REPORT

ON

SUMMER TRAINING AT

RELIANCE INDUSTRIES LIMITED

By

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Department of Computer Engineering

Mahatma Education Society's

Pillai College of Engineering

New Panvel

2023 – 2024

Guided By

Mr. Kantimahanti Sivananda Kumar

CERTIFICATE

This is to certify that Miss Aarya Vishwas Zunjarrao,

has successfully completed her summer training

At Reliance Patalganga in the partial fulfilment of the Undergraduate Degree course in Computer Engineering, is a bonafide record of project work carried out by her under my supervision.

Mr. K S Kumar

Mentor,

Data Centre Operations

Mr. Sanjay B Shukla

HOD - IT

Acknowledgement

I take immense pleasure in thanking **Mr. Srinivas N Iyer**, HR Learning Dept. for giving me an opportunity to pursue an internship at Reliance Patalganga.

I express my deep gratitude to **Mr. K S Kumar**, Manager IT Operation who has without any hesitation permitted us to undertake the Work Report in Overview of IT System Overview. His dedication and keen interest above all his overwhelming attitude to help his student had been solely and mainly responsible for completing my work.

I also thank **Mr. Sanjay B Shukla**, HOD-IT Dept. for extending his immense support and attention throughout my internship training.

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Aarya Zunjarrao

Table of Content :

1. Safety Training

1.1 Introduction

A Safety Management System (SMS) is a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures. As per ICAO requirements, service providers are responsible for establishing an SMS, which is accepted and overseen by their State.

1.2 Safety Equipment:

• Safety shoes :

A steel-toe boot (also known as a safety boot, steel-capped boot or safety shoe) is a durable boot or shoe that has a protective reinforcement in the toe which protects the foot from falling objects or compression, usually combined with a mid-sole plate to protect against punctures from below.

• Safety Helmets:

A hard hat is a type of helmet predominantly used in workplace environments such as industrial or construction sites to protect the head from injury due to falling objects, impact with other objects, debris, rain, and electric shock. Suspension bands inside the helmet spreads the helmet's weight and the force of any impact over the top of the head.

• Safety gloves:

Safety gloves are hand garments meant for the protection of the wrist, hand, fingers, and thumbs from adverse processes or conditions. These items are virtually limitless in application and find employment in both industrial and commercial marketplaces. Their functionality is determined by the material and design of the glove.

• Safety Goggles: Goggles or safety glasses are forms of protective eyewear that usually enclose or protect the area surrounding the eye in order to prevent particulates, water or chemicals from striking the eyes. They are used in chemistry laboratories and in woodworking. They are often used in snow sports as well, and in swimming. Goggles are often

worn when using power tools such as drills or chainsaws to prevent flying particles from damaging the eyes.

1.3 Zero Tolerance:

A zero-tolerance policy is one which imposes strict punishment for infractions of a stated rule, with the intention of eliminating undesirable conduct.

Zero-tolerance policies have been adopted in all around RIL Industries. These policies are usually promoted as preventing smoking, drinking and prohibiting mobile phones. Staff members, workers and other visitors, who possess a banned item or perform any prohibited action for any reason are automatically punished.

Zero Tolerance Rules:

1.) No Smoking, No Drugs, No Alcohol, No Ignition sources.

2.) No Violation of Work Permit Conditions.

3.) No Line Break Without Authorization.

4.) No Entering Confined Space Without Authorization.

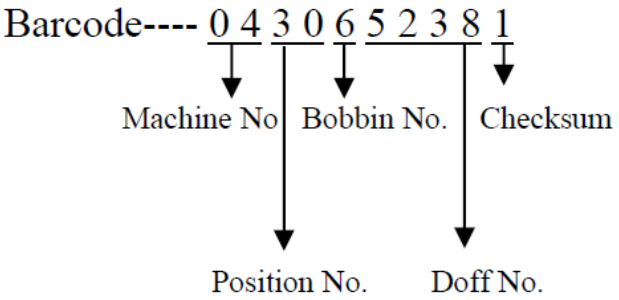
2.Automated Product Handling System

2.1 Introduction to APHS:

More than 120 automation systems installed worldwide, Salmoiraghi may certainly be considered as the absolute market leader. Our Automated Handling System featuring high efficiency and excellent cost performance ratio incorporates highly innovative solutions developed along the years (many of which are protected by international patents). We offer a wide range of field-proven solutions for handling and computerized tracking of yarn bobbins all the way from the winding machines to packings.

