Date: Monday, 29 July 2024, 9:01 PM

ITMDA3-34 Assessments (2024)

Project

1. Project

Faculty:	Information Technology
Module Code:	ITMDA3
Module Name:	Project: Mobile Application and Web Services
Internal Moderation:	Community of Practice
Copy Editor:	Thanyani Netshisumbewa
Total Marks:	400
Deliverable 1 Submission Week:	Block 4, Week 1
Deliverable 2 Submission Week:	Block 4, Week 2
Deliverable 3 Submission Week:	Block 4, Week 3
Deliverable 4 Submission Week:	Block 4, Week 5
Deliverable 5 Submission Week:	Block 4, Week 6
Deliverable 6 Submission Week:	Block 4, Week 7
Oral Presentation & Defense of Mini Dissertation	Block 4, Week 8

This module is presented on NQF level 7

5% will be deducted from the student's project mark for each calendar day the project is submitted late, up to a maximum of three calendar days. The penalty will be based on the official campus submission date.

Projects submitted later than three calendar days after the deadline or not submitted will get 0%. [1]

This is a group project.

Groups should consist of 5 members.

This project contributes 100% towards the final mark.

[1] Under no circumstances will projects be accepted for marking after the projects of other students have been marked and returned to the students.

2. AI Checklist and Declaration

Before you submit an assignment, you should be able to confidently and honestly make all the below statements. For group work, you can also review the list, together, to hold one another accountable.

- I confirm that my submission reflects my personal learning, knowledge, skills, and understanding.
- If AI tools were employed for generating any part of this assignment (even in the drafting/research phase), I have referenced the use of AI in the text and/or declared the use of AI. I am willing to discuss the process and its contribution to my learning.
- I am aware that the lecturer may request a demonstration of my learning, such as explaining choices in approach, research, and the content I am submitting.
- I am aware that, if I did use AI in any phase of preparing this submitted work, it is recommended that I save a copy of the relevant chat history (prompts and answers), as this will help me demonstrate my writing/work process to my lecturer, if I am asked to do so.
- I have read the assignment instructions on whether AI tools are prohibited for this assignment, and if they are prohibited, I can confirm that I did not use AI tools.
- I understand that failure to agree to these terms may be deemed unethical, potentially leading to disciplinary action. I understand my responsibility for the integrity of my work, including seeking clarification from academic staff and adhering to instructions.

It is essential to acknowledge your use of ChatGPT or other generative AI in your learning. If you use ChatGPT or other generative AI to help you generate ideas or plan your process, you should still acknowledge how you used the tool, even if you don’t include any AI-generated content in the assignment.

Please note: The following guiding questions that you will be asked in an AI declaration questionnaire below this assignment brief.

AI Declaration

It is compulsory to complete this AI declaration for each of your assignment submissions.

I carefully read the assignment instructions, and the extent to which AI may be used for the assignment.
I used the following AI system(s)/tool(s):
I used it for the following:
If I quoted or paraphrased an AI output, I have referenced the relevant tool, version, and the date I used the tool.
I still consider this work my own. (i.e., I have not outsourced the final product, or significant portions of it, to AI tools/systems).
If required, I can defend my argument/perspective, explain my choices and approach, and can show that I am knowledgeable about the details of my work.

For further guidance on the use of AI at Eduvos, please refer to the AI FAQ glossary. You will locate the FAQs in the Artificial Intelligence tile on the myDocuments page of myLMS.

3. Instructions to Students

1. Please ensure that your answer file (where applicable) is named as follows before submission: **Module Code – Assessment Type – Campus Name – Student Number.**
2. Remember to keep a copy of all submitted assignments.
3. All work must be typed.
4. Please note that you will be evaluated on your writing skills in all your assignments.
5. All work must be submitted through Turnitin. The full originality report will be automatically generated and available for the lecturer to assess. Negative marking will be applied if you are found guilty of plagiarism, poor writing skills, or if you have applied incorrect or insufficient referencing. (See the "instructions to students" book activity before this activity where the application of negative marking is explained.)
6. Make use of the templates found in the Resources folder here.

7. You are not allowed to offer your work for sale or to purchase the work of other students. This includes the use of professional assignment writers and websites, such as Essay Box. You are also not allowed to make use of artificial intelligence tools, such as ChatGPT, to create content and submit it as your own work. If this should happen, Eduvos reserves the right not to accept future submissions from you.
8. One group member should be nominated to submit the assessment on behalf of the group. Multiple submissions by various group members will result in an inflated similarity index on Turnitin.

4. Section A

Section A

Learning Objective

This project focuses on the Mobile Application and Web Services. The students will be expected to gather information related to a specific client and come up with a project proposal guided by the template provided. Furthermore, the students will be expected to develop a database driven mobile application based on the requirements gathered from the client using, but not limited to Android programming, Java, Swift, React Native, Firebase, SQLite.

