Tropico Mushrooms

Proposal

Team Amigos

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Version 1.0

2/19/2021

This proposal is submitted to the Information Technology department in partial fulfillment for the ITP module in the Diploma in Information Technology program.

DECLARATION

We hereby declare that the project work entitled “Tropico Mushrooms”, submitted to the SLIIT Academy (Pvt.) Ltd. a subsidiary of Sri Lanka Institute of Information Technology is a record of an original work done by us, under the guidance of our Supervisor “Roshan Jayawardana”. This project work is submitted in the partial fulfillment of the requirement for the award of the Diploma in Information Technology. The Results embodied in this report have not been submitted to any other University or Institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given. (Normal Font Size 12, Headings must be bold)

Project ID:

Group Members:

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Date of Submission: 2/19/2021

Name of Supervisor: Roshan Jayawardana

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Signature of the Supervisor

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1 INTRODUCTION

We are going to make a software for a private mushroom company to record their sellings and buyings.

1.1 BACKGROUND OF THE CLIENT/ PROJECT

Tropico Mushrooms is a private company that makes mushrooms and sells them via other shops. The company and the warehouses are located in Ambalangoda.
Currently the Company is running on manual bookkeeping system to manage its sakes and inventory. Client expects to automate the process, thus increasing efficiency of the company

1.2 PROBLEM STATEMENT

The main problem with the above-mentioned manual system is that you have to manually record all the incoming and outgoing products, which is time consuming. The company is facing high issues on keeping track of records on time. Since the records are not up to date, the owner is experiencing financial crisis in payment recovery. Unlike an automated system finding an error and fixing it will be a hard job, when u consider a manual system which might lead to confusion

1.3 NEEDS STATEMENT

Tropico Mushrooms supplies mushrooms directly to customers and other small-scale distributors. The company offers its clients a grace period to pay for the products they choose to buy, it will depend on the amount that the client chooses to purchase and the value of it.

In the manual bookkeeping system, the person in charge has to make sales entry on their documents and keeping a track of it is nearly impossible, due to large number of customers. If a payment is missed by a customer, there is no reminder to the staff or to the customers until it is overdue

1.4 SOLUTION AND OBJECTIVES

The project goal is to create ‘Tropico Mushrooms Stock Management System’ that can facilitate all the financial manual processes in the Company. One of the many solutions that TMSM System provides is to move the business in to digitalization of data. Main advantage of it is that, all the sensitive client details of the company and the rest of the data will be stored securely. It also provides ease of access to the

individuals who have authorization to use the system. Unlike paper-based data, system data can be easily monitored and backed up. ‘Tropico Mushrooms Stock Management System’ performs five main functions: (a) allows to enter sales transaction, where the total of sales get automatically calculated. (b) Inventory can be managed, so that users can easily manage new and old stock without confusion. (c) Reports can be viewed as per customer, shipment and also weekly, monthly, annually or bi-annually as per users wish. (d) In addition, Reports and Profit/loss can also be viewed in the form of graphs such as pie charts and bar charts. (e) Thereafter to keep track of customers and their payments due, the client will be reminded with a notification.

2 PROPOSED TECHNICAL APPROACH

The technical approach of the project directly affects the final state of the entire project, since deliberate planning is required in deciding the methodology to implement the system. Hence the team has made use of the agile methodology to implement the project. Agile methodology benefits the clients with a competitive advantage by embracing their changing requirements. The choice of architecture design to implement the system is the two-tier client server architecture.

2.1 DEVELOPMENT METHODOLOGY

Planning software projects requires adopting a rigid or flexible approach, as it can have an impact on the project's outcome. The team chose the agile development methodology to implement the 'Tropico Mushrooms Stock Management System'

