

# **GUIDELINES FOR PREPARING GRADUATION PROJECT-1 AND PROJECT-2 REPORTS**

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**2022-2023**



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## 1. GENERAL GUIDELINES

Graduation Project-1 and Project-2 courses are partial requirement for the fulfillment of the bachelor degree in Computer Science, Computer Information Systems, Business Information Technology, Data Science, Artificial Intelligence, and Cybersecurity at KASIT. It provides students the opportunity to implement what they learnt in a real world solution, system, product, or research. In this handbook, we provide information about the graduation Project-1 and Project-2 processes, evaluation criteria, deliverables, suggested documentation templates, and forms.

### 1.1 Graduation Project-1 and Project-2 Processes

After the graduation projects' teams are formed, each team's members are encouraged to meet with their advisor in order to complete a proposal. The proposal preparation should not take more than one week. The advisor should review the proposal and make a decision. At the same time, each team should submit the required forms to their departments. Please note that sometimes departments advertise some topics of interest for graduation projects. In this case, team members can select one topic and submit the required form to the department and wait for approval from the advisor(s) and department.

After the advisor(s) approve(s) the proposal, **the team should immediately start working on Project-1 and its documentation.** During the semester, the whole team should regularly meet with their advisor(s) to discuss both the completed and the upcoming tasks. At each meeting, the team members are encouraged to complete a discussion minutes form that documents the meeting agreements and to submit a progress report that shows the completed and the upcoming tasks. The teams are required to complete Project-1 and submit its deliverables to their advisor(s) at least one week before the defense day. You are advised to register Project-2 in the next semester right after you have successfully passed Project-1. Teams are required to complete Project-2 and submit its deliverables to their advisor(s) at least one week before the defense day.

## 1.2 Advisor(s) and Examiner(s)

Each team is assigned a faculty member from the same department to serve as an advisor for Project-1 who also continues as the advisor for Project-2. Each advisor can form several teams from the students that he/she advises. **Each team should have at least two students and at most four.** There may be more than one advisor for the team especially when it consists of students from different departments. The advisor(s)' responsibility is to provide guidance and evaluate the team's performance.

Before the projects defense day, the department will announce two examiners for each team. The examiners will attend the project's defense and provide their evaluation.

## 1.3 Graduation Project-1 and Project-2 Progress and Supervision

After the advisor approves the project's proposal, the team should start working on their project and deliverables including the documentation. At the first meeting, the advisor(s) should determine the duration between the subsequent meetings. The team should continuously keep their advisor(s) up to date with their progress and the obstacles that they face. **You are required to meet your advisor(s) at least once every two weeks.**

## 1.4 Graduation Project-1 and Project-2 Deliverables

Each team should submit two copies of the project's software (including source code files) and the documentation. One copy is submitted to the advisor(s) and the other one is submitted to the department along with a poster. A soft copy of the project's source code files, the documentation, and the poster should be uploaded to the E-learning portal too. The team is required to complete Project-1 and Project-2 and submit their deliverables to the advisor(s) **at least one week before the defense day.**

## 1.5 Graduation Project-1 and Project-2 Evaluation

In the project's defense, the advisor(s) and the examiners will investigate and examine the project's deliverables with the team members, and complete the evaluation forms. These forms evaluate the team members from team based and individual based perspectives. Finally, a final evaluation form is submitted to the department.

## 1.6 Graduation Project-1 and Project-2 Defense

**All the graduation Project-2 defenses will be scheduled in the last day of teaching in the semester.** A complete schedule for all the defenses will be announced at an early time. The schedule shows each team's defense time and venue. **Defense for Project-1 follows each department's procedures and the instructions given to you by your advisor(s).**

## 1.7 Academic Integrity and Plagiarism

If a student of the team or the whole team is/are found guilty of plagiarism, they will face a punishment. There are several ways of punishments that may include, but are not limited to: graduation project failure, or scaling down the students grade. **The team should complete and sign the anti-plagiarism form that is attached with this handbook and submit it to their advisor(s) at their first meeting.** This form certifies the students' intention not to commit any plagiarism, cheating, or any other academic integrity violation.



