CM1 Report Template

Write a report (**at least 15, at most 22 pages long excluding the cover page, the table of contents, the list of figures etc., 12 pt. Times New Roman or Arial on MS Word, or LaTeX**) which follows the guideline below:

1. Cover Page and Table of Contents:

The cover page should include **the document name, project name, university and department information, project team members, academic mentor, company mentor and teaching assistant, date**. Please also give a brief description of the company, which aims to use the output of this project.

2. Project summary:

A <u>single-paragraph</u> abstract (~250 words) which summarizes the **project idea**, **your solution strategy**, **simulation**, **test and other validation strategies** you plan to use, and **expected results**.

3. Motivation and Novelty:

* What is the issue/problem the company is trying to resolve with your project (if there are more than one issues or problems, state all of them)? How serious is it on a national, global and consumer scale? What outcomes does the company expect upon the successful completion of your project?

* How will the company utilize the final product? Will it be integrated into an existing product or used alone? What kind of improvements can the company do on the project post-completion?

* Please research **similar products** and compare (with your product):
    - The cost,
    - Advantages and disadvantages,
    - The novelty aspect of your project,
    - Existing/unresolved problems with the similar products.

* How likely are you to receive a **patent** for your project? Are there any similar national or international **patented solutions** (does not have to be a commercial product)? What are their similarities and differences to your idea?

4. Requirements:

4.1 *Functional Requirements*

Describe the **functions/capabilities** of your final product as **quantitatively** as possible (both user controlled and autonomous) in an itemized requirement format (see "IEEE Guide for Developing System Requirements Specifications, IEEE Std 1233, 1998" and examples on the course Moodle page). **Itemize and number each requirement so that it has an ID (see examples)**.

4.2 *Non-Functional Requirements/Constraints*

What are the **non-functional requirements/constraints** of your final product? ***Discuss each of the item below*** in your report. Indicate, if there is no such constraint related to any item.

* What is **the maximum allowable cost** of your product/project?

* What are **the maximum allowable size, weight etc** of your product?

* What are **the power requirement/constraint** of your product?

* What are the **environmental issues (both environmental operating conditions and other issues)** you considered for your design?

* What are the **safety issues** you consider for your design?

* Describe the **health constraints and requirements** related to your product.

* Global, cultural and social factors that can affect your design.

* Provide references related to the **standards** that your final product will be compatible with.

Hint: While writing the requirements, refer to "IEEE Guide for Developing System Requirements Specifications, IEEE Std 1233, 1998 Edition (R2002)" available on course Moodle page. You can also find some examples of "Requirements Document".

5. Methods and Implementation Details

5.1 *Work Breakdown Structure and Project Plan*

* Break down your project into main **work packages/tasks**. Explain briefly your work packages/tasks. Specify the **milestones of the project** and relate them to the works/tasks. (Milestones are certain points in your project that show an important achievement or the completion of a major phase in the project; i.e. when you complete a major task or a combination of related tasks.) Give **Gantt chart** for your WBS with **responsible team members**. You may use MS Project, Excel or any other program. The important point is that your Gantt chart should include your work packages/tasks and their time durations in the project with **responsible team members** and also indicate milestones on your Gantt chart.

* Specify your performance expectation and define your success criteria for each milestone.

5.2 *Methods and Progress*

* Explain your solution strategy for each major task/work package in different subsection. Give the details of **methods** you use/will use, **required tools, equipment and technique**, **simulations** etc. Give more detail for tasks you have started/finished up to now. Do not hesitate to give block diagrams, flow charts, figures, schematics, tables when necessary. It is your responsibility to make sure that the reader understands your solution strategy and your current state in detail.

* What are the possible risks throughout the project?
    - Explain the risks in different work packages, which may affect your project outcome.
    - Also, include the precautions you expect to undertake if the risky work package fails during the project.

6. A detailed equipment list:

A detailed **equipment list**, **their costs** and **the way you obtain them** (from company, by purchase, from the department). You should provide a **compact table** which summarizes all of the equipment you have purchased/used in your project.

7. References:

Include references you have used. Please do not list a number of literature in this section. If there is any reference here, **it should be referred in the text** with necessary explanation.

Important Notes:

1- Please **DO NOT EXCEED** the page limit (22 pages). Prepare your reports in a concise manner, do not use *smaller font sizes* or change the default page margins.

2- You may want to send your report to your TA before the deadline so that your TA can provide you feedback.

3- Name your reports as "TeamNo_CM1_Report" while submitting it to the Moodle.

4- The deadline for report submission is **November 14**, **Monday**, 11:55 am (morning).

    a. Upload your soft copies to the corresponding Moodle assignment until the deadline of yours.

    b. Leave your colored, single-page, spiral-bounded hard copies to Ceren Erkut's mailbox before your deadline. We will collect the reports before the lunch break, so please DO NOT BE LATE.