

**ANKARA SCINECE UNIVERSITY FACULTY OF ENGINEERING**

**<DEPARTMENT NAME> ENGINEERING DEPARTMENT**

**GRADUATION PROJECT**

**GRADUATION PROJECT REPORT**

**< PROJECT NAME IN CAPITAL LETTERS AND CENTERED IN THIS SECTION>**

**Prepared by <2 or 3 students>**

**<Student Name, Surname, Student ID>**

**<Student Name, Surname, Student ID>**

**<Student Name, Surname, Student ID>**

**JUNE 2024**

**ANKARA**

The project titled "This Part Will Be Filled in Bold and Word Heads with Capital Letters" prepared by Name Surname. has been accepted as a GRADUATION PROJECT in Ankara Science University, <DEPARTMENT Name> Engineering Dept. by the following jury with VOTE UNANIMOUS / VOTE MAJORITY.

Advisor: ………………………………….

<DEPARTMENT Name> Engineering Department

I confirm that this report is a Graduation Project in scope and quality.

Signature: …………………….

Member: ………………………………….

<DEPARTMENT Name> Engineering Department

I confirm that this report is a Graduation Project in scope and quality.

Signature: …………………….

Member: ………………………………….

<DEPARTMENT Name> Engineering Department

I confirm that this report is a Graduation Project in scope and quality.

Signature: …………………….

I confirm that this project, accepted by the jury, fulfills the requirements for being a Graduation Project. ......../….…/……

…………………

Prof./Assoc.Dr….

Head of <DEPARTMENT Name>

**CONFLICT OF INTEREST**

In this project study that we prepared in accordance with Ankara Science University Engineering Faculty Project Writing Rules.

We declare that;

* We have obtained the data, information, and documents are presented in the project report within the framework of academic and ethical rules,
* We have presented all information, documents, evaluations, and results in accordance with the rules of scientific ethics and morality,
* We have cited all the works I have benefited from in the project study with appropriate attribution,
* We have not made any changes to the data used,
* This report is original and has not been presented elsewhere before,
* We have prepared within the framework of workplace training within the scope of the studies and observations,

We, all group members, hereby declare that we accept all loss of rights that may arise against us in any other case declared above. ......../….…/……

Name Surname (1st Student) Signature………..…

Name Surname (2nd Student) Signature……….…

Name Surname (3rd Student) Signature……….…

**SPELLING RULES**

The writing format to be used in the preparation of this report is set out in detail below.

**1. TYPING**

**1.1. Nature of the Paper to be Used**

Reports should be written on A4 (21 x 29.7 cm) standard and NAVIGATOR 80 Gram first pulp white paper.

**1.2. Margins and Page Layout (Single and Double Pages)**

In writing, a margin of 3.0 cm on the top, 2.75 cm on the left, 2.0 cm on the bottom and 2.75 cm on the right edges of each page should be left.

**3.3. Writing Plan**

Use of paper surface

Reports should be written using a computer. One side of the paper should be used for the section from the beginning of the report to the INTRODUCTION and for the APPENDICES section at the end of the report, and two sides of the paper should be used from the INTRODUCTION to the end of REFERENCES. Section headings, including the INTRODUCTION, should always be on the front page (with a single page number).

Page numbers

The section from the beginning of the report to the INTRODUCTION should be numbered with Roman numerals. Numbering from the INTRODUCTION should be done with natural numbers (1,2,3...etc.).

Font character and size

**Palatino Linotype** and **12-point font** should be used in report writing. However, 10 pt. font size can be used for footnotes, and smaller font sizes (minimum 8 pt.) can be used for large and/or long charts, provided that they can be easily read. A maximum of 12 and a minimum of 8 points can be used when writing inside the tables. Font sizes other than these values should not be used. A character smaller than the plain font size should be used in the writing of subscripts and superscripts (the "superscript, subscript" features given automatically in the MS Word program can be used). There should be a one-character space after commas and periods.

Line spacing

Paragraphs should start from the left edge of the page and should not be indented. In the transition between paragraphs, paragraph spacing should be used as **6k** and **then 6k**.

The Latin names of plants and animals are based on the naming codes in each scientific discipline.

**3.4. Spelling of Numbers**

Only commas should be used in writing decimal numbers. Consecutive decimal numbers should be separated by semicolons (;).

Table 3.1. Spelling of decimal numbers

|  |  |  |  |
| --- | --- | --- | --- |
| That's right | Wrong | That's right | Wrong |
| 5,2 | 5.2 | 1032,97134 | 1032.97134 |

When writing large numbers, they can be grouped in threes starting from the last digit of the number and a space of one stroke can be left between these groups of three. However, no periods or commas are placed in these spaces.