**The University of Jordan  
King Abdullah II School of Information Technology  
Anti-Plagiarism Declaration**

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This is to declare that the graduation project produced under the supervision of \_\_\_\_\_  
\_\_\_\_\_ having the title  
“ \_\_\_\_\_ ”

is the sole contribution of the student(s) below and no part hereof has been reproduced illegally (in particular: cut and paste) which can be considered as **Plagiarism**. All referenced parts have been used to support and argue the idea and have been cited properly. I/We certify that I/we will not commit any plagiarism, cheating, or any other academic integrity violation. I/We will be responsible and liable for any consequence if violation of this declaration is proven.

**Date:** \_\_\_\_\_

**Graduation project group's student(s):**

**Name:** \_\_\_\_\_ **Signature:** \_\_\_\_\_

**Name:** \_\_\_\_\_ **Signature:** \_\_\_\_\_

**Name:** \_\_\_\_\_ **Signature:** \_\_\_\_\_

**Name:** \_\_\_\_\_ **Signature:** \_\_\_\_\_

## **2. APPEARANCE**

### **2.1 Paper**

High quality 80gm A4 paper shall be used. The paper should be white in colour, acid free and non-erasable kind.

### **2.2 Type of Machine/Software**

Students are encouraged to use a personal computer (PC) or laptop to write their graduation project report. Near-letter quality impact printers or laser-jet printers may be used, however, dot-matrix printers and ink-jet printers are not acceptable. Any word processing software such as Microsoft Word or WordPerfect would be suitable to write the graduation project report. Students may also use Microsoft Excel, Lotus 123 etc. for any tables, calculations or any other applications.

### **2.3 Font Size**

The basic text should be in “Times New Roman” of font size 12 points. However, 10 points font size may be used for footnotes, captions, figures, tables and other print outside the basic text.

### **2.4 Font Style**

Only one font style may be used throughout the entire graduation Project-1 and Project-2 reports, including the title-page, signature page, acknowledgement, references, and appendices. Exceptions to this can only be made for tables/ figures/ illustrations imported from other sources. Italic variants of the font style may be used for headings, labels, foreign words, book titles or occasional emphasis. The usage of bold variants of the same font style and underlining in the text of headings and titles is at the student’s discretion.

## 2.5 Line Spacing

The line spacing should be generally set at 2.0 (double spacing). Single spacing may be used only in the following cases:

- a) Acknowledgments
- b) Tables of Contents, as long as there is double spacing between entries of two chapters and/ or other major sections such as References and Appendices.
- c) List of Tables/ Figures/ Illustrations/ Cases
- d) Abstract
- e) Quotations set off from the text, of more than 40 words and indented eight spaces in from left and right margins.
- f) Captions of figures and Tables.
- g) Footnotes
- h) References
- i) Index

## 2.6 Headings

Chapter headings are to be centered and written in (bold) capital letters. The maximum acceptable font size for Chapter Headings is 14 points. Other sub-headings are to be aligned to the left margin and should be of 12 points font size. The use of capital or small letters, underlining and boldfacing in the sub-headings is at the student's discretion.

## 2.7 Paragraphs

Spacing between two paragraphs should be set at 4.0 points. The first sentence of a paragraph should be indented to 1.25cm. A heading that appears as a last line on a page will not be accepted. There should be a minimum of two lines of a paragraph at the bottom of the page under the heading.



## 2.8 Binding

The first submission of the graduation Project-2 report manuscript for evaluation and examination purposes should be in temporary binding. Hole-punching and spiral binding of the manuscript may be acceptable for temporary binding.

Final submission of the graduation Project-2 report must be in permanent hard-cover binding. Information printed on the cover and the spine must be with good-colored letters of between 18 and 24 point size. The color of the cover must be **BLACK**.

**You are not required to submit a hard-cover binding report for graduation Project-1.**

### **3. FORMAT/LAYOUT**

#### **3.1 Margin**

When typing the original manuscripts, the following margins should be observed (also please refer to the sample in the appendices):

LEFT: 3 cm (This margin is wide for binding requirements)

TOP: 2 cm

RIGHT: 2 cm

BOTTOM: 2 cm

Excepting from page numbers, all other manuscripts material must fit within these margin requirements (including tables, figures, graphs, etc.).

