

Database Requirement Specification

for

IICT Construction Site Material Management System



Course Name: Database Management System Lab

Course Code: SWE 328

Project Supervisor:

Dr. Ahsan Habib

Assistant Professor, IICT, SUST

Submitted By:

Team The TechNerds

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Date Of Supervision:

29th March 2023

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29th March, 2023

Dr. Ahsan Habib
Assistant Professor,
IICT, Shahjalal University of Science and Technology, Sylhet

Dear Sir,

We have prepared the attached report on the Software Requirements Specifications of “IICT Construction Site Management System” application for your approval. This report describes the project requirements we've gathered so far.

The major objective of this report is to provide a synopsis of our results from our Project field work. This report contains the specifics of each process used to gather the requirements.

Sincerely yours

Md Sadman Hafiz

On behalf of

Team The TechNerds

Enclosure: Collected documents so far

Executive Summary

IICT Construction Site Material Management System

In 2023, the construction project in our building was still being controlled manually, and we, Team The TechNerds, IICT, SUST students, were thinking about it. We have therefore chosen to totally automate the management of the entire construction site in order to reduce the stress on the staff working on our own building.

Our project intends to build a database that will allow workers to manage the entire building site almost entirely without paper.

Brief Introduction

Construction Site:

Construction site management is the process of organizing , planning, and monitoring the work being done on a construction site to make sure the project is finished on schedule, on budget, and in accordance with all applicable laws and safety requirements.

Project Idea Development:

Handling a building site manually can be difficult and intimidating. Handling a construction site management system manually can lead to a number of issues, such as

- ➔ Lack of real-time data
- ➔ Safety concerns
- ➔ Ineffective communication
- ➔ Difficulty in managing resources.

In this situation, In order to streamline procedures, enhance communication, and boost productivity overall, a construction site database management system can be very helpful in managing construction site activities.

Project Storyline

Receiving contract:

It goes through some approval process from the proper stakeholder or Owners

Planning:

This involves developing a project plan that outlines the scope of the project, the timeline, the budget, and the resources required.

Site Preparation:

Once the project plan is in place, the site preparation process begins. This involves clearing the site, setting up the construction site office, installing temporary facilities.

Procurement:

The procurement process involves identifying and purchasing the necessary construction materials, equipment, and supplies.

Division of the Whole Project into Subparts:

According to IICT Construction Site Engineer, they divide the whole project into sub parts and contracts with the external service providers for the specific subtasks.

Quality Control:

This involves regular inspections and testing to verify that the work meets the required standards and specifications.

Project Management:

This includes managing the project team, coordinating activities, communicating with stakeholders, and monitoring progress against the project plan.

