
THE SCHOOL OF COMPUTING AND TECHNOLOGY

Calibri, Heading 1, 14pt

EASTERN MEDITERRANEAN UNIVERSITY

201…..-201….. FALL/SPRING SEMESTER

Calibri, Heading 2, 12pt

ITEC403

<<PROJECT TITLE>>
<<PROJECT NUMBER>>

Calibri, 11pt

Prepared By

<<Student Id Name of Member 1>>

<<Student Id Name of Member 2>>

<<…>>

Supervised by

<<Supervisor Name>>

<<Month, Year>>

# Table of Contents

# 1. Introduction

To assist you in preparing graduation project orientation report process, the graduation project committee has prepared this Graduation Project Orientation Report Format Manual. The goal here is to help you prepare a report that looks professional and renders your findings easily accessible to your readers.

## 2. How to Write Your Report

You may use Microsoft Word or any other equivalent word processor to write your report. It should have an acceptable and readable English level. Note that hand written reports will not be accepted.

# 3. Organization and Requirements

Reports are organized into three sections:

1. Preliminary Matter
    a) Title Page
    b) Table of Contents
2. Text (Introduction, Hardware and Software Requirements, Proposed System, Project Management Plan, UML Modeling, Database Modeling, Interface Sketches, as well as Completed Activities and Achievements)
3. Back Matter
    a) References, Appendix

**In the following Sections, each of the above requirements is explained in detail.**

## 3.1. Preliminary Matter: Requirements

Preliminary pages are paginated separately from the rest of the text. Use lower-case Roman numerals at the bottom of these pages. The title page is anticipated as *i*. It is counted but not numbered and should not be included in the Table of Contents. Begin numbering with the Table of Contents using *ii*. Continue using the lower-case Roman numerals up to the first page of Introduction. Specific requirements and examples for each part of the preliminary matter follow.

### 3.1.1. Title Page

**See example in the first page.**

### 3.1.2. Table of Contents

The Table of Contents introduces the reader to your text, indicating its contents, organization, and progression. It should make access easy, not overwhelm the reader with detailed index of the contents. The Table of Contents Page of this manual constitutes an example. The following list of requirements is necessary:

- On a separate page
- Typeface and size: Calibri, 12 point size
- No underlining or italics

- Length: may run more than one page; do not type "continued" at the end of the first, or at the beginning of the second page
- Each entry should have tab leaders and corresponding page reference numbers must be aligned correctly.

## 3.2. Text

The text of the report should be organized logically according to the nature and range of the work being reported. The report must begin with an Introduction, as a separate Chapter, which includes a clear explanation of the goals of the system.

In the section "Introduction", you should give a broad, general view of your project.

In the section "Hardware and Software Requirements", you should give a detailed description of the;

i. Programming Languages (Structured Programming Languages or Object-Oriented Programming Languages (OOPL))
ii. System Architecture and Processing Methods, (i.e. Mainframe architecture, File Server, Client/Server architecture, Web-Centric etc.)
iii. Database Management System (i.e. Oracle, SQL-Server, MySQL Server)
iv. Hardware and Communication Platform

In the section "Proposed System", you should explicitly define the planned activities for the remaining timeline and discuss about the probable issues and identify possible risks in the project life cycle.

The "Project Management Plan" section is one of the most important parts of your report. As you know project planning takes place at the beginning and end of each Project Phase to develop a plan and schedule for the phase that follows. It is important to effectively manage the available time in order to complete the proposed tasks and submit the project.

The "UML Modeling" part is a comprehensive part of the report containing details about the main functionality of the Proposed System. In other words it will contain details of Logical Model of the System, in which it will show "what the system must do" to satisfy business information needs. The UML modeling includes general and partial use-case diagrams, activity diagrams, use-case templates and domain class diagram.

The next part which is the "Database Modeling" uses any Entity-Relationship notation (Peter Chen, Crow's Foot, etc.) to draw the Entity-Relationship Diagram, indicating the Primary keys, multiplicities and cardinalities clearly.

In the "Interface Sketches" section you must show a sequence of sketches of the display screens during a dialog with navigation

The final part is the "Completed Activities and Achievements", which you are expected to explain on the activities and achievements so far, as outlines in your UML modeling packages for the period covered by this report. Do include any additional activities undertaken that are not in your UML modeling packages, providing the background to their inclusion.