#### **3.2 Page Numbering**

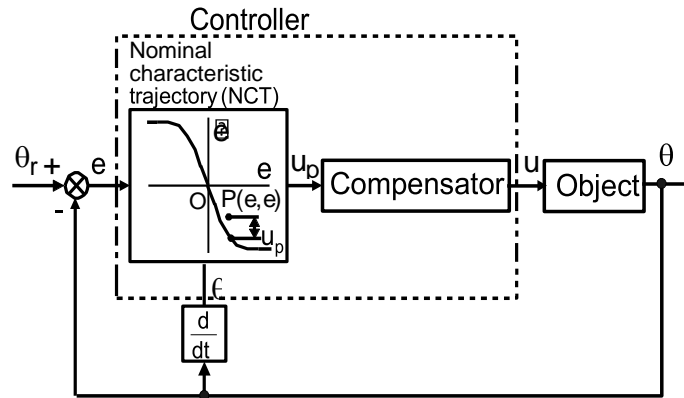
Every sheet of paper in the manuscript except the title page must be numbered. The title page is 'i' but not numbered. Preliminary pages (all pages before the body of the text) such as abstract, acknowledgments and table of contents are to be numbered in lower case Roman numeral (ii, iii, iv, etc). The main text pages are to be numbered in Arabic numerals (1, 2, 3, etc) and all pages must be numbered. The page number must be centered to the text, not to the page and must be placed at the bottom of the page. Since the bottom margin is 3.0 cm, the page number must appear 1.3 cm from the bottom of the page. No dashed, periods, underlining or other marks should appear before, after or under the page number.

#### **3.3 Justification**

The graduation Project-1 and Project-2 reports must be fully justified (i.e. have even left and right- hand margins).

#### **3.4 Figures and Tables**

All figures and tables should be placed after their first mention in the text. Figure caption should be below the figures while table caption should be above the table. They should be referred in the text, for example, Figure 1.1, Figure 1.2, ...etc, and for tables, Table 1.1, Table 1.2 in the order of their mention and in accordance to each chapter. Examples below:



**Figure 1.1:** The caption should be placed after the figure

Tables and figures must face out of the binding edge, the 3.8 cm (left) margin then being at the top of the installation. Illustration, tables, or figures requiring more than one page should have the number of caption and the “continued” at the top of each additional page. For example **Table 1.3 (continued)**.

**Table 1.1:** The caption should be placed before the table

A	B	C	D
(1)	0.279	0.312	-
(2)	1.68	0.168	0.025

### 3.5 Symbols, Units and Equations

Symbols or nomenclature used shall be defined. Standard symbols or acronym normally accepted in engineering can be used. International system unit (SI) shall be used.

Equation number should be Arabic numerals enclosed in parentheses on the right-hand margin. They should be cited in the text, for example, Equation (1.1), Equation (1.2), ...etc in the order of their mention and in accordance to each chapter.

Equations start from the left. Punctuate equations with commas or periods when they are part of a sentence. For example,

$$x = Ax + Bu \quad (1)$$

$$y = Cx + Du \quad (2)$$

### **3.6 Photographs**

Photographs may be attached in any of the following ways:

- a) Students may submit a page with an actual photograph, if the image size conforms to the margin requirements.
- b) If the photograph is smaller than A4 size, students may paste the photograph on a standard sheet of paper, according to the margin requirements, and photocopy it in black & white or in color, as appropriate. Pasted-up pages, however, will not be accepted. High quality and high contrast photocopies must be made of any photographic material.
- c) Students may also use high resolution scanners to scan photographs and reprint them as required through a suitable computer software. In this option, the size of the photographs, margins, color and contrast etc. may be adjusted according to the requirements.

### **3.7 Slides, Diskettes, CD ROMs, Video or Audio Cassettes**

Students may also submit with the graduation project report, any relevant items such as, slides, video and audio-cassette recordings. However, they must be of good quality, clear, and sharp. All items must be appropriately labeled and must bear the name of the author, title of the graduation project report, name of the degree and the year. The inclusion of any of the above items must be indicated in the graduation project report, and under the section where lists of all Tables, Illustrations etc. are given.