Project Topic

Mobile Application and Web Services Project

Scope

In this project, students are expected to identify and schedule meetings with any registered local business or an individual in need of a database driven mobile application. Using different information gathering methodologies, the students must have a clear understanding of what is expected by the client. Complete the research project proposal and the project documentation and submit to your lecturer for marking. Use at minimum Android programming, Java, Swift, React Native, Firebase, SQLite for the development of the mobile application.

Marking Criteria

Deliverables must be submitted on or before the due date to the lecturer in class or as per arrangement. Five percent (5%) will be deducted for every day that the deliverable is late. Deliverables that are more than a week late will be awarded a zero. Late submissions must be accompanied by a medical certificate.

4.1. Deliverable 1: Problem Settings

Deliverable 1 — 50 Marks

Identify and schedule meetings with any registered local business or an individual in need of a database driven Mobile Application. Using the Deliverable 1 template provided, write a full project proposal, and submit it to your lecturer on or before the due date.

Mark Allocation

Requirement	Marks	Deductions
1.1 Background of Research	**8**	
Nature and Context of research clearly defined	2	
Overview of previous studies in relation to current research	2	
Justification of current research	2	
Company Background	2	
1.2 Aim of Research	**6**	
Is it high level achievements of the research?	2	
Concise, direct, but broad statement of intent	2	
Reveals the purpose of the research	2	
1.3 Research Objectives	**9**	

SMART	5	
Direct the work of research activities	2	
Well-articulated in point form, each point a single objective	2	
1.4 Problem Statement	**8**	
Clearly defines the problems faced by the company/users	2	
States the problems and ideal solutions for the problem	2	
Sub-Problems		
Breaks down problem into at least two (2) sub-problems	2	
Decomposed problem within a sub-problem not a totally new problem	2	
1.5 Benefits of Study	**6**	
Benefits to academic area	2	
Benefits to company or users	2	
Benefits to the researchers	2	
1.6 Delimitations of Study	**4**	
Clear scope boundary	2	
Acceptable challenge areas excluded from research	2	
1.7 Benefits of Study	**6**	
Gantt Chart	2	
Work Breakdown Structure	2	
Reasonable Timelines	2	
1.8 Outline of Mini Dissertation	**3**	
TOTAL	**50**	

End of Deliverable 1

4.2. Deliverable 2: Literature Review

Deliverable 2: Literature Review	**100 Marks**

Mark Allocation

Requirement	Marks	Deductions
2.1 Introduction	**20**	
Overview of Literature Review and Literature Search Parameters	10	
Overview of Literature Review and Analysis Structure	10	
2.2 – 2.3 Mobile Apps & Apps in your Area	**25**	
Relevant Literature on Mobile Apps & Apps/Systems in research area	10	
Well done review	5	
Meaningful Analysis and Review	10	

2.4 Mobile Apps Tools and Technologies	**30**	
Reviewed Relevant Tools for area of Research	10	
Reviewed relevant current and future tools in area of research	10	
Identified tools and technologies to be used in your research	10	
2.5 Mobile Apps Research and Design Methodologies	**15**	
Past Relevant Research work approach by researchers	5	
Relevant Information on your chosen Methodology of Research and Development	5	
Relevant Diagrams and Illustrations	5	
2.6 Conclusion	**4**	
Citations and Sources	**6**	

End of Deliverable 2

4.3. Deliverable 3: System Modelling and Architectural Design

Deliverable 3: System Modelling and Architectural Design — 50 Marks

Mark Allocation

Requirement	Marks	Deductions
3.1 Introduction	**4**	
Outlay of the design plans, considering mobile app architectural and system designs	2	
Outlay of iterative and incremental design plans and structure of the design process	2	
3.2.1 User Experience	**12**	
User Experience considerations	2	
Fact-finding Techniques	3	
Analysis of User Requirements	3	
Tools and Diagrams used	4	
3.2.2 User Interface Design	**10**	
Designs	3	
Design Tools and Techniques	3	

Designs Look and Feel (Aesthetic, Business Colors, etc.)	2	
Iterative and Incremental Design	2	
3.3 Business Layer	**12**	
Operations and Process Flow Designs	3	
Data Handling Operation Designs (security, exception handling, data validation, etc.)	3	
Diagrams	4	
Iterative and Incremental Design	2	
3.4 Data Layer	**8**	
Logical Data Models	3	
Diagrams, Tools, and Techniques	3	
Iterative and Incremental Design	2	
3.5 Conclusion	**4**	
TOTAL	**50**	

