Sample sheet (outer cover)

STATISTICAL PROCESS CONTROL OF MECHANICAL LOCKING SYSTEM FOR AUTOMOTIVES (24pt.)

REPORT (14pt.)

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR
Four Weeks Training

at

TCS, Mumbai
(from _____to _____)

SUBMITTED BY

Priyanka Walia (14pt)
Branch
Roll No.
Univ. Roll No.

GNDEC Logo

Information Technology Department
GURU NANAK DEV ENGINEERING COLLEGE
LUDHIANA, INDIA (14pt.)

Sample sheet (inner title page)

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B.TECH TRAINING REPORT GUIDELINES

1. The report shall be computer typed (English- British, Font -Times Roman, Size-12 point, Double spacing between lines) and printed on A4 size paper.
2. The report shall be hard bound with cover page – Light Red (TR102) , Lemon (TR103). The name of the candidate, degree, month of training, college name shall be printed in black on the cover [refer sample sheet (title page/front page)].
3. The report shall be typed on one side only with double space with a margin 3.5 cm on the left, 2.5 cm on the top, and 1.25 cm on the right and at bottom.
4. In the report, the title page [Refer sample sheet (title Page/front page)] should be given first then the Certificate by Company/Industry/Institute and then candidate‟s declaration, followed by an abstract of the report (not exceeding one page). This should be followed by the acknowledgment, list of figures/list of tables, notations/nomenclature, and then contents with page nos.
5. References and Bibliography should be included in report.
6. The diagrams should be printed on a light/white background, Tabular matter should be clearly arranged and the font of the Tabular matter should be Font -Times Roman, Size-10 point, Single spacing between lines. Decimal point may be indicated by full stop(.). The caption for figure must be given at the BOTTOM(center aligned) of the figure and Caption for the Table must be given at the TOP(center aligned) of the Table. The font for the captions should be Times Roman, *Italics*, Size-10 point.
7. The font for the chapter titles should be Times Roman, Bold, Capital, Size-16 point and center aligned. The font for the Headings should be Times Roman, Bold, and Size-14 point. The font for the sub-headings should be Times Roman, Bold, and Size-12 point.
8. Equations should be numbered as 1.1, 1.2, 1.3 etc in chapter 1. Similarly as 2.1, 2.2, 2.3 etc in chapter 2 and so on.
9. Figures should be numbered as Figure1.1, Figure 1.2, Figure 1.3 etc in chapter 1. Similarly as Figure 2.1, Figure 2.2, Figure 2.3 etc in chapter 2 and so on.

10. Tables should be numbered as Table 1.1, Table 1.2, Table 1.3 etc in chapter 1. Similarly as Table 2.1, Table 2.2, Table 2.3 etc in chapter 2 and so on.

11. Conclusions and future scope each must not exceed more than two page.

12. The graphs (optional) should be combined for the same parameters for proper comparison. Single graph should be avoided as far as possible.

13. The training report must consist of following chapters:

    Chapter 1- Introduction
    Chapter 2- Requirement Analysis and System Specification
    Chapter 3- System Design
    Chapter 4- Implementation, Testing and Maintenance
    Chapter 5-Results and Discussions
    Chapter 6-Conclusion and Future Scope References
    Appendix (if any)
    Annexures-I,II,III

14. References (For style of references follow the instructions attached)

15. Appendix (Any additional information regarding training, (If any) e.g. program, is supposed to be included in appendix

16. There should be 3 copies of Final Report.

GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

CANDIDATE'S DECLARATION

I "NAME OF THE STUDENT" hereby declare that I have undertaken four week training "Name of **Company/ Industry / Institute**" during a period from __ to ____ in partial fulfillment of requirements for the award of degree of B.Tech (Electronics and Communication Engineering) at GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA. The work which is being presented in the training report submitted to Department of Electronics and Communication Engineering at GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA is an authentic record of training work.

Signature of the Student

The four week industrial training Viva–Voce Examination of_____has been held on
_____and accepted.