## **4. ARRANGEMENT AND CONTENTS**

### **4.1 Arrangement**

The contents should be arranged in the following order:

- a) COVER & SPINE
- b) TITLE PAGE
- c) ABSTRACT
- d) ACKNOWLEDGEMENTS
- e) TABLE OF CONTENTS
- f) LIST OF TABLES
- g) LIST OF FIGURES
- h) LIST OF SYMBOLS/ABBRAVIATIONS/TRANSLATIONS, ETC.
- i) BODY OF THE TEXT (Chapter 1, ... Chapter 7)
- j) REFERENCES
- k) APPENDICES

### **4.2 Cover and Spine**

#### **a) Cover**

The information printed on the cover page should include the following information exactly in the given order (Please see Appendix A):

- The TITLE of the graduation project report appears at the top of the cover. It should include meaningful keywords descriptive of the subject and the content.
- The NAME of the student used on the cover, must be the same under which the student is registered at UJ. Registration Number of the student should appear following the name of the student.
- The LOGO of UJ.
- NAME OF DEPARTMENT should appear in the next line
- KING ABDULLAH II SCHOOL OF INFORMATION TECHNOLOGY should follow the name of the department.
- THE UNIVERSITY OF JORDAN appears in full capital letters at the bottom of the page.
- The MONTH and YEAR of Submission should appear on the next line.

The title of the graduation project report will be in 18 point and the other texts will be in 14 point font size. The top and bottom margin for the cover page must be 6 cm. All information printed on the cover must be justified centered.

If the graduation project report exceeds 6 cm in thickness, then the binding should be done in two different volumes. In this case the volume number should be printed in Arabic Numbers under the title of the graduation project report, for example, Vol. 1 or Vol. 2.

#### **b) Spine**

Information printed on the spine must be with gold-coloured letters of between 18 and 24 point font size, and must be in the following order (please refer to appendix B):

- Name of the author(s)
- Volume number (if more than one volume)
- Acronym of the name of the degree (CS, CIS, BIT)
- Month, Year, i.e. May 2016
- Acronym of the University i.e. UJ

The top and bottom margin of the spine should be 5 cm. If a graduation project report is more than one volume, the volume number should be printed in Arabic digits in the center of the spine.

#### **4.3 Title Page**

The information printed on the title page should include the following information exactly in the given order (Please see Appendix C):

- The TITLE of the graduation project report appears at the top of the cover. It should include meaningful keywords descriptive of the subject and the content.
- The NAME of the student used on the cover, must be the same under which the student is registered at UJ. Registration Number of the student should appear following the name of the student.
- The SUPERVISOR(S) NAME(S).
- The LOGO of UJ.

The title of the graduation project report will be in 18 point and the other texts will be in 14 point font size. The top and bottom margin for the cover page must be 6 cm. All information printed on the cover must be justified centered.

#### **4.4 Abstract**

The heading of ABSTRACT appears centered and in full capital letters beneath the top margin (See Appendix D). The abstract consists of:

- A brief description of the problem
- A brief description of the methods or procedures used
- A condensed summary of the findings of the study

The length of the abstract should be about 250 words, the maximum being 500 words.

#### **4.5 Acknowledgements**

Acknowledgements should be double-spaced under the heading ACKNOWLEDGEMENTS. This section may include appreciation of all those who assisted the author in the preparation of his/her graduation project, particularly the supervisor(s). Please see Appendix E.

#### **4.6 Table of Contents and Lists of Figures/Tables/Symbols**

A table of contents (TOC) shows readers the starting page number of each major section and subsection in the report (see Appendix F). The topics to be covered in the report must be carefully selected and organized. The flow of the topics to be presented is very important in order to guide a relatively novice reader in understanding the whole report. To an experienced reader, the TOC gives a quicker way of finding the interested information.

With the similar purpose as the TOC, the lists of figures/tables/symbols is to enable readers to find the illustrations, diagrams, charts, tables and symbol explanation in the report. Figures/tables must be numbered consecutively in order of appearance (see Appendix G, H and I).

#### 4.7 Body of the Text

The MAIN BODY TEXT should normally be divided into chapters such as (See Appendix J):

- **Refer to the recommended table of contents for product based reports**

(See Appendix L):

- **Refer to the recommended table of contents for research based reports**

(See Appendix M)

#### 4.8 References

Every reference quoted or cited in the report must be included in the list of references and numbered accordingly. Citation is required for statement which expresses a fact that goes beyond the common knowledge of the art. See Appendix H for detail explanation on references.

#### 4.9 Appendices

This section contains lengthy materials which are not suitable to be put inside the main text, for example raw data, equipment and computer programmes.