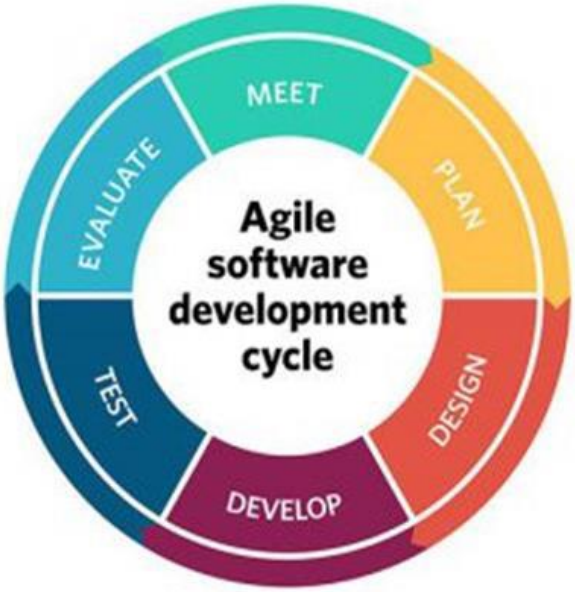

Figure 2-1Agile development methodology

Agile provides multiple opportunities for stakeholder and team engagement before, during, and after each sprint. By involving the client in every step of the project, there is a high degree of collaboration between the client and project team, providing more opportunities for the team to truly understand the client's vision

2.2 REQUIREMENT GATHERING

Requirements are an essential part of any software project and the foundation on which all projects should be built. Therefore, the project team prepared a questionnaire with interview questions and had an interview online.

2.3 ARCHITECTURE DIAGRAM

The project team chose the two-tier architecture design to make the system. The proposed architecture design has the presentation layer or interface that run on a client pc, and a data layer or data structure gets stored on a server. The two-tier architecture has two parts including, Client Application (Client Tier) and Database (Data Tier). In the client application side, the code is written for saving the data in the SQL server database. Client sends the request to server and it process the request & send back with data.

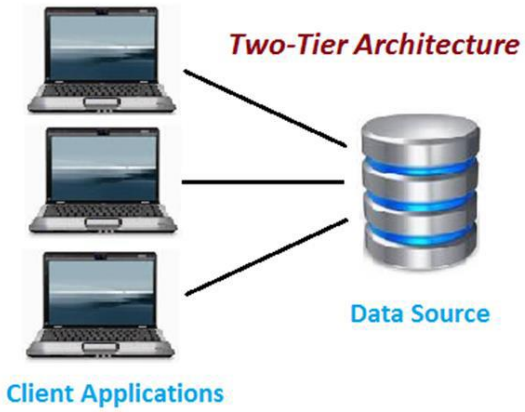

Figure 2-2Two tier architecture diagram

2.3.1 AS IS SYSTEM

Currently the company is undergoing rapid change and growth resulting in an urgent need for a more efficient management of its financial transactions. Currently the manual system consists of keeping book records, maintaining excel sheets, recording stock wise sales, recording customer wise sales etc.

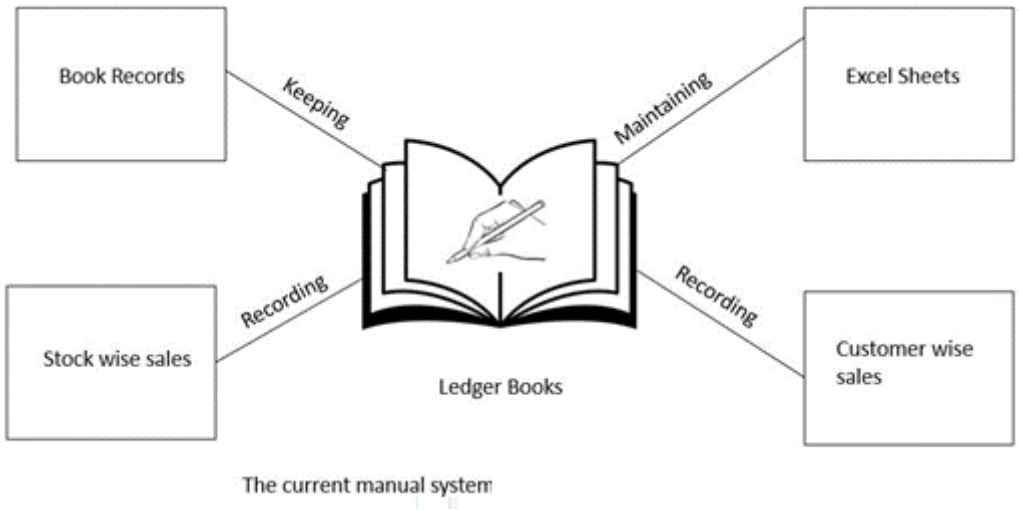

Figure 2-3AS IS System

2.3.2 TO BE SYSTEM

The Advantages are commonly attributed to automation including increased productivity, improved safety, allowing new business opportunities and eliminating the manipulation of paper documents. Digital information can be stored in the system, which optimizes time spent on looking for specific records.