Signature of Internal Examiner

Signature of External Examiner

Abstract(Sample)

Packet Filtering firewalls can use a database of rules to decide which packets will be allowed to move in and out and from one network onto another. However with the increase in size of rule list, it's very hard to manage and validate the rules, which can also increase the cost of rule lookup and that may add significantly to latency. Packet filtering is the one of the major contemporary firewall design techniques. Implementation of such packet filter using Binary Decision Diagram (BDD) gives more advantages in terms of memory usage and look up time. In the case of the list-based packet filter firewall where rules are checked one by one for each incoming packet, the time taken to decide on a packet is proportional to the number of rules. The performance is improved with rule promotion but that is a slow and static kind of firewall implementation. In this work a BDD-based approach is presented which gives much better result in terms of number of comparisons or accesses the rule list make. This work presents the study, design and implementation of a packet filter firewall using binary decision diagram which provides faster processing of packets while maintaining the integrity of the original security policy. Results on large number of packets show that for most-accept packets, and for most- reject packets there is manifold reduction in such comparisons when BDD-based approach is used over list-based with promotion approach.

The overall performance of a firewall is crucial in enforcing and administrating security, especially when the network is under attack. The continuous growth of the Internet, coupled with the increasing sophistication of the attacks, is placing stringent demands on firewall performance. In this work, a traffic-aware optimization framework is described to improve the operational cost of firewalls. Based on this framework a set of tools are designed that inspect and analyze both multidimensional firewall rules and traffic logs and construct the optimal equivalent firewall rules based on the observed traffic characteristics. The current work is the first to use traffic characteristics in firewall optimization. To evaluate the performance of current approach, a large set of firewall rules and traffic logs from a local LAN or at tens of enterprise networks managed by a Tier-1 service provider are evaluated. The evaluated results find these approaches very effective. In particular, current work has achieved more than 10 fold performance improvement by using the proposed traffic-aware firewall optimization

Sample sheet –Certificate

Letter Head of Company/Organization

WHOM IT MAY CONCERN

I hereby certify that "NAME OF THE STUDENT" Roll No _____of Guru Nanak Dev Engineering College Ludhaina, has undergone 4 weeks training from _____to ____at our organization to fulfill the requirements for the award of degree of B.Tech. (Branch).He/She works on _____project during the training under the supervision of _____. During his tenure with us we found him sincere and hard working.
Wishing him a great success in the future.
Signature of the Student

Signature of the SUPERVISOR (S)

(Seal of Organization)

SAMPLE SHEET-**ACKNOWLEDGEMENT**

ACKNOWLEDGEMENT

I/WE are highly grateful to the Dr. Sehijpal Singh , Principal, Guru Nanak Dev Engineering College (GNDEC), Ludhiana, for providing this opportunity to carry out the six month industrial training at _____.

The constant guidance and encouragement received from Dr. K. S. Mann Dean T&P, GNDEC Ludhiana has been of great help in carrying out the project work and is acknowledged with reverential thanks.

I/WE would like to express a deep sense of gratitude and thanks profusely to _ _____Director/CEO of Company , . Without the wise counsel and able guidance, it would have been impossible to complete the report in this manner.

The help rendered by Mr _____, Designation(___Department _____) for experimentation is greatly acknowledged.

I/WE express gratitude to other faculty members of Information Technology department of GNDEC for their intellectual support throughout the course of this work.

Finally, I/WE are indebted to all whosoever have contributed in this report work and friendly stay at _____.

Priyanka Walia

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Chapter 1 Introduction **Page 1 (so on onwards)**

1.1 Introduction to Organization**(should not exceed 3 pages including Figs.)**
1.2 Introduction to Project
1.3 Project Category(Internet based, Application or System Development, Research based ,Industry Automation, Network or System Administration)
1.4 Objectives
1.5 Problem Formulation
1.6 Identification/Reorganization of Need
1.7 Existing System
1.8 Proposed System
1.9 Unique Features of the System

Chapter 2. Requirement Analysis and System Specification

2.1 Feasibility study (Technical,Economical,Operational)
Software Requirement Specification Document which must include the following:(Data Requirement, Functional Requirement, Performance Requirement, Dependability Requirement, Maintainability requirement, Security requirement, Look and feel requirement)
2.2 Validation
2.3 Expected hurdles
2.4 SDLC model to be used

