

User Manual for Cyber-Twin version 1.0

Group 7

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Abstract 1

The software developed automates the machines in the industry .The operator of that machine would feed the inputs about the usage and frequency which would then be sent into the cyber twin which records the inputs in the database and gives an analysis of the failure and graphs about the statistics of the machine usage in graphical interface . Also, the managers can see the ongoing and completed events.

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1. Introduction

1.1 Audience

The intended audience of this User Manual would be the people who would operate the machine and the managers. It also helps the users to get familiar with this software and its various functionalities.

1.2 Applicability

The Software is applicable to the data provided by the operators and the managers through the website or the tablet.

1.3 Purpose

The main purpose of this software is the storage ,display, and analysis of the data entered.

1.4 User Manual Usage

This manual can be used as an installation guide.. It will guide you through the flow of this software.

1.5 Conventions and Terms

1.6 If You Have A Problem

In case of any queries regarding the product, please mail the Developer Team at: cse140001013@iiti.ac.in . Our team will get back to you ASAP.

Thank You for buying our PRODUCT.

2. Installing Cyber-Twin

Import the SQL file and put details in the dbconfig.php file .

3. Using Cyber-Twin

3.1 Operators

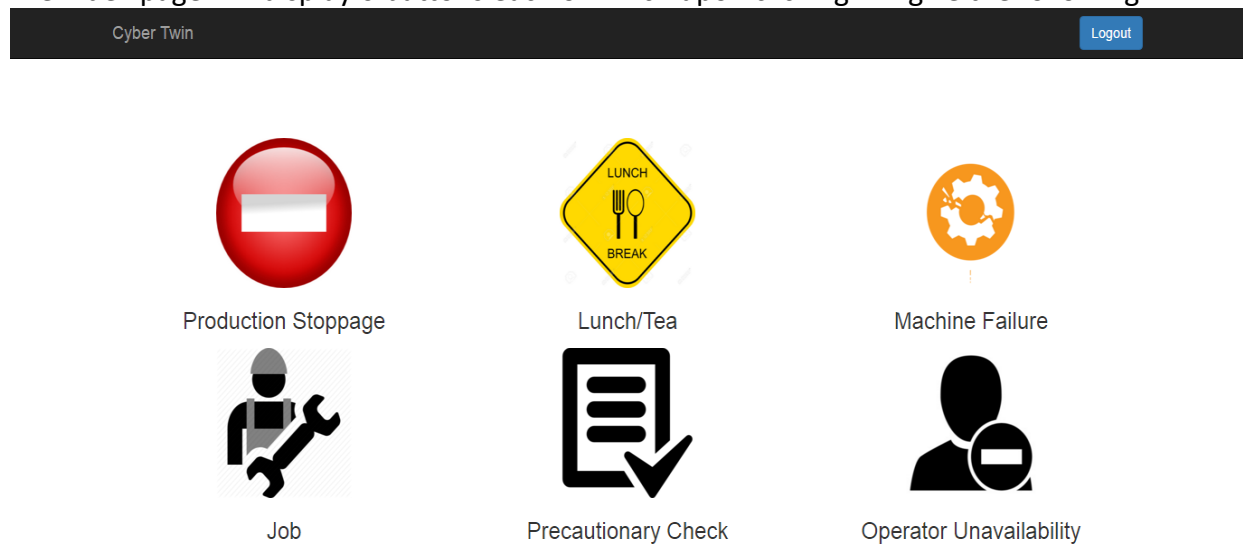
The start screen will be the homepage. The navigation bar will contain a login button, which on clicking will direct you to the login page

The image shows a web application interface for 'Cyber Twin'. At the top, there is a dark grey navigation bar with the text 'Cyber Twin' in white. Below the navigation bar, the main content area is white and contains a login form. The form has a title 'Login' in bold. Below the title, there are two input fields: 'Username' and 'Password'. Each field has a light grey border and a small 'x' icon on the right side. Below the 'Password' field, there is a blue button with the text 'Login' in white. The entire form is enclosed in a light grey border.

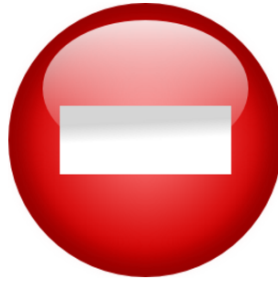
Enter your username and password (which will be provided to you by the manager) on the login page in the provided fields and press the submit button. After validation you will be directed to the index page. If the details entered are not found an alert message will be displayed showing "username and password not found".

This situation arises because you've entered the wrong details ,so reenter the details. If the problem still persists then contact the manager.