2.2 Overview of APHS :

The end product POY (Partially Oriented Yarn) from the manufacturing division is winded on a single unit called a Bobbin, at the rate of 3000 frequency. On each Doff (bobbins carrying unit) eight bobbins are assembled using an automated shuttle. The shuttle has a scanning machine that scans the barcode of each Doff and assembles accordingly. For example,



This Doff travels through three major station :

1. Physical Testing Station :

Test performed are as follows :

- Cross Section
- Denier
- Draw Tension
- Tenacity Elongation
- Entanglement

2. Pre-visual Inspection Station :

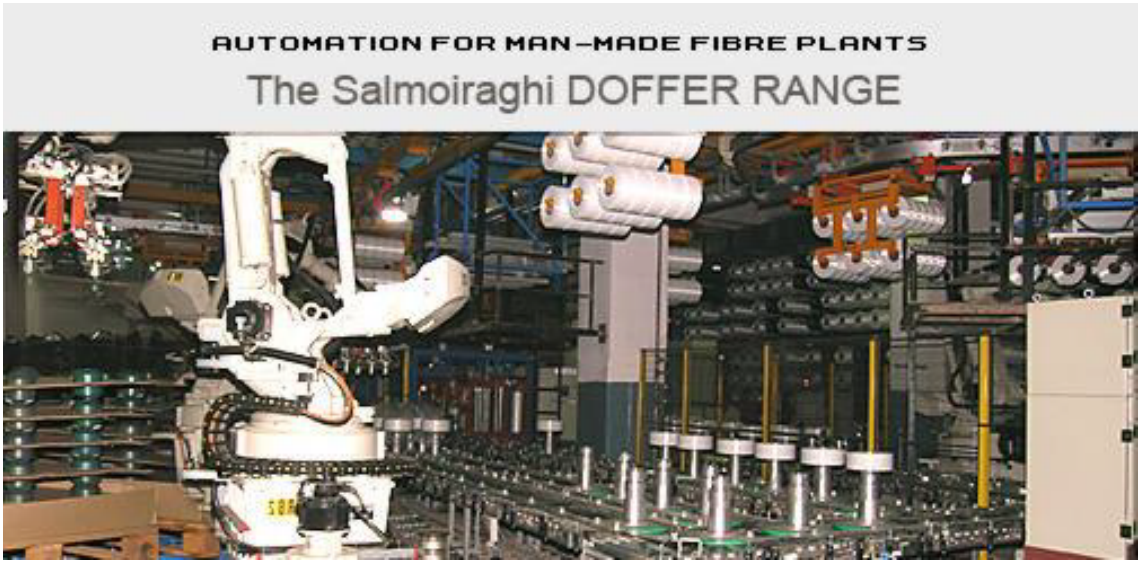
Mirrors are installed on the both ends of the doff through which all sides of bobbins are examined by the examiner and faults are identified.

3. Visual Inspection Stations :

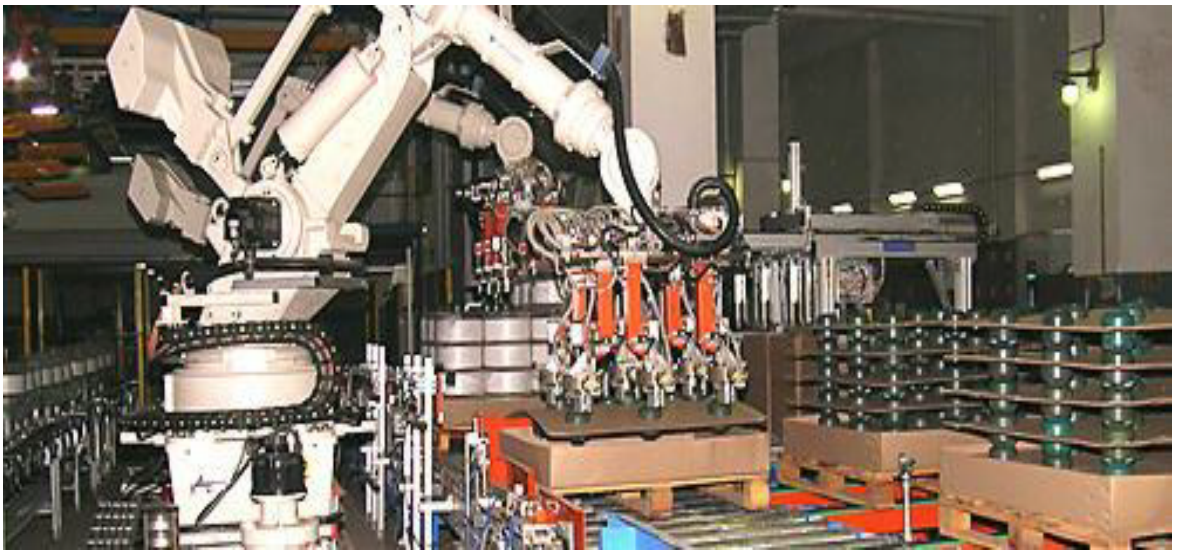
Final weight and grade of the bobbins are determined and accordingly bobbins are accepted or rejected.