Chapter 3. System Design

3.1 Design Approach (Function oriented or Object oriented)
3.2 Detail Design
3.3 System Design using various Structured analysis and design tools such as : DFD's,Data Dictionary,Structured charts,Flowcharts or UML
3.4 User Interface Design
3.5 Database Design
3.5.1 ER Diagrams
3.5.2 Normalization
3.5.3 Database Manipulation
3.5.4 Database Connection Controls and Strings
3.6 Methodology

Chapter 4. Implementation ,Testing and Maintenance

4.1 Introduction to Languages,IDE's,Tools and Technologies used for Implementation
4.2 Coding standards of Language used
4.3 Project Scheduling using various tools such as PERT,GANTT charts,Open PROJ etc.
4.4 Testing Techniques and Test Plans

Chapter 5. Results and Discussions

5.1 User Interface Representation (Of Respective Project)
5.1.1 Brief Description of Various Modules of the system
5.2 Snapshots of system with brief detail of each
5.3 Back Ends Representation (Database to be used)
5.3.1 Snapshots of Database Tables with brief description **Chapter 6.**

Conclusion and Future Scope

References/Bibliography

(Note: Page No.s for different topics in report may vary according to the contents.

Headings within the chapters should be numbered as 1.1, 1.2, 1.3 and so on for chapter 1. Similarly as 2.1,2.2, 2.3 and so on for chapter 2. The corresponding subheadings as 1.1.1, 1.1.2, 1.1.3 and so on.)

GNDEC Citation Reference

Citation standards in this reference are provided for:

- Books
- Conference Technical Articles/Papers
- Periodicals (Journals/ Transaction/Magazines/Letters)
- Reports
- Online sources
- Patents, Standards, Thesis (M.S.) and Dissertations (Ph.D.)

NOTE: For two authors use style [J. K. Author and A. N. Writer] and
For three or more authors: [separate author names by comma and also use word „and‟ before the name of last author e.g. : J. K. Author, R. Cogdell, R. E. Haskell, and A. N. Writer]

Books

Basic Format:

[1] J. K. Author, *Title of His Published Book*, *x*th ed. City of Publisher, Country: Abbrev. of Publisher, year.

Examples:

[1] B. Klaus and P. Horn, *Robot Vision.* Cambridge, USA: MIT Press, 1986.

[2] L. Stein, *Computers and You*, J. S. Brake, Ed. New York, USA: Wiley, 1994.

[3] M. Abramowitz and I. A. Stegun, Eds., *Handbook of Mathematical Functions* (Applied Mathematics Series 55). Washington, DC, USA: NBS, 1964.

Conference Technical Articles/Papers

Basic Format:

[1] J. K. Author, "Title of paper," *Unabbreviated Name of Conference*, City of Conference, Country, year, pp. *xxx-xxx.*

Example:

[1] H. Chen, S. C. Laroiya, and M. Adithan, "Precision Machining of Advanced Ceremics" *International Conference on Advanced Manufacturing Technology (ICMAT - 94)*, Johor Bahru, Malaysia, 1994, pp. 203-210.

Periodicals (Journals/ Transaction/Magazines/Letters)

Basic Format:

[1] J. K. Author, "Name of paper," *Unabbreviated Title of Periodical*, vol. *x*, no. *x*, pp. *xxx-xxx*, Abbrev. Month, year.

Examples:

[1] R. E. Kalman, "New results in linear filtering and prediction theory," *Journal of Electrical Engineering*, vol. 83, no. 5, pp. 95-108, Mar. 1961.

[2] Y. V. Lavrova, "Geographic distribution of ionospheric disturbances in the F2 layer," *IET Microwaves, Antennas and Propagation*, vol. 19, no. 29, pp. 31–43, Feb. 1961.

[3] E. P. Wigner, "On a modification of the Rayleigh–Schrodinger perturbation theory," (in German), *International Journal of Computational Intelligence Studies*, vol. 53, p. 475, Sep. 1935.

[4] W. Rafferty, "Ground antennas in NASA‟s deep space telecommunications," *IEEE Transactions on Antennas and Propagation*, vol. 82, pp. 636-640, May 1994.

