



# Computerized Maintenance Management System

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## Introduction

For the past 30 years, CMMS has become a very important tool to facilitate the maintenance of the assets in a hospital as well as keeping communication between the employees (doctors, managers, technicians) so easy and dynamic. In this project we implemented a CMMS model that is inspired from many models from different hospitals around the world. It's basically the same concept that is focused on the work order flow between the employees and how to view the maintenance reports about different equipment as well as making a new report. We took care of three different types of reports which are PPM, Repair and Inspection and in that report we will illustrate the functions that you can do with our website.

## Database ER model

We used python flask library to make our website so, we have made a mysql database to connect it with the backend of our website. The figure below illustrates the ER model of our database and later we will show you the functions you can do on that database.

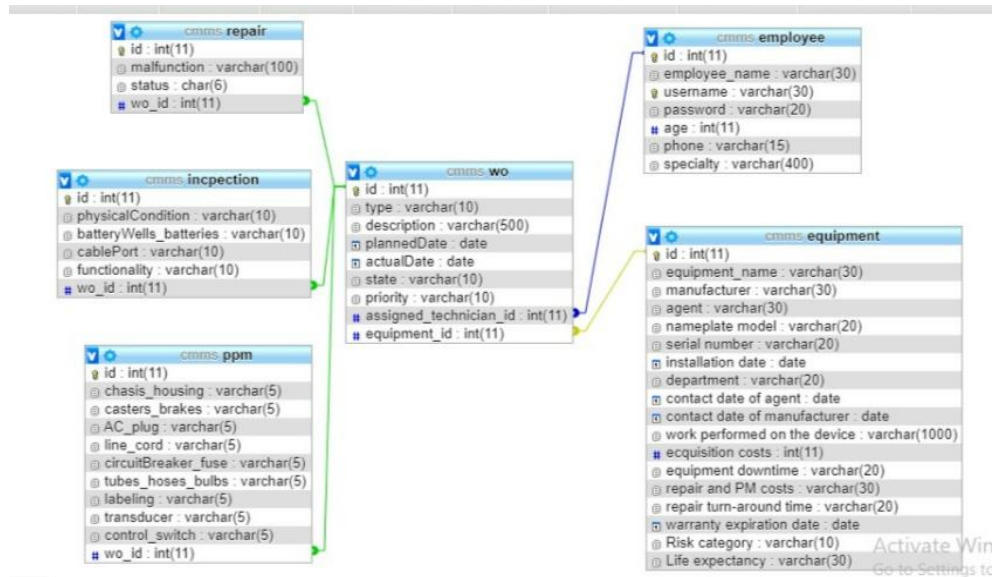


Figure 1: ER Model

## User guide

### SIGN IN

At first you need to sign in - as in all websites - to be able to log in to the home page. We don't have a sign in option as we supposed that the admins are the ones who make new accounts not the normal employees.

**SIGN IN HERE**

sherifesam

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**Sign in**

Figure 2: Sign in form

## WORK ORDER (HOMEPAGE)

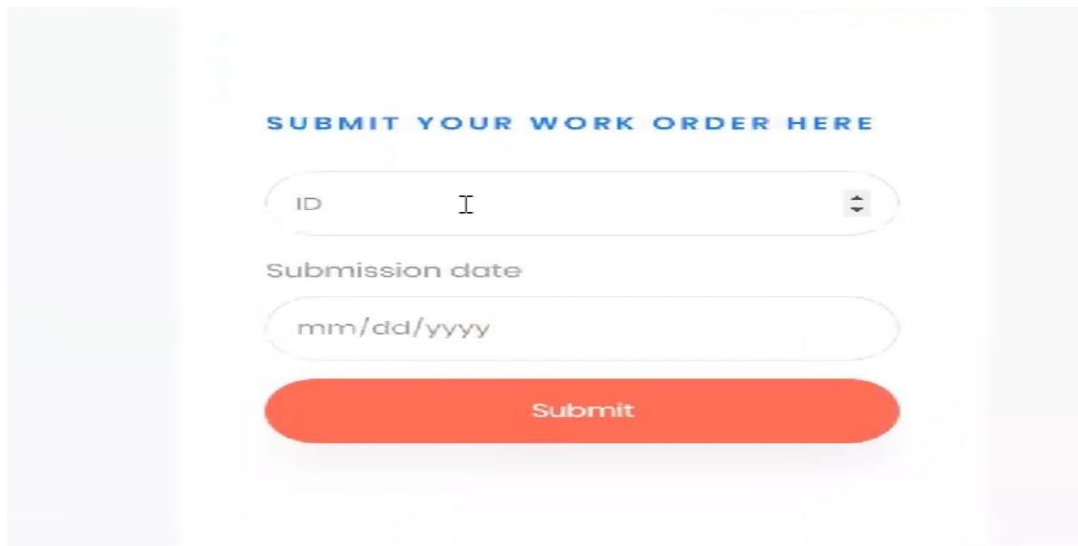
Our homepage gives the employees the access to see all the active work orders so that the employee can see if he has a work order to do. The figures below explain how the employee can see the work orders.