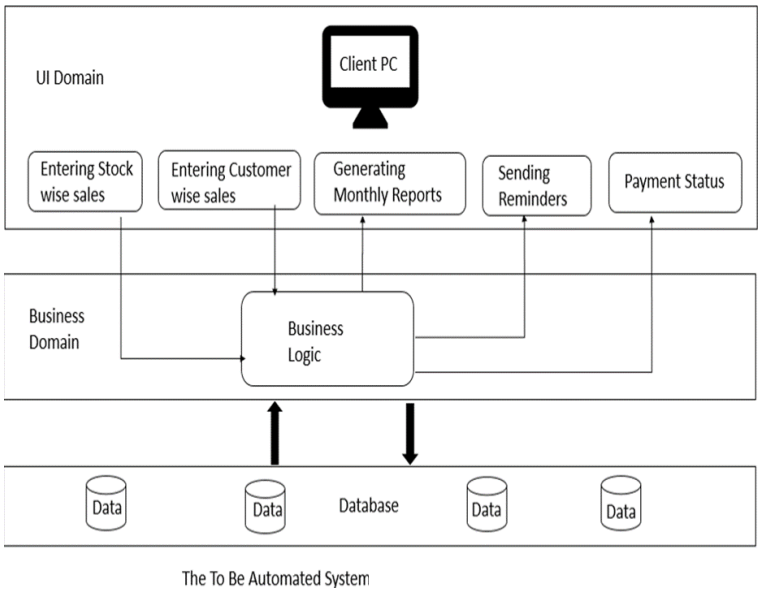

Figure 2-4BE System

2.4 FUNCTIONAL REQUIREMENTS

Requirement ID	Functional Requirement Description
FR 01	Employees should be able to login to the system by providing user name and password. • Upon successful login, user shall be redirected to the Landing page of the system. • If the credentials are not correct "Error in Login" message shall be prompted.
FR 02	Managers should be able to add New Employees or delete them from accessing.
FR 03	User should be able to enter sales data and total of all sales should be calculated automatically by the system.

FR 04	Users should be able to update and delete sales entries.
FR 05	Employees should be able to update and manage Inventory

Table 2-1Functional Requirements

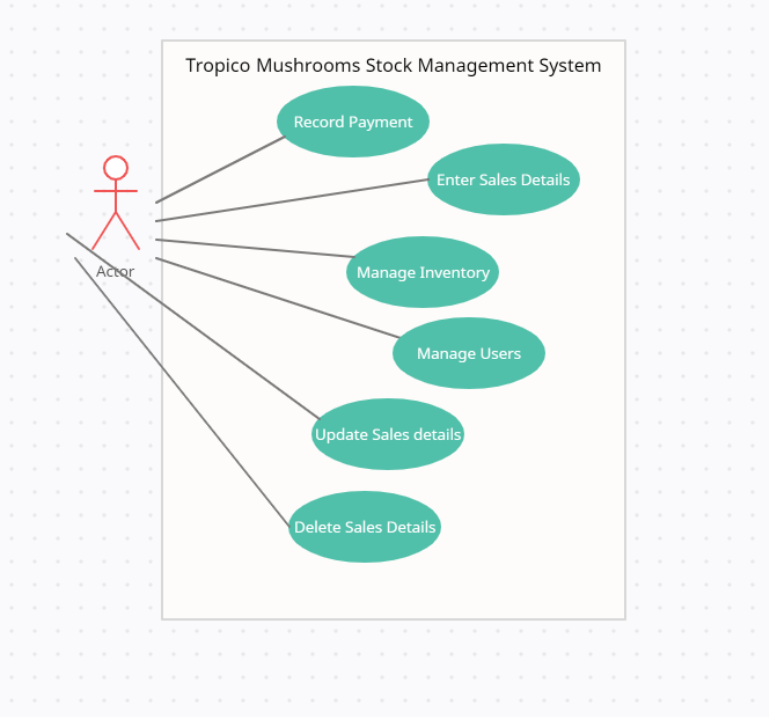

Figure 2-5 USECASE Diagram

2.5 NON-FUNCTIONAL REQUIREMENTS

Requirement ID	NON-Functional Requirement Description
NFR 01	Performance: Upon providing correct credentials, user shall be redirected to the Landing page within 10 seconds (max).
NFR 02	Usability: Simple and natural dialogue will be used. Exits and Shortcuts will be clearly marked. Precise and constructive error messages will be given to guide users.
NFR 03	Security: Password verification rechecked every time when PC logs out.