Reports:

The general form for citing technical reports is to place the name and location of the company or institution after the author and title and to give the report number and date at the end of the reference.

Basic Format:

[1] J. K. Author, "Title of report," Name of Company, City of Company, Country, Report No., *xxx*, year.

Examples:

[1] E. E. Reber "Oxygen absorption in the earth‟s atmosphere," Aerospace Corporation, Los Angeles, USA, Tech. Rep. TR-0200 (4230-46)-3, Nov., 1988.

Online Sources

FTP

Basic Format:

[1] J. K. Author. (year). *Title* (edition) [Type of medium]. Available FTP: Directory: File:

Example:

[1] R. J. Vidmar. (1994). *On the use of atmospheric plasmas as electromagnetic reflectors* [Online]. Available FTP:atmnext.usc.edu Directory: pub/etext/1994 File: atmosplasma.txt

WWW

Basic Format:

[1] J. K. Author. (year, month day). *Title* (edition) [Type of medium]. Available: http://www.(URL)

Example:

[1] J. Jones. (1991, May 10). *Networks (2nd ed.)* [Online]. Available: http://www.atm.com

Patents, Standards, Thesis (M.S.) and Dissertations (Ph.D.)

Patents

Basic Format:

[1] J. K. Author, "Title of patent," U.S. Patent *x xxx xxx*, Abbrev. Month, day, year.

Example:

[1] J. P. Wilkinson, "Nonlinear resonant circuit devices," U.S. Patent 3 624 125, July 16, 1990.

NOTE: Use "issued date" if several dates are given.

Standards

Basic Format:

[1] *Title of Standard*, Standard number, date.

Examples:

[1] *IEEE Criteria for Class IE Electric Systems*, IEEE Standard 308, 1969.

[2] *Letter Symbols for Quantities*, ANSI Standard Y10.5-1968.

Thesis (Master) and Dissertations (Ph.D.)

Basic Format:

[1] J. K. Author, "Title of thesis," M.S. thesis, Abbrev. Dept., Abbrev. Univ., City of Univ., Country, year.

[2] J. K. Author, "Title of dissertation," Ph.D. dissertation, Abbrev. Dept., Abbrev. Univ., City of Univ., Country, year.

Examples:

[1] J. O. Williams, "Narrow-band analyzer," Ph.D. dissertation, Dept. Elect. Eng., Harvard Univ., Cambridge, MA, 1993.

[2] N. Kawasaki, "Parametric study of thermal and chemical non equilibrium nozzle flow," M.S. thesis, Dept. Electron. Eng., Osaka Univ., Osaka, Japan, 1993.

References in Text

References in Text:

References are needed be cited in the text and they should appear on the line, in square *inside the punctuation.* Grammatically, they may be treated as if they were footnote numbers, e.g.,

> as shown by Brown [4], [5]; as mentioned earlier [2], [4]–[7], [9]; Smith [4] and Brown and Jones [5]; Wood et al. [7]

or as nouns:

> as demonstrated in [3]; according to [4] and [6]–[9].

NOTE: Use *et al.* when three or more names are given.

Reference List Style

Reference numbers are set flush left and form a column of their own, hanging out beyond the body of the reference.
The reference numbers are on the line, enclosed in square brackets. In all references, the given name of the author or editor is abbreviated to the initial only and precedes the last name. There must be only one reference with each number.

[1] R. E. Kalman, "New results in linear filtering and prediction theory," *Journal of Electrical Engineering*, vol. 83, no. 5, pp. 95-108, Mar. 1961.

[2] Ye. V. Lavrova, "Geographic distribution of ionospheric disturbances in the F2 layer," *Applied Soft Computing*, vol. 19, no. 29, pp. 31–43, Feb. 1961.

[3] E. P. Wigner, "On a modification of the Rayleigh–Schrodinger perturbation theory," (in German), *International Journal of Computational Intelligence Studies*, vol. 53, p. 475, Sep. 1935.

[4] W. Rafferty, "Ground antennas in NASA‟s deep space telecommunications," *IEEE Transactions on Antennas and Propagation*, vol. 82, no. 3, pp. 636-640, May 1994.

Important: Editing of references may entail careful renumbering of references, as well as the citations in text.