End of Deliverable 3

4.4. Deliverable 4: System Prototype Development and Testing

Deliverable 4: System Prototype Development and Testing — 50 Marks

Mark Allocation

Requirement	Marks	Deductions
4.1 Introduction	**4**	
Layout of Implementation Plans and considerations of the Designs	2	
Considerations of Iterative and Incremental development	2	
4.2 Testing Plans	**6**	
Chosen Testing Types	2	
Testing Plan Schedule	2	
Testing Reports	2	
4.3 Layouts Development	**10**	
Layout Screens Implementations	3	
Code Snippets and Discussions	3	
Designs Look and Feel (Aesthetic, Business Colors, etc.)	2	
Iterative and Incremental Design	2	
4.4 Business Logic Development	**21**	

Business Logic and Operational Algorithms	5	
Logical flow in code	3	
All Code Works	7	
Use of programming structures (Decision, Loops, Overloading, Overriding, etc.)	2	
Good Design Practices, Good Code, Comments	2	
Iterative and Incremental Development	2	
4.5 Data Access Development	**6**	
Relevant Database Implementation Technology (In-App DBMS or Server Implementation) and Justification	2	
Database Creation and Accessor Classes and Methods	2	
Iterative and Incremental Design	2	
4.6 Conclusion	**3**	
TOTAL	**50**	

End of Deliverable 4

4.5. Deliverable 5: Results, Conclusion and Recommendations

Deliverable 5: Results, Conclusion and Recommendations — 50 Marks

Mark Allocation

Requirement	Marks	Deductions
5.1 Results	**30**	
Research Findings	10	
Research Successes and Failures	10	
Research Challenges	5	
Research Benefits	5	
5.2 Conclusion	**10**	
Covers all aspects of the research	5	
Rounds down and closes all research work	5	
5.3 Recommendations	**10**	
Addressing real needs for the customer	5	
Relevant to the current technologies and an improvement	5	
TOTAL	**90**	

End of Deliverable 5

4.6. Deliverable 6: Mini Dissertation (Compilation of All Deliverables)

Deliverable 6: Mini Dissertation (Compilation of All Deliverables)	**50 Marks**

Mark Allocation

Requirement	Marks	Deductions
6.1 Document Format	**28**	
Table of Contents: All headings and Accurate Page Numbers	4	
Chapter Headings (Centre-aligned with Chapter Number), Sub-headings (Left-aligned with subheading multilevel numbers)	5	
Chapters and Major sections begin on their own page	2	
Default template fonts used in all sections	2	
List of Figures: Accurate page numbers, All Figures listed, Figures Numbered by Chapter, Figures Centre-Aligned, Caption Centre-aligned	5	

List of Tables: Accurate page numbers, All tables listed, Tables numbered by chapter with a dot separator, table captions centre-aligned	5	
References: Correct format and layout, Sorted into ascending order, All listed	5	
6.2 Content	**22**	
Acknowledgements	2	
Abstract: Concise, rich, accurate, enticing	10	
Appendices: User Guide (Neat and informative), User Requirements Specifications, Test Templates/Reports, any other as students see fit	10	
TOTAL	**50**	

End of Deliverable 6

4.7. Oral Presentation & Defense: Mini Dissertation

Oral Presentation & Defense: Mini Dissertation	**50 Marks**

Requirement	Marks	Deductions
7.1 PowerPoint Presentation	**10**	
PowerPoint Design: Colors, Images, Font, Contrast, Visibility	2	
Relevant Points and Slide Organization	2	
Quality of Content and Quality of Images	2	
Proper Referencing (Credible Sources, In-Text Referencing)	2	
Grammar, Spelling, Neatwork and Professional	2	
7.2 Presentation Skills	**10**	
Group Organization and Preparedness	2	
Clarity of Speech and Eye Contact	2	
Diction, Articulation and Command of Language	2	
Group Collaboration and Well-Known Presentation Plan	2	
All Members Participation	2	
7.3 Research Overview in Presentation	**10**	
Clear Aims, Objectives, Problem Statements, Solutions	2	
Clear Research Contributions and Previous work Review	2	
Suitable Methodology and App Design	2	
Implementation Issues and Prototype Discussions	2	

Research Results, Analysis and Recommendations	2	
7.4 Mobile App Demonstration	**20**	
App Look and Feel: Layout Designs (Colors [Company Colors], Appropriate Widgets, Widget Designs, Interactions Feel) Widgets: Buttons (ImageButtons, Buttons, Toggle Switches), TextViews, EditTexts, Layouts, Containers, etc	5	
Settings and Preferences:- Saved and Retrieved	4	
Interactions:- Button Listeners, Object Listeners, Fragments and Layout Switching. Code Works. Intents work and pass messages.	4	
Solutions Implemented: Code solves the problems (processes data, does logic operations, has algorithms that solve challenges like data searching, sorting and organization, identifying, etc	4	
App data persists, Classes to handle data storage and retrieval work. No hard coded data.	3	
TOTAL	**50**	

End of Deliverable 7