### 3.2.1. Margins

As noted throughout this manual, you must maintain margins of 2.5cm on the left, and 2.0cm at the right, top and bottom of the page. The extra width of the left margin accommodates the binding.

### 3.2.2. Justification

All text must be right and left justified, just like this manual is written.

### 3.2.3. Paragraphs and Indentations

The first line of all paragraphs should be indented by one tab space, which provides sufficient guidance to your reader's eye. The indentation must be consistent throughout the text.

### 3.2.4. Spacing

Use 1.5 line-spacing for the entire text. Materials in tables, appendices, and block quotations, individual footnotes and reference entries may be single-spaced. The Title page must be spaced according to the sample provided. Spacing in the Table of Contents should conform closely to the spacing illustrated in this manual.

### 3.2.5. Pagination

The text, beginning with the Introduction, or of Chapter 1, should be numbered consecutively. Page numbers must be placed 1.Scm from the bottom center of each page.

### 3.2.6. Typeface and Size

Calibri typeface with 12 point size should be used throughout the text.

### 3.2.7. Tables, Figures and Illustrations: General Comments

Tables, figures and illustrations must serve the reader, support your text, and conform to standards in your field. All tables, figures and illustrations must be placed in the Appendix section and referred to within the report using its appendix number. For more information see the Appendix section. While referencing a table, figure, illustration or a series of these within the text, abbreviation as shown in the following examples should be used: A1, A2, A3 etc.

### 3.2.8. Chapter, Section, and Subsection headings

Chapter, section and subsection headings must all be typewritten in bold, with the following rules:

- Chapter headings should start at a new page, centered, Chapter no in Roman numerals first, followed by the Chapter Title in small letters, the first letters of main words being capital, and with 16 point size Bold Calibri typeface.
- Section headings may start anywhere within the text, after a space of the text of the previous section. Section titles contain Chapter and Section numbers separated by a dot, followed by the Section Title in small letters, the first letters of main words being capital. Section headings should be in bold, 14 point size Bold Calibri typeface.
- Subsection headings should be written similarly as section headings, and contain Chapter number, Section number and Subsection number, separated by dots.

## 3.3. Back Matter

The back matter of the report consists of the Appendices. The back matter is paginated consecutively from the last page of the text. The back matter, including the appendices, must meet the same margin requirements as the rest of the report.

### 3.3.1. Appendices

The appendix should contain any tables, figures, illustrations, program listings, diagrams, or other material of technical nature that you have generated for the project. Any document in the appendix must be clearly ordered, and numbered.

Appendices must be designated with a letter (Appendix A, Appendix B, etc.) each starting on a fresh page, and a title. Each appendix must be listed in the Table of Contents. All appendices must meet the usual margin requirements.

Captions for Figures, Tables and Illustrations must be placed at the bottom of each, and centered, as shown in the following example:

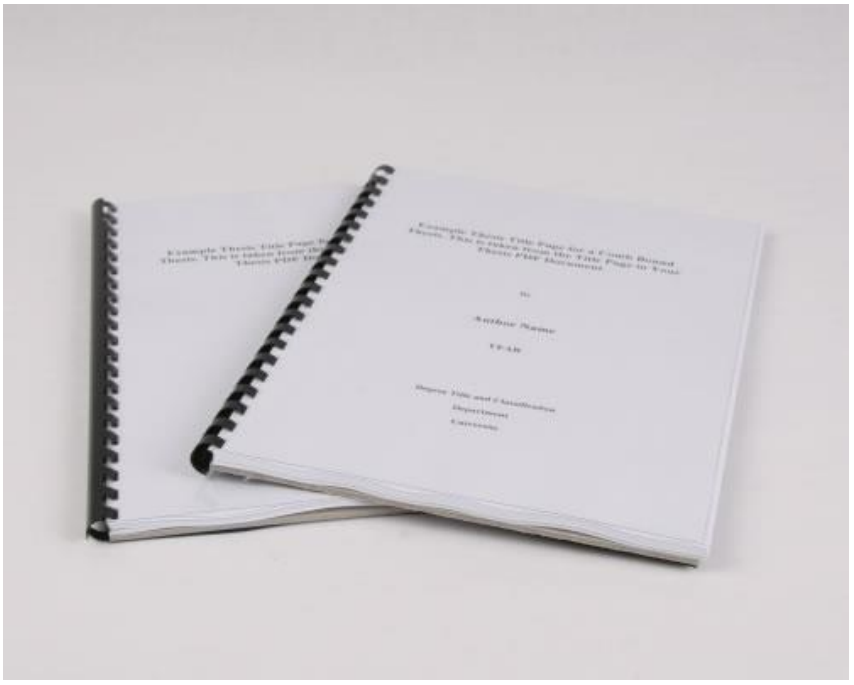
**A1.** This is a Sample Figure

If the table, figure or illustration is too wide for the page, landscape may be used, the caption appearing at the bottom of the table, figure, or illustration (at the right of the page). If the table is too long for one page, the table must be continued on the next page, the title not repeated on the next page, instead, center ''Table

contd.'' at the top of each succeeding page until the table is completed. Table caption must than follow. If the table is oversized, try to redesign the table to fit the page. If this does not solve the problem, you may reduce the table proportionately, but remember that the captions must still conform to the typeface and size standards of the text.

# 4. Binding

The final copy must be submitted for binding. The front cover of the binding must be transparent binding plastic and the back cover of the binding must be black plastic binding.



# 5. Graduation Project Report Content Description

The expected sections for the graduation project orientation report are given in the following sections.

## 1. Introduction

Your report will need an introduction. This should not be more than a couple of paragraph. The introduction is the place for a broad, general view of your material. Avoid details which belong properly to the main sections or appendices.

In your Introduction Section include an overview information about your group progress during the graduation project orientation phase, the current status of the project, achievements, delays, milestones, problems (if any) and corrective actions.

## 2. Literature Review

Literature review is a section which provides a theoretical base for the project, giving an understanding about the nature of the project (domain). You may use various websites and books for your research (referencing to your cites). A literature should not be treated like a standard research. All works included in the review must be read, evaluated and analyzed. Relationships between the literature is also identified and articulated, in relation to your field of research. The main aim of literature review is to analyze and discuss the state of the art in this domain. It is important to clarify the reader clearly with the previous knowledge and ideas that has been established on the topic and what their strengths and weaknesses are.

SAMPLE FOR THE GAME PROJECT:

You must find the most recent research/technical articles to perform literature review for your graduation project. Topics to cover in literature review:

1. How to develop the product: Strategies and processes used for this domain (agile/waterfall/prototyping)
2. What are the special requirements for this domain and how to adapt them? Example: What are the AI schemes normally used in game development and how are they applied.
3. How to develop and model scenarios/graphics/interfaces/sound effects?

# 3. Proposed System

This section attempts to propose a feasible solution to the problems in the current system environment as well as fulfilling new and/or additional user requirements.

## 3.1. Planned Activities

Report on the planned activities and achievements for the remaining timeline. Do include any additional activities undertaken that are not in your UML modeling packages, providing the background to their inclusion.

## 3.2. Issues and Risks

Report on any issues or problems that have impacted on the development and implementation of the project during the reporting period. Detail what impact any issues may have on the achievement of project targets, and set out how you plan to tackle these issues. Report on any unexpected project achievements. In this section you can list the potential risks within the development of the system.

## 3.3. Hardware and Software Requirements

This section should contain the tools and techniques that are used for the development and implementation of the Proposed System. You should also give a brief justification of the method and technique that you have chosen for this project.

You should consider and justify the usage of the following Methods and Techniques:

- Programming Languages (Structures Programming Languages or Object-Oriented Programming Languages (OOPL))
- System Architecture and Processing Methods, (i.e. Mainframe architecture, File Server, Client/Server architecture, Web-Centric etc.)
- Database Management System (i.e. Oracle, SQL-Server, MySQL Server)
- Hardware and Communication Platform

## 3.4. Project Management Plan and Gantt Chart

The Project Plan provides an overall framework for managing the tasks and assignments between the project development team as well as monitoring the costs and schedules. Project planning takes place at the beginning and end of each Project Phase to develop a plan and schedule for the phase that follows. GANTT chart is a popular project planning and scheduling tool.

The Project Management Plan and Gantt chart should present the project work plan starting from the beginning of graduation project orientation phase until the end of implementation phase (ITEC403+ITEC404). **The Project Management Plan and Gantt chart should be placed in the Appendix Section and referenced inside the report.**

# 4. Design and Modeling

This section will contain details about the main functionality of the Proposed System. In other words it will contain details of Logical Model of the System, in which it will show "what the system must do to satisfy business information need".