Table 3.2. Spelling of large numbers

|  |  |  |
| --- | --- | --- |
| That's right | Wrong | Wrong |
| 1 000 000 | 1.000.000 | 1,000,000 |

**3.5. Line and Paragraph Spacing**

**Full** line spacing (**Value 18**) should be used in writing the report text. Paragraph spacing should be **6 pt before** and **6 pt after**.

Single line spacing should be used for abstract, abstract, citation, footnote and reference list.

Figure, Picture, Map captions and Table superscripts should be written with single line spacing. When bullet points or numbering is made in the text, no space should be left between two bullets/numbers.

There should be 1.5 line spaces between the section headings and sub-section headings and the first paragraph following them, as well as before the sub-section headings.

The writing of the main sections should always start on a new, single numbered page.

**3.6. Numbering of Pages**

Page numbers should be given in Palatino LinoType typeface and 10 point font, 3.0 cm from the top and 2.75 cm from the right for odd numbered pages; 3.0 cm from the top and 2.75 cm from the left for even numbered pages.

The preliminary pages of the report such as Abstract, Abstract, Acknowledgments, Table of Contents, List of Tables, List of Figures, Symbols and Abbreviations should be numbered with small Roman numerals starting from iv (starting from Abstract) and the text of the report between the Introduction and CV should be numbered as "1, 2, 3, ...". Page numbers should not be given on the Cover, Acceptance/Approval and Ethical Statement pages. No signs such as brackets or dashes should be used before or after the page numbers.

**3.7. Word and Text Fragmentation**

The word at the end of a line in the text should not be divided into two. There should be at least two lines of text after the sub-section headings. If the text does not fit on the page after the sub-section titles, the title should be moved to a new page.

**3.8. Type Processors**

It is recommended to use MS Word Program for report writing. However, depending on the requirements of the subject area, LATEX writing program can also be used.

**3.9. Correction of Errors**

All corrections and changes to the report text must be made electronically. Corrections made by hand or by using text correctors are not accepted.

**3.10. Sections and Subsections**

Table 3.3 shows the rules and examples regarding the writing of chapter and sub-chapter titles.

Table 3.3. Writing of chapter and sub-chapter titles

|  |  |  |
| --- | --- | --- |
| Text Type | Features | Example |
| Special Page Title | Uppercase, bold, 12-point font and centered | **THANK YOU**  **BACKGROUND** |
| First degree section headings | Uppercase, bold and 14 point font | **1. INTRODUCTION** |
| Second degree subsection headings | The first letter of each word is capitalized, all bold and 12-point font  (Conjunctions such as "and", "or", "with", if any, are written in lower case). | **1.1. Administrators and Teachers**  **Vocational Education Centers**  **Opinions about** |
| Third degree subsection headings | Only the first letter of the first word is capitalized, all in bold and 12-point font | **3.1.1. Administrators and teachers**  **on disciplinary regulations**  **Opinions** |
| Unnumbered subheadings between numbered chapter and subsection headings | Plain and underlined, italic only or italic and underlined and 12-point font, respectively  (Words, sentences or definitions to be emphasized can also be italicized. These subheadings should never be written in bold). | Senior manager  *Assistant manager*  *Janitor* |

**3.11. Numbering of Sections and Subsections**

In reports, main sections are numbered with 1, 2, 3, .... In some reports with a lot of detail, subsections may also be numbered with a double numbering system. For this purpose, each sub-section also receives the number of the section and sub-sections in which it is included.

For example; 2.1. means the first sub-section of the second chapter; 2.1.1 means the first sub-section of the first sub-section of the second chapter. In the reports of the Departments of Mathematics and Statistics, Example and Proof should be italicized; Theorem, Definition, Lemma should be written in plain and not bold.

Correct spelling of definition, lemma, example and proof statements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Examples of correct use | | | | |
| 2.1.1. Theorem | 2.1.1. Definition | 2.1.1. Lemma | *Example* | *Proof* |

References to "Theorem", "Definition" and "Lemma" in the text should be Theorem 2.1.1; Definition 2.1.1; Lemma 2.1.1

.

**WRITE THE PROJECT NAME IN ENGLISH IN CAPITAL LETTERS AND CENTERED IN THIS SECTION**

(Graduation Project)

**ABSTRACT**

Abstract is the section that should be written after the project is completed and the project report is written. The aim of the abstract is to give the reader general information about the project topic. Someone who does not know your project at all should be able to get an idea of what the project is and decide whether it is interesting for them by simply reading the abstract. In abstract, the aim and scope of the project, the methods and techniques used in the research and the modeling, simulation, testing, prototype production etc. verification methods and results should be explained. While writing the abstract, passive expressions such as "done, completed, applied" should be used. In this section, details of the study, comments and sources should not be mentioned. In addition, quotations, tables, figures and mathematical expressions should not be included. The entire abstract should be between 150-300 words.