كلية الملك عبد الله الثاني  
لتكنولوجيا المعلومات  
KING ABDULLAH II SCHOOL OF  
INFORMATION TECHNOLOGY

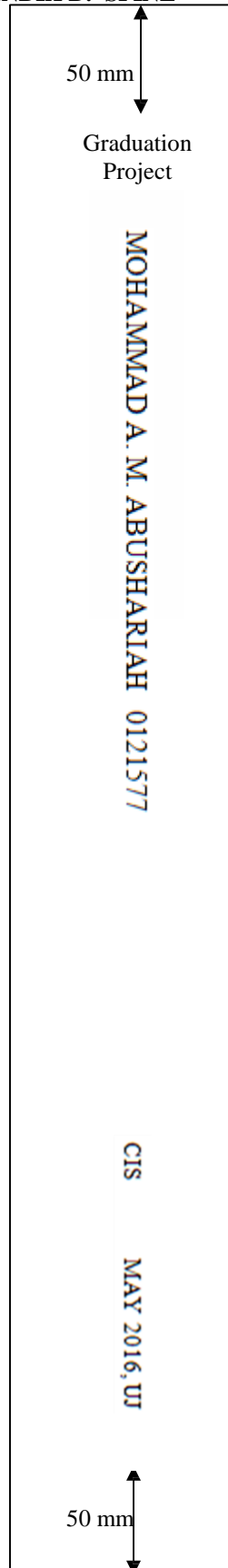
الجامعة الأردنية  
The University of Jordan



### APPENDIX A: COVER PAGE

50 mm	
<b>TITLE OF THE FINAL YEAR AND CONTROL</b>	
AUTHOR NAME	Registration No.
	
NAME OF DEPARTMENT KING ABDULLAH II SCHOOL OF INFORMATION TECHNOLOGY THE UNIVERSITY OF JORDAN MONTH YEAR	
50 mm	

APENDIX B: SPINE





## APPENDIX C: TITLE PAGE

50 mm

# ARABIC AUTOMATIC SPEECH RECOGNITION

MOHAMMAD A. M. ABUSHARIAH 0121577

Project Supervisor: Name of Supervisor(s)



50 mm

## APPENDIX D: ABSTRACT

### ABSTRACT

*« A short summary of the project emphasizing the novelty of the approach adopted, the actual work performed and the important results obtained in preferably one paragraph and no more than 300 words. »*

## APPENDIX E: ACKNOWLEDGMENTS

### ACKNOWLEDGMENTS

*« Give acknowledgment to any advisory or financial assistance received  
in the course of your work. »*



## APPENDIX F: TABLE OF CONTENTS

### CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	iv
LIST OF FIGURES	v
LIST OF SYMBOLS	vi
CHAPTER 1 « <i>CHAPTER TITLE</i> »	1
1.1 « <i>Section Title</i> »	«Page no.»
1.2 « <i>Section Title</i> »	«Page no.»
... ..	...
CHAPTER 2 « <i>CHAPTER TITLE</i> »	«Page no.»
2.1 « <i>Section Title</i> »	«Page no.»
2.2 « <i>Section Title</i> »	«Page no.»
... ..	...
... ..	...
REFERENCES	«Page no.»
APPENDIX A « <i>APPENDIX TITLE</i> »	«Page no.»
APPENDIX B « <i>APPENDIX TITLE</i> »	«Page no.»
... ..	...

## APPENDIX G: LIST OF FIGURES

### LIST OF FIGURES

Figure 1.1: « *Figure Caption* » «Page no.»

Figure 1.2: « *Figure Caption* » «Page no.»

.....

## APPENDIX H: LIST OF TABLES

### LIST OF TABLES

Table 1.1: « <i>Table Title</i> »	« <i>Page no.</i> »
Table 1.2: « <i>Table Title</i> »	« <i>Page no.</i> »
... ..	...



## APPENDIX I: LIST OF SYMBOLS AND ABBREVIATIONS

Note that only important symbols need to be included in this list.

### LIST OF SYMBOLS AND ABBREVIATIONS

« *Symbol 1* » « *Symbol Description* »

« *Symbol 1* » « *Symbol Description* »

... ..

...