**Company Name** Home Equipments [Choose Report](#)

id	type	description	plannedDate	priority	employee_name	equipment_name
15	ppm	it's time for 'ECO' ppm	2020-04-20	high	youssef sameh	ECO
18	ppm		2020-04-24	high	mohamed elhab	Incubator
19	inspection		2020-05-17	very high	sheaff esam	Ventilator
16	ppm	it's time for 'MRI' ppm	2020-04-18	low	maria khaili	MRI
17	repair	None	2020-04-08	very high	maria khaili	Defibrillator
14	inspection	Blood Chemistry	2020-04-10	moderate	marlem khaleel	Blood Chemistry analyzer

Figure 3: Homepage

If an employee finished a work order he would simply submit it by entering the id of the work order as well as the date of the submission. And that process is illustrated in the figure below.



**SUBMIT YOUR WORK ORDER HERE**

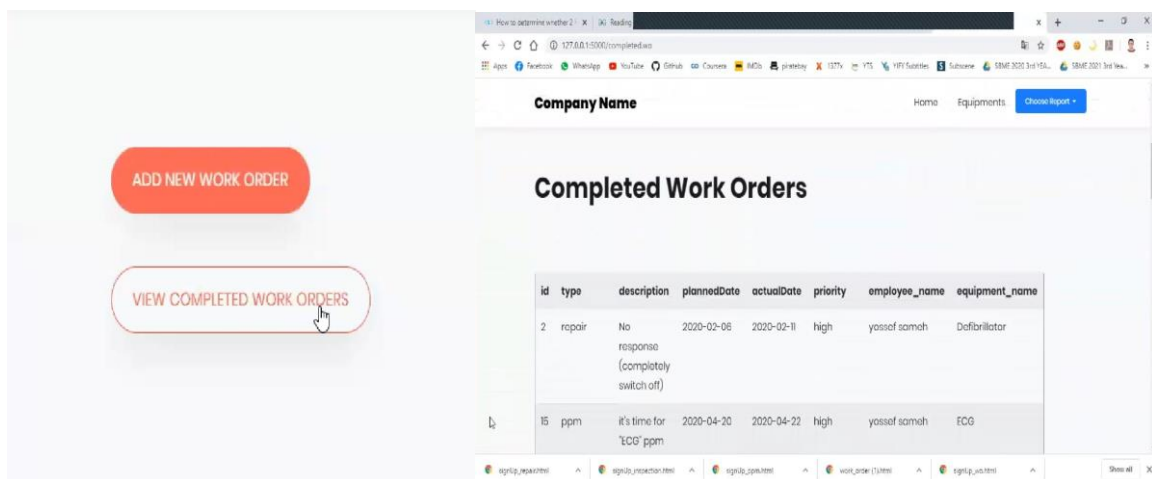
ID

Submission date

**Submit**

Figure 4: Submit work order form

There is an option that gives you the access to see the completed work orders. The figures below show how to do so and how the completed work orders appear.



**ADD NEW WORK ORDER**

**VIEW COMPLETED WORK ORDERS**

**Company Name** Home Equipments [Create Report](#)

### Completed Work Orders

id	type	description	plannedDate	actualDate	priority	employee_name	equipment_name
2	repair	No response (completely switch off)	2020-02-06	2020-02-11	high	youssef someh	Defibrillator
15	ppm	it's time for "ECG" ppm	2020-04-20	2020-04-22	high	youssef someh	ECG

[Show all](#)

Figure 5: Completed work orders

You can also add a new work order and it will appear automatically in the homepage.