Table 2-2 Non-Functional Requirements

2.6 IMPLEMENTATION AND DEVELOPMENT REQUIREMENTS.

Tropico Mushrooms typically sells about 500 packets of mushrooms a week with transaction worth about Rs40000 within a week, so 'parallel implementation methodology' will be a good approach because the old system will be used simultaneously while the new system is being tested.

Software Requirements:

Apache NetBeans IDE 12.1 will be used as the development platform because All features provided by Apache NetBeans are supported out of the box, without additional plugins needing to be installed, and all for free.

In addition, WampServer will be used to develop the database requirements of the system.

Hardware Requirements:

System requirements for Apache NetBeans IDE 12.1

- 1.8 GHz or faster processor. Quad-core or better recommended
- GB of RAM; 8 GB of RAM recommended (2.5 GB minimum if running on a virtual machine)
- Hard disk space: Minimum of 800MB up to 210 GB of available space, depending on features installed; typical installations require 20-50 GB of free space
- Hard disk speed: to improve performance, install Windows and NetBeans on a solid-state drive (SSD).

2.7 RUNNING ENVIRONMENT REQUIREMENTS

Software Requirements:

The proposed user-friendly desktop application will be created in JAVA programming language using NetBeans IDE 12.1. Thus, the client's computers would need to have .NET Framework which is a software development framework in order to run the application. Besides any conflicting .NET framework versions installed on the machine should be removed.

Operating System – Windows 8 or Later Versions

Hardware Requirements:

	Minimum	Recommended
CPU	1.4GHz 32-bit(x86)	Dual Core 1.8GHz 64-bit
RAM	2GB	4GB

Table 2-3Hardware Requirements to run the software

2.8 QUALITY ASSURANCE PLAN

Software quality assurance is an important process that comprises procedures, techniques, and tools that are employed to ensure that a product developed is of high quality and aligns with the requirements of the client. In order to verify that the project works, unit tests (often even integration tests) are necessary.

The project consists of tight timelines, which may serve as a risk factor in quality assurance if necessary, measures are not taken in advance. It is one of the reasons why agile development methodology was adapted. Since Agile breaks the development process into smaller parts, it enables testers to work in parallel with the rest of the team throughout the process and fix the flaws and errors immediately after they occur. Therefore, Agile methodology makes room for quality assurance right from the start, opposed to the danger of separating testing module. Besides Unit testing can be used in agile primarily, to confirm that software components are performing as predicted.

3 EXPECTED PROJECT RESULTS

3.1 DELIVERABLES

Project Management

- Create Software Requirement Specification (document) as a form of acceptance criteria
- Construct a work breakdown structure using the Gantt chart prepared to define its timeline and milestones.

Application Development

- Deliver the Product prototype to the clients for compliance purposes.
- Software units and Modules at each sprint.
- Deliver the Final candidate software

Testing

- Develop Unit and Integration Testing plan
- Perform the Testing mentioned above

Training

- Training Company staff to use the new System.
- User guides, manuals and training materials

3.2 MEASURES OF SUCCESS

It is possible for the system to be delivered ‘on time’, ‘on budget’ and a successful delivery of 100% of its scope. Even though deadlines are too tight, the necessary counter measure has been taken by adapting agile methodology.

stakeholder satisfaction including sponsors, steering committees, the project team, clients and others are also necessary.

4 BUDGET

Miscellaneous

Hardware and software deployment	LKR 10000
Document Preparation (such as Project Charter, Project Proposal and etc.)	LKR 5500
Computer Services	LKR 3000
Sundry and Indirect Cost	LKR 4000
TOTAL	**LKR 22500**

Training Session for Users

Handout preparation	LKR 1000 × 2 workshops	LKR 2000
Refreshments	LKR 2000 × 2 workshops	LKR 4000
Stationaries	LKR 500 × 2 workshops	LKR 1000
Domestic Transportation Expenses	LKR 750 × 2 workshops	LKR 1500
Info sheets	LKR 100 × (10 copies)	LKR 1000
TOTAL		**LKR 9500**
GRAND TOTAL		**LKR 32000/=**

5 ROLES AND RESPONSIBILITIES

Roles and responsibilities of project members should be clearly stated in the beginning of the project.