The index page will display 6 buttons each of which upon clicking will give the following:



1 Production Stoppage - You will be displayed a list of reasons for the stoppage. Whenever the machine fails due to any of the reason **start the event**.



Production Stoppage
Cause

Raw Material Unavailable	Tools Unavailable	Tool Inspection	Tool Change	Coolant Refilling	Air Failure
No Demand					



Duration: 00:00:00

2 Lunch/Tea -If you wish to have a lunch/tea break press this button and **start the event** .



Lunch/Tea



Duration: 00:00:00

3 Machine Failure- Choose the cause of and **start the event**.



Machine Failure
Failed Unit

Drilling Unit	Milling Unit	Clamping Unit	Feed Unit	Power Unit
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Mode of failure

1	2	3	4	5
---	---	---	---	---



Duration: 00:00:00

4 Job - Select the job type and mode .Then **start the event**.



Job

Select Job Type

Normal Rework

Select Component

GMI Cam Shaft	NALT Main Shaft	GMI Main Shaft
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Duration: 00:00:00

5 Precautionary measure -For precautionary measures **start the event.**

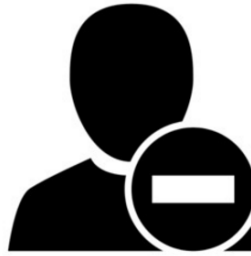


Precautionary Check



Duration: 00:00:00

6 Operator Unavailability -If you are unavailable then select the cause and **start the event.**



Operator Unavailability

Cause

Busy with
other machineBusy with
official workPersonal
needs

Duration: 00:00:00

Starting and stopping the event - Click the green start button for starting any event and the red stop button for stopping it.



Production Stoppage
Cause

Raw Material Unavailable	Tools Unavailable	Tool Inspection	Tool Change	Coolant Refilling	Air Failure
No Demand					



Duration: 00:00:00



Production Stoppage
Cause

Raw Material Unavailable	Tools Unavailable	Tool Inspection	Tool Change	Coolant Refilling	Air Failure
No Demand					




Duration: 00:00:09

Note -After you have stopped the event you can go back to the index page by clicking on the cyber twin button on the navigation bar. You cannot go back until you have stopped the event.

Cyber Twin


Logout



Production Stoppage

Cause

Raw Material Unavailable	Tools Unavailable	Tool Inspection	Tool Change	Coolant Refilling	Air Failure
No Demand					



Started on 2016-04-29 00:39:44

3.2 Managers

The start screen will be the homepage. The navigation bar will contain a login button, which on clicking will direct you to the login page

Enter your username and password on the login page in the provided fields and press the submit button. After validation you will be directed to the index page. If the details entered are not found an alert message will be displayed showing "username and password not found".