The storage area of bobbins is called CAROUSELS. It has 9 Bobbin Storage Towers with the capacity of 27000 bobbins. Each tower has 3 layers- UPPER, MIDDLE, LOWER.

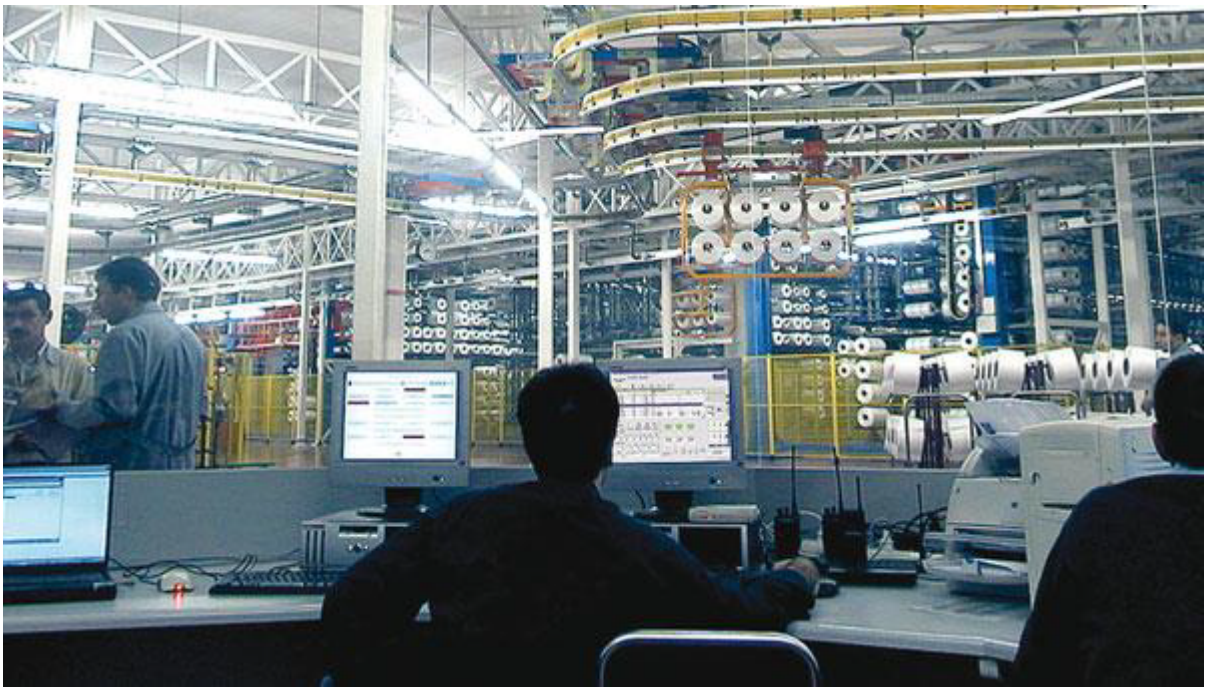
SALMOIRAGHI LOADER loads bobbins from the Doff to the assigned towers.



As per the order by the particular agency, the bobbins are unloaded by the Salmoiraghi Unloader.



As per the company's requirements, Salmoiraghi system is programmed to pack the bobbins in the order of 3*3 or 4*4 manners.



These Packed bobbins are then transported to the Dispatch Department.