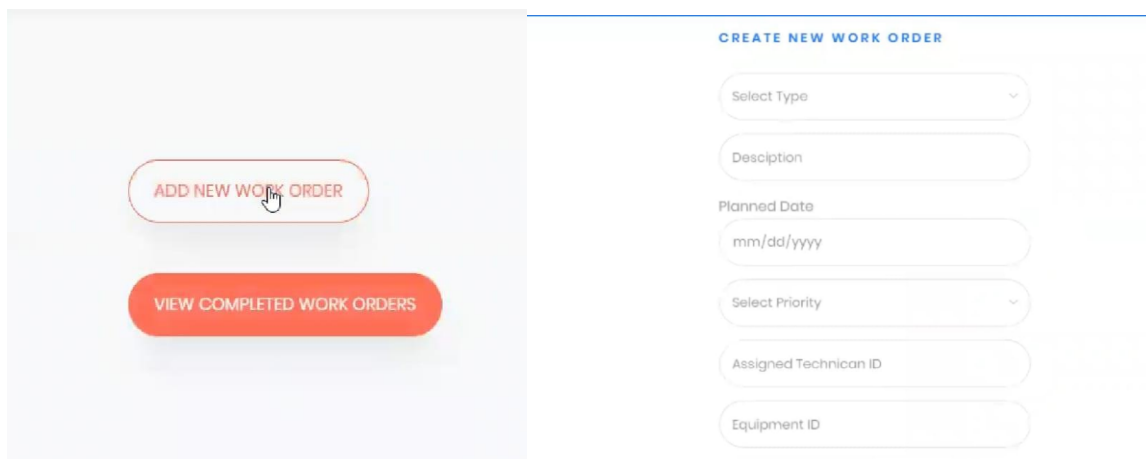


Figure 6: Adding new work order

## ADD NEW REPORT

As we said before, we are interested in three types of reports which are PPM, Inspection and Repair. After the work order submission, the employee will be redirected automatically to add the report of this work order depending on which type of work order he has done whether it's PPM, Inspection or Repair. The screenshots below show each of the three reports forms.

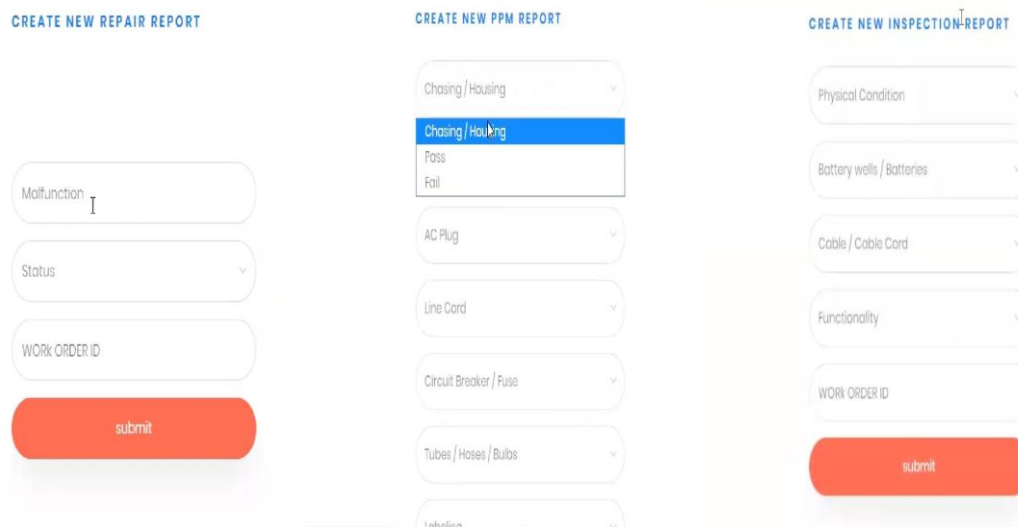


Figure 7: Creating reports

After filling the report you will be redirected automatically to all the reports recorded on the system. You will be redirected to the type of reports you did



fill previously (i.e. If you filled a PPM report you will be redirected to the PPM reports page)

You can also see the reports page of each type by the choose report combobox at the top right of the screen

