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This Research Project report is submitted to the Department of Computer Science as partial fulfillment of Master of Science in Computer/Data Science degree

by

**Student Full Name**

Supervised by

**Supervisor Name**

Designation

Department of Computer Science

School of Mathematics and Computer Science (SMCS)

Institute of Business Administration (IBA), Karachi

Season Semester Year

Institute of Business Administration (IBA), Karachi, Pakistan

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A picture containing text, sign, dark, night sky

Description automatically generated A picture containing text

Description automatically generated

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**Student Full Name**

(ERP ID: 00000)

**Dr. First name Last name** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Supervisor

University Affiliation

**Dr. First name Last name** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dean

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# Dedication

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# Acknowledgement

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# Abstract

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Text of Abstract.

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*Keywords:*

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# Chapter 1

# Introduction (Font size: 18, Times New Roman, left align)

This chapter provides an over view of significance and methodology of this research. It also provides a brief outline of the flow of the dissertation whole dissertation. It gives the purpose, objective, motivation.

It has been established in literature. However, this improved sharing and extensive use of in the organizational dynamics. Its importance has been increasing with advances in the ability to share it. This ease in sharing has been enabled by computerization rds.

|  |  |  |
| --- | --- | --- |
| **Type of memory** | **Abbreviation** | **Features** |
| Dual inline | DIP | Individual memory |
| Single inline | SIMM | Circuit board |
| RAM bus inline | RIMM | RDRAM chip |

**Table 1. Computer RAM**

* 1. **Sub-Heading (Font size: 14, Times New Roman, left align)**

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### **1.1.1 Sub-sub-heading** **(Font size: 12, Times New Roman, left align)**

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**(For text: font size: 12, Times New Roman, Justified, 1-tab space from every second paragraph onwards)**

# References

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Chicago citation style will be used throughout the document. Please visit:

<https://www.chicagomanualofstyle.org/tools_citationguide/citation-guide-2.html>

You can use any reference management system if you prefer, e.g., EndNote.

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**[What should be the format of this report?]**

**[Delete this section after completing the report]**

**Note: In MS Project, the requirement is to implement a product which will be useful for both industry or academic research community.**

**The total weightage for this report is 50%**

**Chapter 1: Introduction (3-5 pages)**

* Describe the business domain of your project (maximum 1 paragraph) – include figures/tables to facilitate understanding as required
* Describe the business process of your project that is related to your business domain (maximum 1 paragraph) – include figures and tables as required
* Describe the business problem which your project is solving (maximum 1 paragraph) – include figures and tables as required
* What is the uniqueness of your project/product? (maximum 1 paragraph) – you don’t need to detail the competitor solutions here because they are asked later on
* Mention some local and global industries (or research communities) for which your product can be useful (make a list and justify the usability for each)
* Mention the Unique Selling Points (USPs) (potential impact(s)) of your solution for industry/research community – you can make a bulleted list along with justifications.

**Chapter 2: Competitor Solutions and Product Positioning (3-5 pages)**

* Mention all competitor solutions – they could be softwares, mobile applications, technologies or research prototypes or any other solution type
* For each solution, describe its features in detail – you should mention the URLs and other references (e.g., white papers, periodicals, research papers etc.)
* Also mention which online sources you used to search for the competitor solutions (ChatGPT, Google etc.)
* At the end of this section, mention how your proposed product is different or like the competitor solutions (this information is most important to gauge how much your product idea is novel and usable).

**Chapter 3: Product Design (4-7 pages)**

* Draw a robust design diagram of your proposed product/solution/prototype.
* The design should be according to the standard software design practices – any sub-standard design will be rejected
* Some recommendations for your design are:
  + Should be modular,
  + Should be scalable,
  + Should have a layered architecture,
  + Use design patterns,
  + Keep API-first (design APIs/interface points before implementation),
  + Apply software testing practices,
  + DevOps/CICD pipelines if applicable,
  + Make your design secure,
  + Use configuration files where needed,
  + Log everything,
  + Version control if required,
  + Proper documentation of your product
* You should explain each module of your design diagram thoroughly.

**Chapter 4: Product Testing (4-10 pages)**

* Mention the detailed experimental methodology for testing your product (mention the test use cases to test each feature of your product thoroughly)
* Mention all primary features of your product/prototype and describe how each feature will be tested
* Implement as many different types of testing as possible (functional, non-functional, regression, smoke etc)
* Check the scalability of your product/prototype
* Include snapshots of results wherever applicable.
* **Discuss thoroughly the results of each test**
* **Mention possible reasons for any negative results**
* **Link the positive results with the impact of your product/prototype.**

**Chapter 5: Limitations, Poster, Video Link**

* Mention the limitations of your product (make a bulleted list)
* Create a poster of your work as per instructions and then insert the image of your poster on a separate page in this chapter
* Create a video of your work and insert the link on a separate page in this chapter. The video should basically give a detailed demo of your work.