Cyber Twin

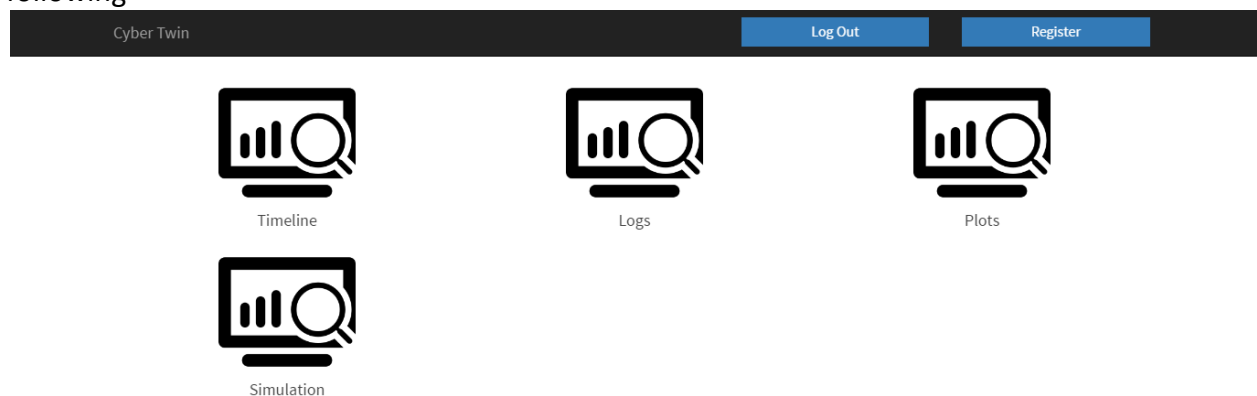
Login

Username

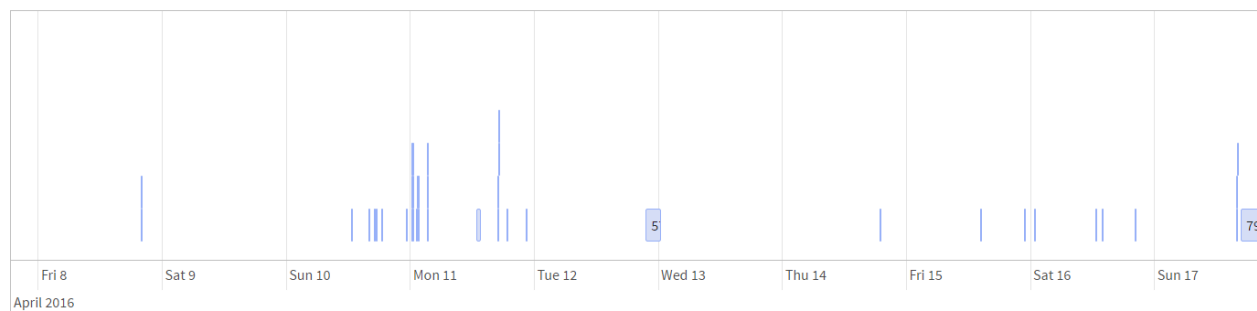
Password

Login

The index page will contain the following buttons which upon selecting will display the following



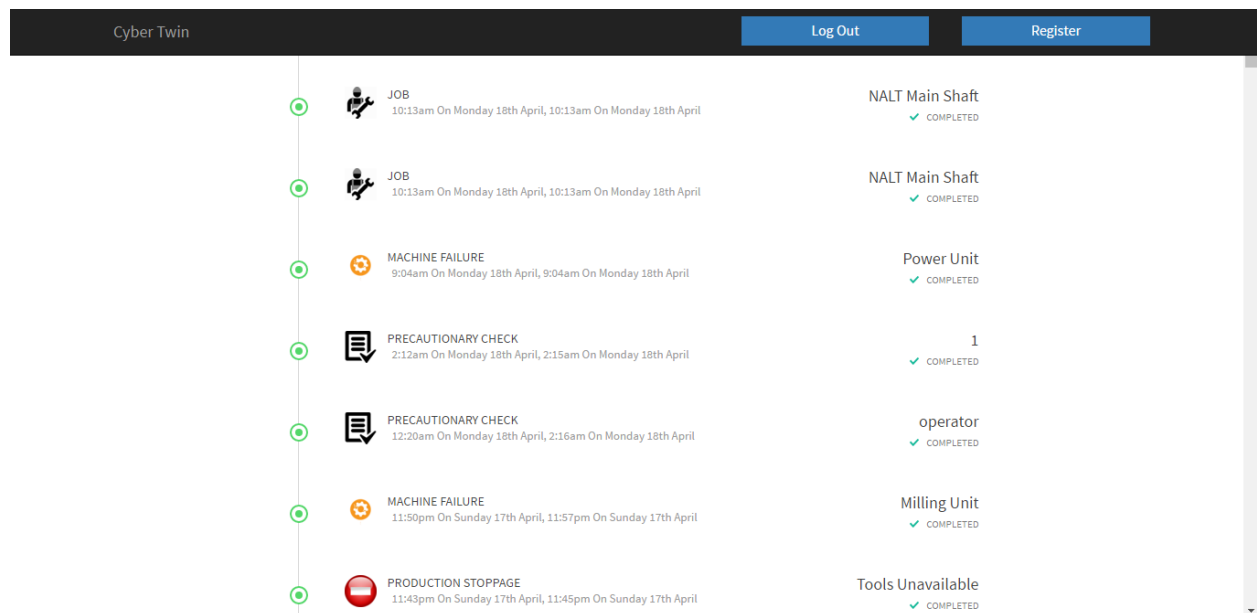
- 1 **Timeline** - You can select the following options to view the timeline(enter data) for the events
 - 1.1 Production Stoppage -Details of the production stoppage
 - 1.2 Lunch/Tea
 - 1.3 Machine Failure
 - 1.4 Job
 - 1.5 Precautionary measures
 - 1.6 Operator unavailable