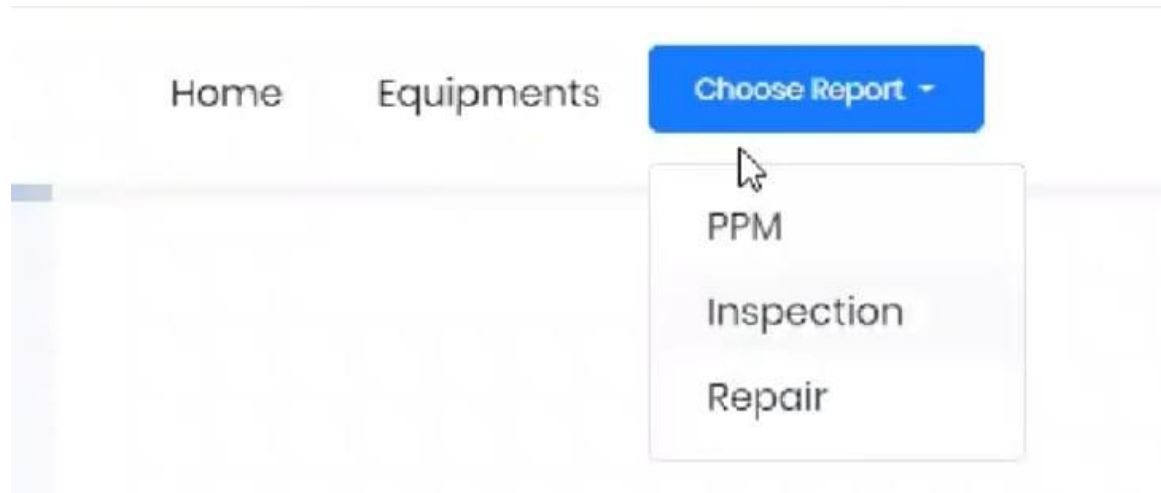


Figure 8: Checking Reports

# EQUIPMENT

You can see the inventory of the hospital by the Equipment button at the top right of the screen, as shown in figures below

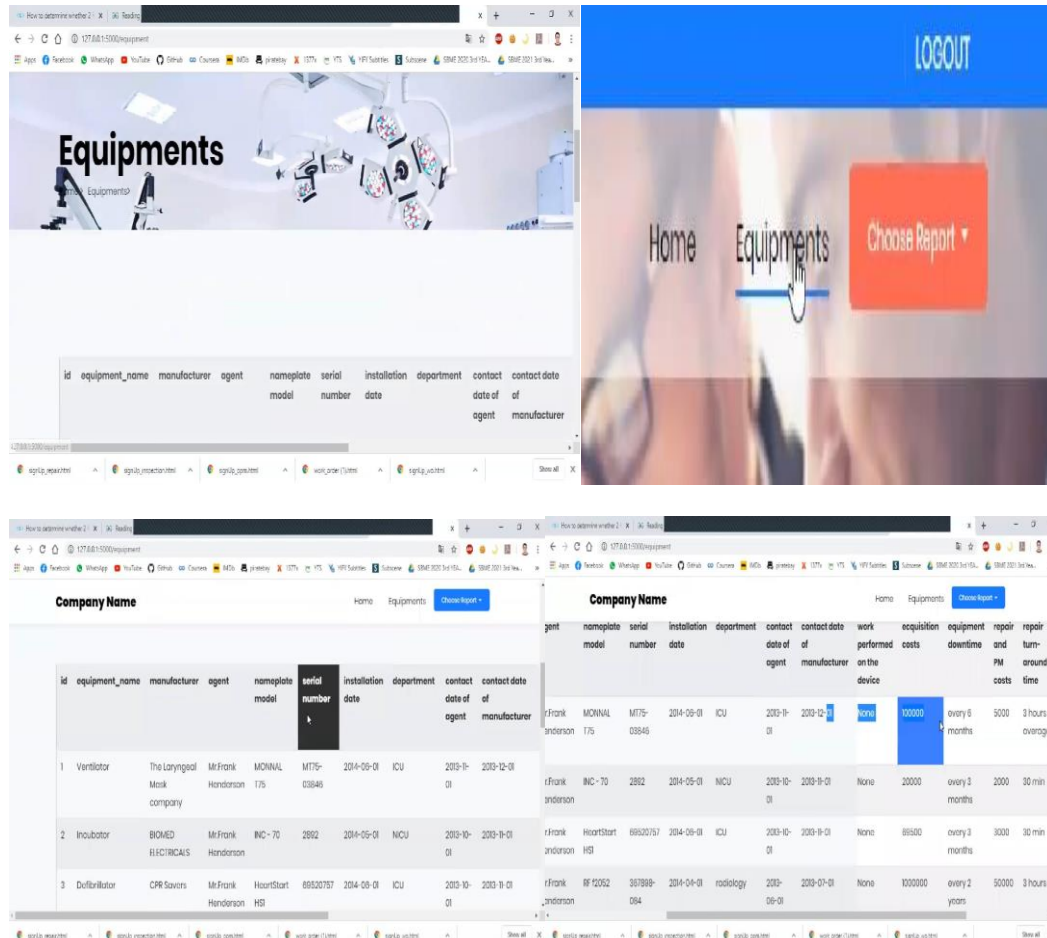


Figure 9: Equipment page