

## Abstract

An abstract is generally quite brief. In a computer science/information technology related paper, it should in most cases include the following sections: **Problem Statement, Objectives, Design and Methodology, Construction and Testing, Contribution, and Conclusions.** Each section is typically a single sentence. In particular, the parts may be merged or spread among a set of sentences.

### Problem Statement

A problem statement is a brief overview of the issues or problems existing in the concerned area. It is a clear, precise and succinct statement of the question or issue that is to be investigated with the goal of finding an answer or solution. There are 2 ways of stating a problem:

1. Posting question / questions
2. Making declarative statement / statements

### Objectives

This is a listing of the objectives which you wish to achieve in the project undertaken, showing how the project is able to **bring benefits to the organisation or users concerned.** For research project, the primary objective should be coupled with the hypothesis of the study.

**List the objectives which you wish to achieve in the project undertaken** that define the specific aims of the study.

### Design and Methodology

Revisit the user-oriented problems and requirements in general, such as production functions, similar system information, problems confronted by the users, user objectives, and general constraints (business rules). You should describe the software development model such as waterfall, agile, spiral, etc in the subsequent sections.

For a real-life, industrial-based project, the operation environment describes the various hardware and software that are required to run the software that will be developed for a particular organization. You are required to provide some system architecture, basic configuration of the hardware, for example, server, terminals, network infrastructure etc to be used in that organization. Software to be used may include the operating system, DBMS, development tools etc. A specific number and specification details of both the hardware and software components are also required. A diagram showing the basic system architecture would be useful. For easy reading and understanding, the above should be presented in the form of a table

For projects which are not ‘real-life’ or industrial-based, you are required to specify who the target customers or market will be, which includes the relevant industries, business model, nature of business, size of company, types of products and services etc that the software can be used. The minimum system (hardware and software) requirements to run the software in an operation environment must also be included.

### Conclusion

The conclusions section should relate directly to the objectives, and sum up the essential features of your work. In this section, you should:

1. State whether you have achieved your objectives
2. Give a brief summary of the project design
3. Highlight the project outputs.

### Construction and Testing

Describe the various software tools, hardware and other resources are used for constructing and testing the project. You must identify and quantify the programming languages, databases, development tools, hardware, and other software to be used.

Present the design of the graphical user interfaces, hardware interfaces, communication interfaces, and software interfaces, if any. Describe the behavioural features that the specified functions must have, e.g. how reliable and usable is the system. Present the concrete functions of the system, such as process logic, tasks and algorithms, i.e. what the system can accomplish.

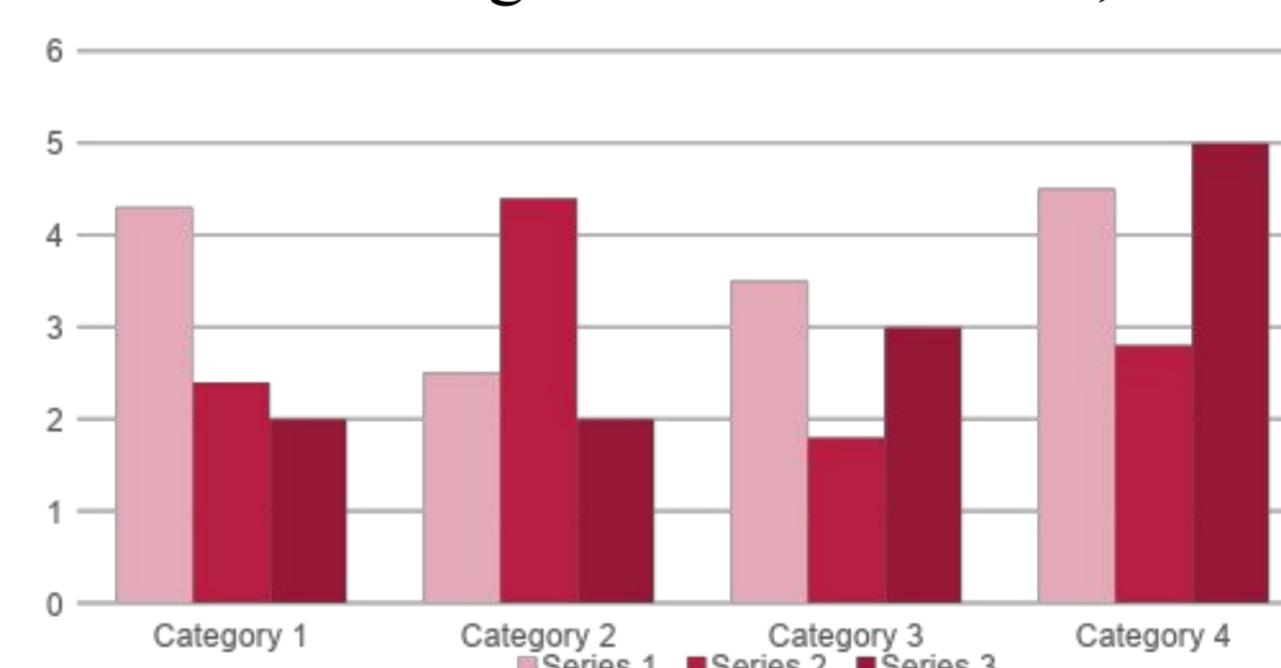
Discuss any problems faced and how you solve or reduce the impact of the problems. You should include any **innovative or creative ideas** used for your project.

All tables must be labelled with proper captions, placed on top of the table and centralized as shown in **Table 1** below.

**Table 1: Example of Table**

	Series 1	Series 2	Series 3
Category 1	4.3	2.4	2
Category 2	2.5	4.4	2
Category 3	3.5	1.8	3
Category 4	4.5	2.8	5

Similar to table, all figures must be labelled with proper captions, placed below of the figure and centralized, as shown in **Figure 1.**



**Figure 1: Example of Figure**

### Contribution

You should elaborate how your project brings contribution, including but not limited to:

1. **commercialization values,**
2. **social responsibility,** and
3. **technical awesomeness.**