“*abbreviation 1*” « *Expansion* »

“*abbreviation 2*” « *Expansion* »

## APPENDIX J: MAIN TEXT

« *CHAPTER NUMBER* »

« *CHAPTER TITLE* »

« *Section no* » « *Section Title* »

« *Text of section ...* »

« *Page No* »

## APPENDIX K: REFERENCES

In writing references, the titles of books or journals are italicized. The list of references is not classified or categorized according to the type of material e.g. books, journals, newspapers or magazines.

### 1 REFERENCING

When student are writing a piece of work it is essential that student provide detailed and precise information on all the sources student have consulted. Always remember to record the details about an item as student use it. The use of public material without acknowledgement is plagiarism for which the penalty will be failure of the graduation project.

#### 1.1 Setting out References

There are two methods by which references can be displayed, the British Standard and Harvard. Once a method has been selected it is important to be consistent in applying it. (<http://www.unn.ac.uk/central/isd/cite/set.htm>).

##### 1.1.1 British Standard (Numeric) System (B.S. 1629:1989) Book

###### **Book:**

Macdonald, D.J. *Drugs, drinking and adolescents*. Year Medical Publishers, 1984.

###### **Journal Article:**

Rimmer, L. Family, unemployment and welfare. *Quarterly Journal of Social Affairs*, 2(3), 1986, p. 243-264.

###### **Section in a Book edited by another:**

Franklin, A. W. Management of the problem. In: Smith, S.M. (ed.) *The Maltreatment of children*, MTP, 1978, p. 83.

###### **Monograph:**

Body, D.M. *Flood Estimation*. Water Res. Board of Australia, 1959, No.4, 41 pages.

###### **Thesis:**

AGUTTER, A.J., *The linguistic significance of current British slang*. Thesis (PhD). Edinburgh University, 1995.

###### **Conference Proceedings:**

SILVER, K., Electronic mail: the new way to communicate. In: D.I. RAITT, ed. *9<sup>th</sup> International Information Meeting, 3-5 December 1990 London*. Oxford: Learned Information, 1991, 323-330.

**Web Page:**

HOLLAND, M., *Guide to Citing Internet Sources* [online]. Poole, Bournemouth University. Available from: [http://www.bournemouth.ac.uk/library/using/guide\\_to\\_citing\\_internet\\_sources.html](http://www.bournemouth.ac.uk/library/using/guide_to_citing_internet_sources.html), 2004. [Accessed 4 November 2004].

**1.1.2 Harvard System**

**Book:**

Macdonald, D.J., 1984. *Drugs, drinking and adolescents*. Year Book Medical Publishers.

**Journal Article:**

Rimmer, L., 1986. Family unemployment and welfare. *Quarterly Journal of Social Affairs*, 2(3), p. 243-264.

**Section in a Book edited by another:**

Franklin, A.W., 1978. Management of the problem. In: Smith, S.M. (ed.) *The maltreatment of children*, MTP, p. 83.

**Monograph:**

Body, D.M., 1959. *Flood Estimation*. Water Res. Board of Australia. No.4, 41 pages.

**Thesis:**

AGUTTER, A.J., 1995. *The linguistic significance of current British slang*. Thesis (PhD). Edinburgh University.

**Conference Proceedings:**

SILVER, K., 1991. Electronic mail: the new way to communicate. In: D.I. RAITT, ed. *9<sup>th</sup> International Information Meeting, 3-5 December 1990 London*. Oxford: Learned Information, 323-330.

**Web Page:**

HOLLAND, M., 2004. *Guide to Citing Internet Sources* [online]. Poole, Bournemouth University. Available from: [http://www.bournemouth.ac.uk/library/using/guide\\_to\\_citing\\_internet\\_sources.html](http://www.bournemouth.ac.uk/library/using/guide_to_citing_internet_sources.html) [Accessed 4 November 2004].

## **APPENDIX L: RECOMMENDED TABLE OF CONTENTS FOR PRODUCT BASED PROJECTS**

Cover Page

Title Page

Abstract

Acknowledgement

Table of Contents

List of Figures

List of Tables

List of Abbreviations

### **1.0 CHAPTER ONE: INTRODUCTION**

This chapter presents the project motivation, problem statement, project aim and objectives, project scope, software and hardware requirements, project limitations, project expected output, project schedule, and report outline.

### **2.0 CHAPTER TWO: RELATED EXISTING SYSTEMS**

This chapter presents an overview of the existing systems/products, their problems/weaknesses, and the proposed solutions that should appear in the proposed system/product.

