2023-2024

Module Title: Systems Analysis and Database Design

Module Code: CO1605

Level 4

Systems Analysis

This assessment is worth 50% of the overall module mark

THE BRIEF / INSTRUCTIONS

The Learning Outcomes being assessed in this coursework are:

- Identify the various forms and sources of information available to the facilitator of a systems development.
- Capture, document, and structure the information applicable to a basic problem definition in a form suitable for interpretation by a system designer.
- Explain the concepts of lifecycles and users.

You are required to carry out an analysis of a fictional case study: **DinoLand** (see last page). Submit a REPORT with the following sections.

1) Introduction

In the introduction you should explain a bit of background of DinoLand and why you are analysing it, highlighting some of the problems they face.

2) Analysis

- Use Case Diagram
Draw a Use Case Diagram that reflects the way DinoLand currently operates.
- Activity Diagram
Draw an Activity Diagram for one of the use cases from your use case diagram (this should be for one of the more complex use cases).
- Textual Description
Use the Textual Description technique for A DIFFERENT use case from your use case diagram (again choose one of the more complex use cases to demonstrate your understanding of the technique).

3) Requirements

- Functional Requirements
Prepare a list of possible functional requirements for the proposed new system.
- User Stories
Write user stories to justify three of your functional requirements.
- Non-Functional Requirements
Prepare a list of possible non-functional requirements for the proposed new system.
- MoSCoW Analysis
Use the MoSCoW Analysis technique to prioritise your functional and non-functional requirements as one list.

4) Concepts

- Discuss lifecycle options and considerations that would be suitable for this investigation.
- Discuss the importance of talking to users of any proposed system during the process.

5) References

List the references that you have cited in Harvard format.

Assumptions and Questions – where you feel the case study was unclear, list the assumptions you have made whilst carrying out the above work. This could also include questions you now have regarding the case study.

PREPARATION FOR THE ASSESSMENT

You are required to carry out an analysis of a fictional case study: **DinoLand** (see last page). This will consolidate the material we have covered during Semester 1. To prepare, do the following:

- Read the case study that accompanies this assessment (last page).
- Complete all the tasks from all worksheets, to ensure you understand the concepts and techniques.
- Ask questions in class to clarify anything you do not understand.
- Read the marking scheme.

RELEASE DATES AND HAND IN DEADLINE

Assessment release date: Monday 27th November 2023

Assignment draft feedback (within lab sessions): Week beginning 22nd January 2024

Assignment support session (drop-in): Friday 2nd February 2024 at 10:00am

Assessment deadline date and time: Friday 9th February 2024 at 11:59pm

Please note that this is the final time you can submit – not the time to submit!

Your feedback / feed forward and mark for this assessment will be provided within 15 working days.

SUBMISSION DETAILS

Submit a well-written, spell-checked and grammar-checked report that meets the brief instructions and includes relevant references using Harvard formatting. The assignment will be submitted through Blackboard to TurnItIn. The submission link is in the Assessments tab of the CO1605 Blackboard space.

You must also complete and add the cover sheet (separate document on Blackboard) to your assignment submission. you can only submit one document, so you need to copy, paste, and complete it as the first page.

HELP AND SUPPORT

- Academic support for this assessment is provided during timetabled classes. You may request a one to one meeting with any of the tutors during their office hours (as published on Starfish). You will be encouraged to bring a draft report to your lab class two weeks before the submission date to receive feedback and pointers for improvements.
- For support with using library resources, please contact our subject librarian subjectlibrarians@uclan.ac.uk. You will find links to lots of useful resources in the My Library tab on Blackboard.
- If you have not yet made the university aware of any disability, specific learning difficulty, long-term health, or mental health condition, please [let us know](#). The [Inclusive Support team](#) will then contact you to discuss reasonable adjustments and support relating to any disability. For more information, visit the [Inclusive Support site](#).
- To access mental health and wellbeing support, please complete our [online referral form](#). Alternatively, you can email wellbeing@uclan.ac.uk, call 01772 893020 or visit our [UCLan Wellbeing Service](#) pages for more information.
- If you have any other query or require further support you can contact The Student Support Centre. Speak with us for advice on accessing all the University services as well as the Library services. Whatever your query, our expert staff will be able to help and support you. For more information, how to contact us and our opening hours [visit Student Support Centre](#).
- If you have any valid mitigating circumstances that mean you cannot meet an assessment submission deadline and you wish to request an extension, you will need to apply online prior to the deadline.

Disclaimer: The information provided in this assessment brief is correct at time of publication. In the unlikely event that any changes are deemed necessary, they will be communicated clearly via e-mail and a new version of this assessment brief will be circulated.