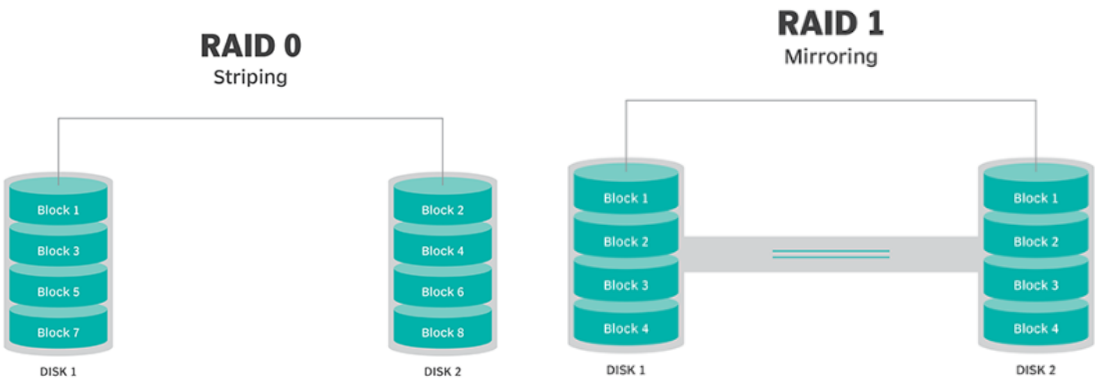
4. RAID Configuration

The RAID – or Redundant Array of Independent Disks – is a type of storage that writes data across multiple drives within the same system. Different configurations are expressed as numbers, such as RAID 0, RAID 1, or RAID 5. Each RAID type gives users different benefits — increased performance, greater fault tolerance, or a combination of both — depending on how it writes and distributes your data.
RAID arrays spread I/O operations across multiple disks in order to read and write data faster, or to mirror data on one drive across other drives, which allows the whole system to continue operating without data loss if one of those drives fails.

Who Needs RAID?

You may want to try one or more RAID configurations if you need to:

- Maintain maximum uptime and availability on your system
- Work with large files without slowing down operations
- Have data redundancy to protect important information
- Increase the potential mean time to failure of your system



4.1 Hyper-V

The Hyper-V role in Windows Server lets you create a virtualized computing environment where you can create and manage virtual machines. You can run multiple operating systems on one physical computer and isolate the operating systems from each other. With this technology, you can improve the efficiency of your computing resources and free up your hardware resources.

Install Hyper-V by using Server Manager

1. In Server Manager, on the Manage menu, click Add Roles and Features.
2. On the Before you begin page, verify that your destination server and network environment are prepared for the role and feature you want to install. Click Next.
3. On the Select installation type page, select Role-based or feature-based installation and then click Next.
4. On the Select destination server page, select a server from the server pool and then click Next.
5. On the Select server roles page, select Hyper-V.
6. To add the tools that you use to create and manage virtual machines, click Add Features. On the Features page, click Next.
7. On the Create Virtual Switches page, Virtual Machine Migration page, and Default Stores page, select the appropriate options.
8. On the Confirm installation selections page, select Restart the destination server automatically if required, and then click Install.
9. When installation is finished, verify that Hyper-V installed correctly. Open the All Servers page in Server Manager and select a server on which you installed Hyper-V. Check the Roles and Features tile on the page for the selected server.

3.2 Installation and configuration of VMWare ESXI-7.0.3

VMware ESXi server is a bare metal hypervisor (without running an operating system) that can run Virtual Machines.

Installation

1. Download ESXi server 7.0 from VMware website.
2. Boot the downloaded image file and choose the standard installer.

3. Press enter key to continue the ESXi 7.0 installation.Accept the End User License Agreement to continue.Choose the hard disk to install ESXi server 7.0 and press Enter key. You can refresh using F5 key if the hard disks are not visible.
4. Enter a root password and confirm.Press Enter key to reboot after the installation.

4. PROJECT

4.1 Abstract

Hospital Management System is an organized computerized system designed and programmed to deal with day to day operations and management of the hospital activities. The program can look after inpatients, outpatients, records, database treatments, status illness, billings in the pharmacy and labs. It also maintains hospital information such as ward id, doctors in charge and department administering.

4.2 Introduction

The project Hospital Management system includes registration of patients, storing their details into the system, and also computerized billing in the pharmacy, and labs. The software has the facility to give a unique id for every patient and stores the details of every patient and the staff automatically. It includes a search facility to know the current status of each room. Users can search for the availability of a doctor and the details of a patient using the id. The Hospital Management System can be entered using a username and password. It is accessible either by an administrator or receptionist. Only they can add data into the database. The data can be retrieved easily. The interface is very user-friendly. The data is well protected for personal use and makes the data processing very fast.

4.3 Modules

The entire project mainly consists of 2 modules, which are

- Administrator
  - ☐ Manage Doctors, Patients details and departments of hospital
  - ☐ Rooms,Beds status
- Receptionist
  - ☐ Manage inpatients, outpatients
  - ☐ Allocating rooms to inpatients

4.4 Technologies and Tools Used

1.SQL Server Management Studio

SQL Server Management Studio (SSMS) is an integrated environment for managing any SQL infrastructure, from SQL Server to Azure SQL Database.It is a software application developed by Microsoft that is used for configuring, managing, and administering all components within Microsoft SQL Server.

SSMS provides a single comprehensive utility that combines a broad group of graphical tools with many rich script editors to provide access to SQL Server for developers and database administrators of all skill levels.

4.3 Database Schema