### **3.0 CHAPTER THREE: SYSTEM REQUIREMENTS ENGINEERING AND ANALYSIS**

This chapter presents the feasibility study, the requirements gathering techniques, the targeted users, the functional requirements definition and specification, the non-functional requirements, and the usability and user experience goals.

### **4.0 CHAPTER FOUR: SYSTEM DESIGN**

This chapter presents aspects of the system design including context diagram, data flow diagram, entity relationship diagram, UML use case diagram, UML sequence diagram, UML class diagram, graphical user interface design/low fidelity prototype, and database design.

### **5.0 CHAPTER FIVE: SYSTEM IMPLEMENTATION**

This chapter presents all aspects of the system implementation including the database implementation, graphical user interface implementation/high fidelity prototype, and any details pertaining the implementation tools used.

### **6.0 CHAPTER SIX: SYSTEM TESTING AND INSTALLATION**

This chapter presents the system testing and installation aspects including the heuristic evaluation, cooperative evaluation, system installation, and user manual.

### **7.0 CHAPTER SEVEN: PROJECT CONCLUSIONS AND FUTURE WORK**

This chapter presents the project conclusions and future work including the overall weaknesses and strengths, and future directions.

### **REFERENCES**

**APPENDIX A, APPENDIX B, ... if available**

## **APPENDIX M: RECOMMENDED TABLE OF CONTENTS FOR RESEARCH BASED PROJECTS**

Cover Page  
Title Page  
Abstract  
Acknowledgement  
Table of Contents  
List of Figures  
List of Tables  
List of Abbreviations

### **1.0 CHAPTER ONE: INTRODUCTION**

This chapter presents the project motivation, problem statement, project aim and objectives, project scope, software and hardware requirements, project limitations, project expected output, project schedule, and report outline.

### **2.0 CHAPTER TWO: PROJECT BACKGROUND AND LITERATURE REVIEW**

This chapter presents the project background and literature review of the selected research topic. Comparing the related works is necessary in this chapter. Finally, identifying the main research problems of the existing related works and proposing solutions is essential.

### **3.0 CHAPTER THREE: PROPOSED RESEARCH METHODOLOGY**

This chapter presents aspects of the proposed research methodology including the flowchart of the proposed methodology, tools and environments used, dataset collection and pre-processing, and the proposed algorithms for each process in the proposed methodology.

### **4.0 CHAPTER FOUR: SYSTEM DESIGN**

This chapter presents aspects of the system design including context diagram, data flow diagram, entity relationship diagram, UML use case diagram, UML sequence diagram, UML class diagram, graphical user interface design/low fidelity prototype, and database design.

### **5.0 CHAPTER FIVE: RESEARCH IMPLEMENTATION**

This chapter presents aspects of the implementation including implementation requirements and components such as feature extraction, feature selection, feature classification, and feature matching. Database implementation and graphical user interface implementation/high fidelity prototype are necessary if the project requires developing a software/product too.

### **6.0 CHAPTER SIX: EXPERIMENTAL RESULTS AND ANALYSIS**

This chapter presents aspects of the experimental results and analysis including performance measures, experimental results, and experimental results analysis and discussion.

### **7.0 CHAPTER SEVEN: CONCLUSIONS AND FUTURE RESEARCH WORK**

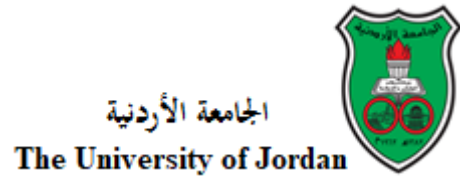
This chapter presents the research conclusions and future work including the overall weaknesses and strengths, and future directions.

### **REFERENCES**

**APPENDIX A, APPENDIX B, ... if available**

### Important Notes:

- **Project-1** requires preparing the documentation from Chapter 1 (Introduction) until Chapter 4 (System Design) for product based projects. For research based projects, Chapter 4 (System Design) is an optional chapter depending whether or not the proposed research produces a software/product. Otherwise, Project-1 for research based projects may end at Chapter 3 (Proposed Research Methodology).
- **Project-2** requires completing all chapters from Chapter 1 (Introduction) until Chapter 7 (Conclusions and future work) for product based and research based projects.



**For more details and assistance, please do not hesitate to contact me.**

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**GOOD LUCK**