Version: 2
Updated
01/09/2022

MARKING SCHEME

	Fail	Third Class	Lower 2nd Class	Upper 2nd Class	First Class
Introduction (5%) Concise Introduction (about 150 words). Gives a background of the company, why you are analysing it, and highlights the problems.	Little or no effort has gone into writing an introduction.	Brief and simplistic introduction.	Brief introduction, but contains some reasonably good points.	A detailed introduction which highlights the main points.	A thoughtful, well written and detailed introduction.
Use Case Diagram (15%) Looking for good use of Actors and well-defined Use Cases, with meaningful associations between them, a boundary, higher marks if correct use of include and extend, etc.	Little or no effort – section does not adequately demonstrate understanding of the use case diagramming technique or the case study.	Some basic understanding of use case diagrams and the case study, but there are large gaps or misunderstandings.	A reasonable understanding of use case diagrams. Diagram shows a reasonable identification of the situational issues of the case study, but there are some minor flaws.	A good understanding of use case diagrams. Diagram shows good understanding of the situational issues of the case study.	An excellent understanding of use case diagrams. Diagram provides detailed and accurate coverage of the case study.
Activity Diagram (15%) Should represent 1 use case. Should have start, end, sensible actions and a good flow. Should have decision points (with guard conditions), possibly concurrent paths, forks and joins.	Little or no effort – section does not adequately demonstrate understanding of the activity diagramming technique or the case study.	Some basic understanding of activity diagrams and the case study, but there are large gaps or misunderstandings.	A reasonable understanding of activity diagrams. Diagram shows a reasonable identification of the situational issues of the case study, but there are some minor flaws.	Section shows a good understanding of activity diagrams. Diagram shows a good understanding of the situational issues of the case study.	An excellent understanding of activity diagrams and provides detailed and accurate analysis of the case study.
Textual Description (10%) Should represent a single use case, and be made up of a header section, a main success story and a list of alternative paths.	Little or no effort – section does not adequately demonstrate understanding of the textual description technique or the case study.	Some basic understanding of the textual description technique and the case study, but there are large gaps or misunderstandings.	A reasonable understanding of the textual description technique. The description demonstrates a reasonable understanding of the situational issues of the case study, but there are some minor flaws.	Section shows a good understanding of the textual description technique. The description demonstrates a good understanding of the situational issues of the case study.	Section shows an excellent understanding of the textual description technique and provides an accurate analysis of the case study.
Requirements (10%) Lists of functional and non-functional requirements.	Little or no effort has gone into defining functional and non-functional requirements. Section does not adequately demonstrate understanding of the main issues and points.	A basic understanding of functional and non-functional requirements. Some understanding of the main issues and points, but there are large gaps or misunderstandings.	A reasonable understanding of functional and non-functional requirements. Demonstrates understanding of most of the main issues and points.	This section shows a good understanding of functional and non-functional requirements. Demonstrates a clear understanding of the main issues and points.	Section demonstrates an excellent understanding of defining and writing clear functional and non-functional requirements. An accurate analysis of the case study has been shown.
User Stories 10% User stories to justify three Functional Requirements. Should be written in the correct format.	Little or no effort has gone into writing the user stories. Section does not adequately demonstrate understanding of the main issues and points.	There is some attempt at user stories, but there are major flaws or misunderstandings.	A reasonable attempt at completing three useful user stories.	Three useful user stories shown in the correct format.	Three excellent user stories showing a thorough understanding of the technique and the case study.
MoSCoW (5%) All requirements should be prioritised.	Little or no effort – section does not adequately demonstrate understanding of the MoSCoW prioritisation technique.	Some thought has been given to requirements prioritisation, but there are major flaws or misunderstandings.	A reasonable attempt at prioritising the requirements, but needs more clarity to be a useful tool for developers.	A good attempt at prioritising requirements, with a clear understanding of at least the MUSTs.	An excellent understanding of the prioritisation of requirements, showing thought for the minimum usable subset, etc.
Lifecycles (15%) Compare 2 lifecycles and whether they would be suitable for developing a system for this scenario.	Little or no effort – section does not demonstrate understanding of software development lifecycles.	Some understanding of lifecycles, but section is mainly descriptive rather than comparing or applying to case study. Major gaps or misunderstandings.	Evidence of a reasonable understanding shown of at least 2 lifecycles and how they could be used for this development. At least 1 reference.	Good understanding shown of at least 2 lifecycles and how they could be used for this development. At least 2 references.	Excellent understanding shown of at least 2 lifecycles and how they could be used for this development. At least 3 references.
Users (10%) Discussion of the importance of users for any development.	Little or no effort – section does not demonstrate understanding of the importance of users in the process.	There has been some thought into how users can be useful, but this is limited or flawed.	Evidence of understanding of the usefulness of users in development. At least 1 reference.	Clear ideas about usefulness of users in development. At least 2 references.	Insightful and perceptive with regard to how users can be useful in development. At least 3 references.
Structure (5%) Clearly labelled sections in a logical	Many parts not attempted. Parts attempted lack structure and clarity.	An attempt at most sections. Structured and written in reasonable English, however, may	Good attempt at most sections. Reasonably well-structured and well-written. Some flaws in the	Good attempt at all sections, with attention to detail. Well-structured and well-written. A good	Very well written and structured report. Referencing style is accurate and consistent throughout. A