Use OODM as the System development methodology for Data and Process Modeling and Unified Modeling Language (UML) Diagrams in order to explain the Functional System. **All diagrams for UML modeling should be placed in the Appendix Section and referenced inside the report**.

## 4.1. General Use-Case Diagram

The general use-case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the users and the different use cases in which those user are involved.

## 4.2. Partial use-case Diagrams

The partial use-case diagrams are designed for each actor separately, showing each actor's role in the system by including the relative functions with the relationship lines.

## 4.3. Use-Case Templates

Use cases templates is a text based practice on each use-case. It is devised by various vendors or experts as a common industry practice to get high-quality functional system requirements. They describe the details for a use case, but permits it to be simplified when less detail is needed. Each use case template should lists the following fields: Use-case title, description, primary actor(s), trigger, precondition(s), postcondition(s), main success scenario and extensions/alternatives. A sample template structure is given below.

| | | |
|---|---|---|
| **Use Case Name** | | |
| **Scenario** | | |
| **Triggering Event** | | |
| **Brief Description** | | |
| **Actors** | | |
| **Related Use Cases** | | |
| **Stakeholders** | | |
| **Preconditions** | | |
| **Post conditions** | | |
| **Flow of events** | **Actor** | **System** |
| | | |
| **Exception Conditions** | | |

## 4.4. Activity Diagrams

Activity diagrams are the graphical representations which show the procedural flow of control between two or more class objects while processing a function. For the progress report we require an activity diagram for each use-case (function) in the system, in order to understand the workflow better.

For the requirement specifications, students are expected to use appropriate Software support tools for developing UML Models (i.e. Microsoft Visio)!!!

## 4.5. Domain class Diagram

The class diagram shows how the different entities (people, things, and data) relate to each other; in other words, it shows the static structures of the system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects.

## 4.6. Database Modeling

In this section you are expected to define **database requirements** in an ordered list according to the provided minimum requirements and your research. Draw a **conceptual Entity-Relationship Diagram** (ERD) using **Peter Chen** notation that will support the requirements listed in the proposal and the requirements you have gathered. You are to indicate the primary keys, multiplicities and cardinalities (if required) clearly in your diagram.

**Convert the ERD to relational schema**, list your tables and show constrains (only **primary keys** and **foreign keys**) clearly.

You should also list and define the **users and their roles/privileges** for the database. Additionally security precautions such as roles, privileges, encryption etc. must be presented in the section.

## 4.7. Interface Sketches

Interface sketches show a sequence of sketches of the display screens during a dialog with navigation. They enable to model the high-level relationships between major user interface elements and thereby ask fundamental usability questions. The boxes represent major user interface elements, modeled as you would instances/objects, and the arrows represent the possible flow between them, modeled as you would transitions in activity diagrams

**For example**, when you are on the Desktop screen, you can use the Students Icon to take you to the Search for Students screen. Once you are there, you can either go back to the desktop (going back is always assumed) or go to the Student Profile screen.

**All interface sketches must be presented in the Appendix Section and referenced inside the report**.

## 5. Completed Activities and Achievements

Report on the activities and achievements so far, as outlines in your UML modeling packages for the period covered by this report and describe any changes to this, including the reasons for these. Do include any additional activities undertaken that are not in your UML modeling packages, providing the background to their inclusion.

## 6. Conclusion

The term conclusion refers to the sentences or paragraphs that bring a report to a satisfying and logical end. Also called the concluding paragraph or closing. Restate the topic of your project and its main points. Mention the broader implications or significance of your topic. Also explain the planned schedule (tasks, partitions and task allocations) for the next phase of the project (ITEC404).

# References

[1] References may include published papers, books and Internet resources.

[2] For published papers, name(s) of the author(s), title of the paper, name of the published journal or proceeding, Volume no, Issue no, ISSN and year published should be written.

[3] For books, name(s) of the author(s), title of the book, publisher name, Edition, ISBN and year published should be written.

[4] For Internet resources, web link for the resource, date visited and date last updated should be written.

# 7. Appendix

**A1.** This is a Sample Figure

**A2.** This is another Sample Figure