Keywords :

Page Number :

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**SYMBOLS AND ABBREVIATIONS**

The symbols and abbreviations used in this study are presented below with their explanations.

**Symbols Explanations**

**m3**  Comments should **not** be longer than one line

**db** Decibel

**hz** Hertz

**m²** Square meter

**Abbreviations Explanations**

**AB** Comments should not be longer than one line

**ASHRAE** Abbreviations should be given in alphabetical order

**ASTM** Abbreviations should be given in alphabetical order

**BRE** Abbreviations should be given in alphabetical order

**BREEAM** Abbreviations should be given in alphabetical order

**BTK** Abbreviations should be given in alphabetical order

**CFD** Abbreviations should be given in alphabetical order

# INTRODUCTION

## 1.1 Purpose

<Identify the product whose software requirements are specified in this document. Describe the scope of the product that is covered by this SRS.>

## 1.2 Project Scope

<Provide a short description of the software being specified and its purpose, including relevant benefits, objectives, and goals. Relate the software to corporate goals or business strategies. An SRS that specifies the next release of an evolving product should contain its own scope statement as a subset of the long-term strategic product vision.>

# OVERALL DESCRIPTION

## 2.1 Product Perspective

<Describe the context and origin of the product being specified in this SRS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product.>

## 2.2 Product Features

<Summarize the major features the product contains or the significant functions that it performs or lets the user perform. Details will be provided in Section 3, so only a high level summary is needed here. Organize the functions to make them understandable to any reader of the SRS. A picture of the major groups of related requirements and how they relate, such as a top level data flow diagram or a class diagram, is often effective.>

## 2.3 Object Design

<Establish the relationships and identify the hierarchies between classes. In addition, create the internal details of the classes and their relationships, such as the data structure for each attribute and the algorithms for the operations. >

## User Classes and Characteristics

<Identify the various user classes that you anticipate will use this product. User classes may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience. Describe the pertinent characteristics of each user class. Certain requirements may pertain only to certain user classes. Distinguish the favored user classes from those who are less important to satisfy.>

## Operating Environment

<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist.>

## Design and Implementation Constraints

<Describe any items or issues that will limit the options available to the developers. These might include: corporate or regulatory policies; hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards (for example, if the customer’s organization will be responsible for maintaining the delivered software).>

## Assumptions and Dependencies

<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project, unless they are already documented elsewhere (for example, in the vision and scope document or the project plan).>

**3. METHOD**

In this section, please include the following sections and sub-headings:

* The method or research design of the study,
* Your study group, population, sample (if you collected data from people in your study), study site, location and their characteristics,
* What your data collection tools are, how you did it if you developed them, and your data collection process,
* How you conducted your observations and fieldwork and how you conducted them, how you analyzed the data and what tools or software you used for this,
* Experimental setups, materials and experimental processes (if it is an experimental study)

In experimental studies, the experimental setup and how the data are collected should be clearly explained. The basic properties of the important measuring devices in the experimental setup (what it is, measurement range, sensitivity, etc.) and the material or materials used should be specified. In this section, you can use subheading numbers such as 3.1. , 3.1.1.1. , 3.2.

1. **IMPLEMENTATION AND RESULTS**

In this section, please include the following sections:

* Clearly state the findings of the data you collected in your study. Make sure that the findings you state coincide with your objectives.
* Present your findings in tables, figures, pictures, charts, etc. as objectively as possible and without comment.
* Be sure to number and name each of the expressions in tables, figures, pictures, charts, etc. (see examples in your own branch)
* Be sure to refer to tables, figures, pictures, charts, etc. in the text you write.
* When referring to tables, figures, pictures, charts, etc. in the text, avoid expressions such as "below, next door, above, etc.". Instead, use more explicit expressions such as "as seen in Table 2 ......".
* Your findings can be numerical values, some mathematical equations or verbal expressions. Discuss your findings, indicating the limits of validity.
* When discussing your findings, state the similar and different results of your study together with other studies in the literature and refer to other studies.

In this section, you can use subheading numbers such as 3.1. , 3.1.1.1. , 3.2.

1. **CONCLUSION**

Write the results of your project in this section.

* You can write your results in bullet points.
* If there are reasons that affect your results negatively, explain them. Before writing this section, be sure to review the purpose of your study and indicate how much you have achieved your goal.

**REFERENCES/SOURCES**

1. Internet: TUBITAK 2242 University Students Research Project Competitions Project Guide, 2019, https://www.tubitak.gov.tr/sites/default/files/2750/2242-2019\_proje-rehberi.pdf , Last Accessed: 04.04.2021.
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