**The following table can be used as a template:

Table 5-1: Roles and responsibilities of the project.

Role	Responsibility	Participant(s)
Project Sponsor	Providing information about the company, sponsoring the project.	Tropico Mushrooms (Client)
Project Leader	The Project leader is responsible for the development and maintenance of the project plan (resourcing implementation, work plans, etc.). In addition, the leader would provide directions to team members while monitoring project progress, and ensuring projects are completed on time and within budget.	D M T B Dissanayake
Analysis	Breaking down the deliverables into detailed business requirements. Identifying the overall direction of the project. Creating project strategy to complete the system.	D M T B Dissanayake U B K Samudika
Design	UI/UX Engineer is in charge of the front-end development and observes user behavior to improve the visible design of the application.	D M T B Dissanayake U B K Samudika
Implementation	Moving the solution from development status to production status. Performing training to the company staff.	D M T B Dissanayake U B K Samudika

Testing	Test the software to check whether its working as expected	D M T B Dissanayake U B K Samudika

6 SCHEDULE

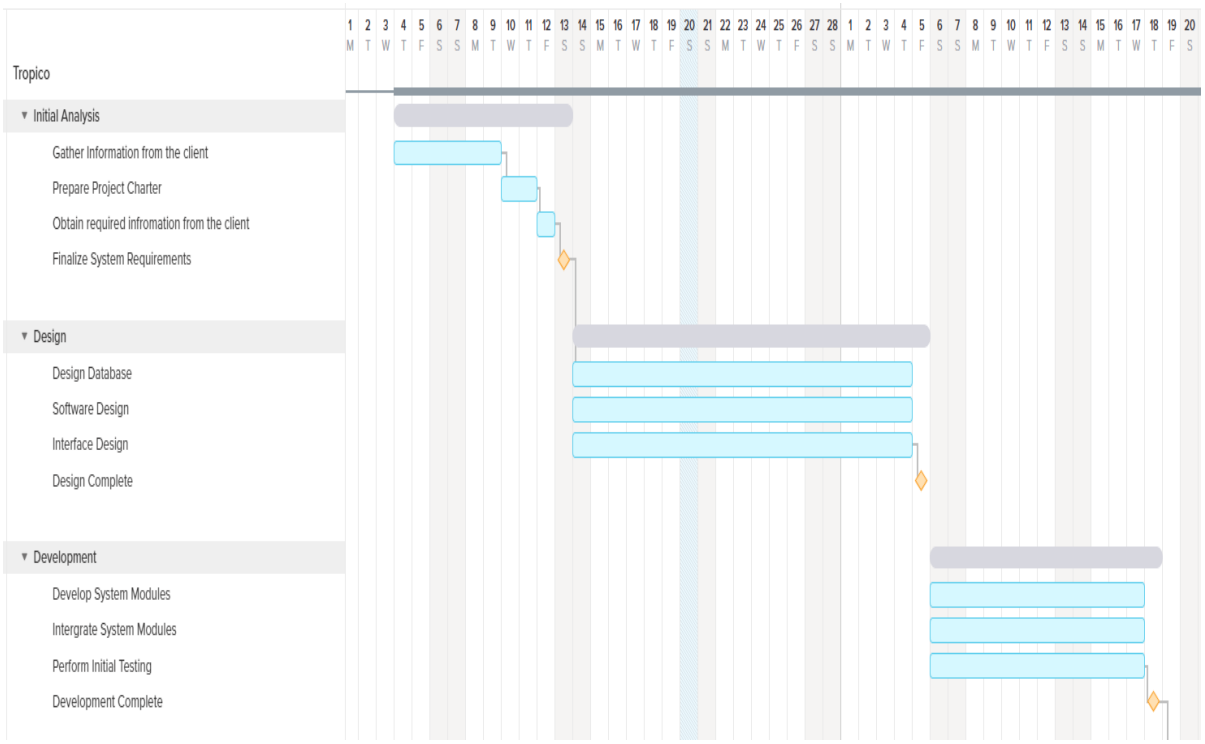

Figure 6-1 Gantt Chart (1)