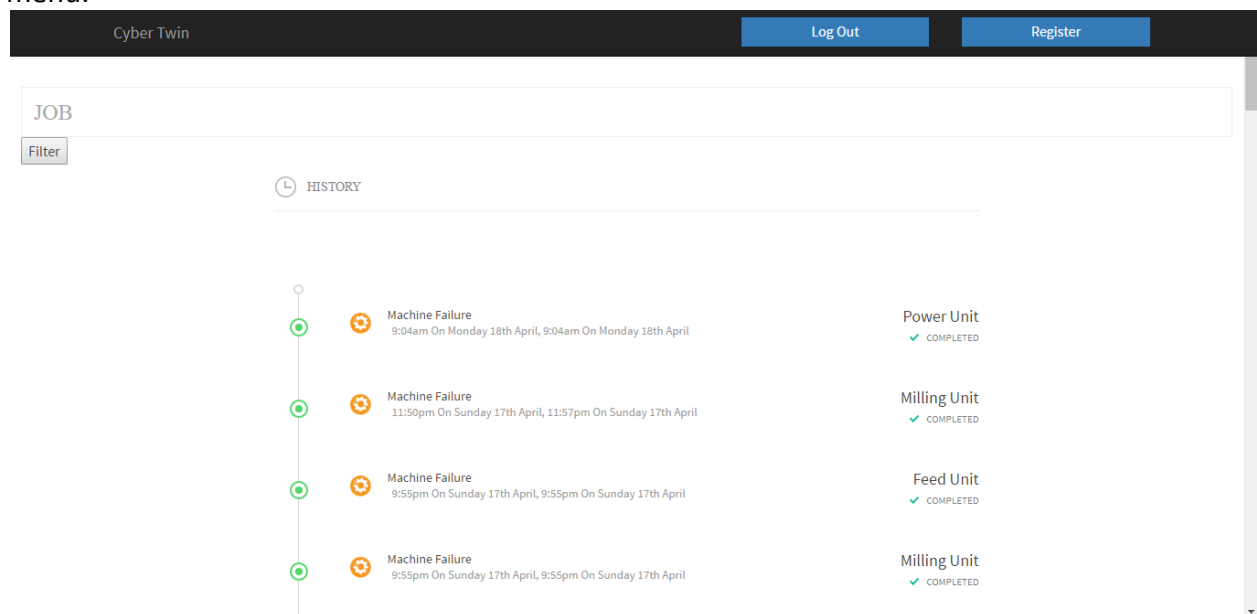
The details will be displayed on a graph showing when the events were inserted . You can zoom in or out to see the statistics on a monthly or yearly basis.

3 Timeline all events -

3.1 You can see the timeline of all events with the recent ones on the top ,also which operator entered the data.



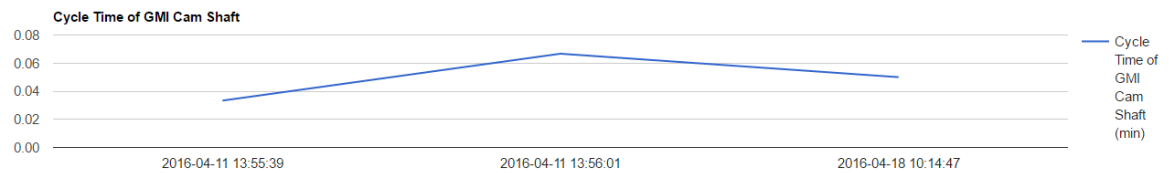
3.2 You can filter the timeline according to the event type by selecting on the dropdown menu.



4 **Plots** - This gives a line plot of the events which you can select in the dropdown list, where each points indicate the time and duration of that event.

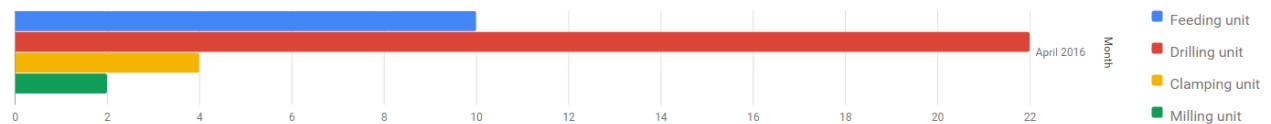
GMI Cam shaftPlot

Filter



Filter

Failed Unit Monthwise
Based on previous data



5 Register user - On clicking the register button on the navigation bar you can register a new operator or a manager. Enter the fields of username ,password and confirm password and select the user type. Press the submit button. If the password and confirm password are the same and the user is not found in the database then a message will be displayed showing "YOUR REGISTRATION IS COMPLETED...".If the user is already there then the message "SORRY...YOU ARE ALREADY REGISTERED USER..." will be displayed.

Cyber Twin

Log Out

Register

Registration Form

UserName

Password

Confirm Password

Operator

Register

4. LIMITATIONS