order. Grammar and spelling is good. Reference style is appropriate.		contain some spelling and or grammatical errors. Reference section is missing or poor.	referencing style and/or contains poor sources.	attempt has been made at referencing, with only minor flaws in the referencing style and choice of sources.	good range of literature has been chosen.
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CASE STUDY: DinoLand Museum

DinoLand is a private museum, owned by palaeontologist Florence. The museum contains a spectacular collection of fossils from around the world, which is growing each year and is on track to become the largest collection of fossils in the area. An interview with DinoLand's Curator, Florence, has provided the following information.

Florence founded the museum about ten years ago on the edge of the seaside town of Weymouth in Dorset. Growing up on the Jurassic coast she has been a collector of fossils since she was a child, and her dream was to expand and show off her collection to the public. She has a limited budget but hopes to improve the viability of the museum with a new information system to help her keep track of things better.

There are three main parts to the museum – the Fossil Collection, the Natural History room, and the Gift Shop. The museum is open daily 10am to 6pm and currently employs twelve people. The staff rota says who should do what on a daily basis – jobs include gift shop stock control (stacking shelves and ordering new supplies for the gift shop), gift shop sales (which also includes admission and tour sales), tour guide for general public and school party visits, cleaning, etc.

The artefacts belonging to the museum are catalogued on a spreadsheet that details what each item is, the age (or approximate age) of the item, where/when it was found or bought (many of the items have been Florence's since childhood), and if bought, how much it cost. Another spreadsheet contains items that Florence sometimes borrows from other museums and collections. Each item is recorded with the same details as her own pieces, plus some additional columns that contain who owns the items, when the items arrived at DinoLand and when they are due to go back to their owners.

The gift shop sells an array of dinosaur and fossil related items from model/toy dinosaurs, dinosaur pens and mugs, to real and replica fossils, teeth, claws, etc. Sales are entered into the till by just entering the price of the item. The details of the items being sold are recorded on a daily spreadsheet (see 'Sample Sales Spreadsheet' below). At the end of each day, the takings are tallied against the sales. Any discrepancies are recorded on the spreadsheet. The sales spreadsheet is then used to update the stock records (see 'Sample Stock Records' below). The takings are banked roughly every other day, depending on how much business there has been.

Florence has noticed that as the museum has expanded, her records are not as reliable as they used to be. The stock take of the gift shop always reveals lots of discrepancies, and some of the museum pieces are not recorded correctly. She has decided it is time to invest in a more reliable system, but is working to a restricted budget.

If you have any further questions about the museum, you should ask your tutor them during your lab time.

Sample Sales Spreadsheet

Date	Time	Description	Selling Price
26/10/2023	11:05	Dinosaur Pens (Green)	£1.50
26/10/2023	11:10	Dinosaur Pens (Black)	£1.50
26/10/2023	11:10	Dinosaur Jigsaw Puzzle	£10.00
26/10/2023	11:45	Dinosaur Mug (Jurassic Park)	£3.99
26/10/2023	11:55	Plastic Dinosaur Toys (medium)	£20.00
26/10/2023	11:57	Dinosaur Pencil	£0.40
26/10/2023	14:12	Dinosaur Pens (Black)	£1.50
26/10/2023	14:33	Dinosaur Writing Set	£3.50
26/10/2023	15:15	Ammonite (small)	£4.50
26/10/2023	15:15	Dinosaur Tooth Necklace	£5.50
26/10/2023	15:22	Fossil Necklace	£5.00
26/10/2023	15:25	Fossil Coaster Set	£6.00

Sample Stock Records

Description	Buying Price	Selling Price	Qty In Stock	Date Last Ordered
Dinosaur Pens (Green)	£0.15	£1.50	212	09/09/2023
Dinosaur Pens (Black)	£0.15	£1.50	145	09/09/2023
Dinosaur Key Rings (Plastic)	£0.10	£1.99	221	15/09/2023
Dinosaur Key Rings (Metal)	£0.15	£2.50	257	10/10/2023
Dinosaur Mug (Jurassic Park)	£1.50	£3.99	147	15/09/2023
Dinosaur Tooth Necklace	£1.00	£5.50	87	09/09/2023
Ammonite (small)	£0.50	£4.50	169	10/10/2023
Plastic Dinosaur Toys (medium)	£4.45	£20.00	98	12/01/2023