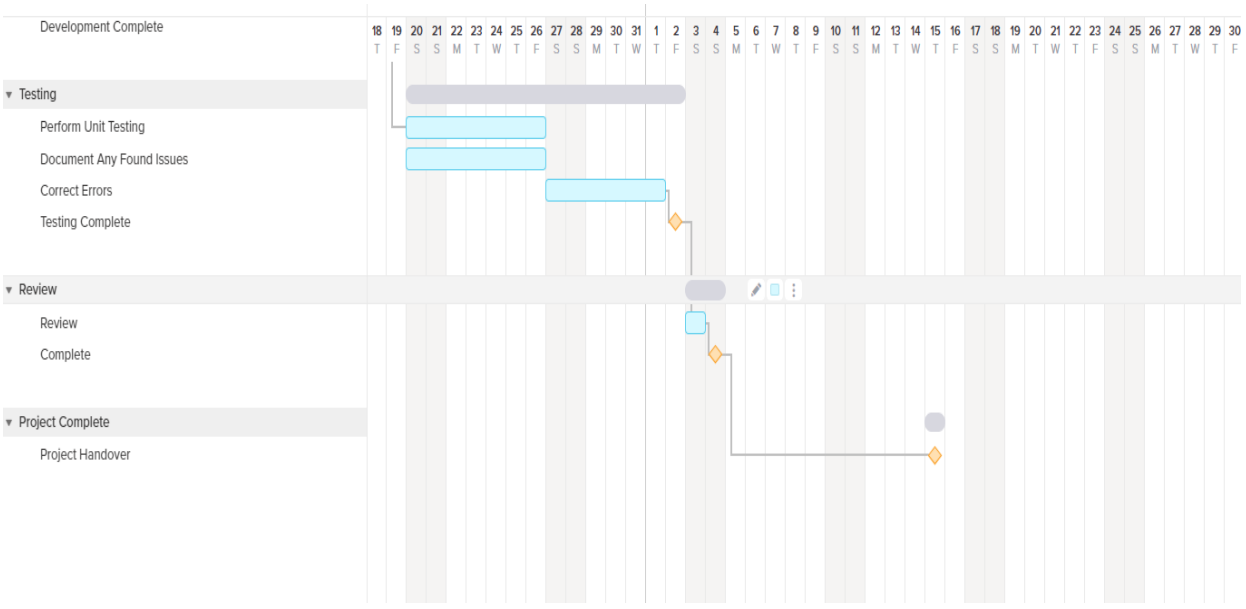

Figure 6-2Gantt Chart(2)

7 References

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8 APPENDICES

STYLE CONVENTIONS (Only for reference remove from your final report)

FORMAT

The proposal should be typed. All text, Figures and Tables should appear on only one side of each sheet of paper. All pages other than the cover sheet should have page numbers that begin with "1" on the first page after the content page and should continue through the last page of the reference page, but not the appendices.

The right-hand, Upper and Lower margin should be 1". The left-hand margin must be 1.5" on each page of the document because of the binding. The margin instructions should be followed in the appendices as well.

The font size in the text should be in 12, in subsections 12 and in the main headings 16. The main headings are to be written in capitals and placed at the beginning of a new page. Level 2 Heading should be 14 and all capitals. All level 1 and 2 headings are to be in bold letters. Level 3 headings must be 12 all capitals. Leave two empty lines under the main heading, two empty lines above the subsection and one empty line under it. The headings should not have more than three numbers. A line spacing of 1.5 should be used in the text, 1 on the title page and in the abstract. The font to be used is Times New Roman. The page number is placed in the lower right corner.

The text should not be indented and both margins on the page should be justified. When a paragraph continues the next page, at least two lines of the paragraph should be left on the upper or lower end of the page. The paragraphs are separated from each other and from the headings with one empty line. A new chapter is started on a new page. One empty line is needed to separate two paragraphs.

PARAGRAPH TEXT

The text of the report should be written in complete sentences. The style should be formal. Formal style means to avoid abbreviations that are common in spoken English.

FIGURES AND TABLES

All Figures and Tables should have a number and a caption. Tables should have the caption before the table and for figures the caption should be placed at the bottom of the image. If a figure or table is extracted from a source; the source should be cited in the references.