Basic Workflow

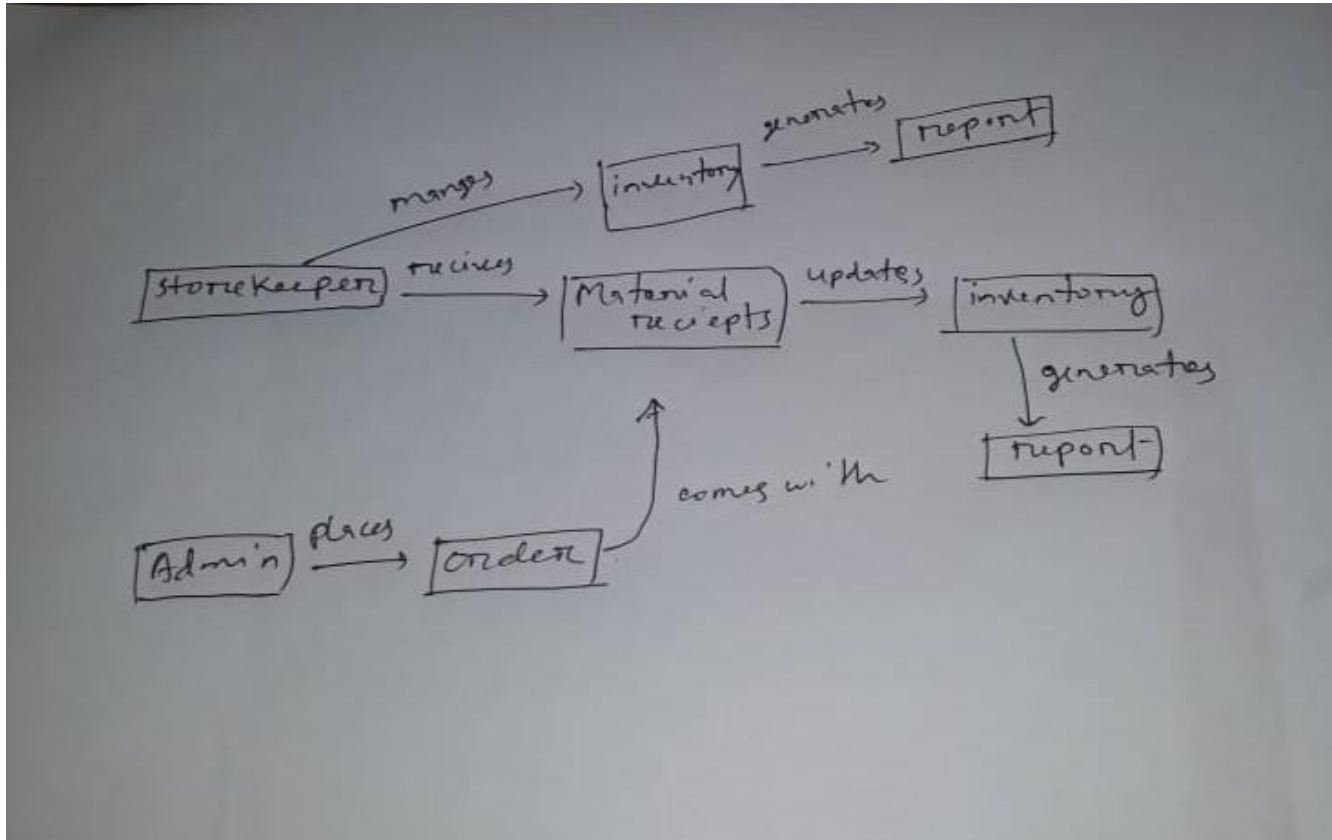


Figure 1: Basic Workflow of Construction Site Material Management

Basic Workflow(Details)

A. Generating Requisition

SABBL & BBL LTD
 87/ Khand Atarfyk Avenue - Digha-1213
 Procurement Request

Requisition Date _____
 Requisition Date _____

Name _____
 Designation _____
 Purpose _____

Loca- []
 SL No- _____
 Month- _____
 Mobile No- _____

Department _____

SL No	Item	Stock Balance of material	Requir Qty	Rate	Remarks

Figure 2: Requisition Form

Entity Taken Form Here:

RequisitionDetail

Attributes:

- RequisitionDate
- RequirementDate
- Location
- SINo
- Purpose
- Destination
- Rate
- Quantity
- Stock
- Remarks
- Contact

B. Making Order Details:

Well-Tech Solution *Think Well*

REF. NO.: FPS/SBDT/ST/SO/2022/1296/Rev-03

DATE: 07 Dec, 2022 *date*

Priced Bill of Quantities
Supply, Installation, Testing & Commissioning of Fire Protection & Detection System
SUST IICT BUILDING

SUMMARY SHEET OF FIRE PROTECTION SYSTEM

S/N	PARTICULAR	SUPPLY AMOUNT (BDT)	INSTALLATION AMOUNT (BDT)
A.	Fire Pump Set	1,950,000.00	120,000.00
B.	Hydrant Accessories	1,028,720.00	239,800.00
C.	Pipe Works	1,844,260.00	124,016.00
D.	Valves & Accessories	1,840,263.00	613,816.00
TOTAL PROJECT VALUE		6,663,243.00	7,277,053.00
GRAND TOTAL PROJECT VALUE			

Terms & Condition:

1. Payment terms: For Supply part 100% Advanced with PO (Purchase Order). *50%* After Delivery for site 30%.
2. For Installation Part 50% advance with PO (Purchase Order), 50% running Bill.
3. The above unit price is without Local Transportation or any other expense. Material Delivery from our Local Warehouse Tongi.
4. Warranty: 12 months from the Material Delivery date.
5. Delivery Lead Time: 60-90 Days after receiving PO (Purchase Order).
6. Above all the price is excluding TAX & VAT or other regularity charge.
7. If any kind change will be appear in BOQ or in drawing, then price will be changed accordingly as per unit rate.
8. The above price is products supply, Installation, Testing & Commissioning without any kind of civil or power related work.
9. This offer installation price is based on the provided BOQ, If any addition or alteration required this will add extra charge.
10. In time of Installation, Buyer will provide workers accomodation, necessary electricity & safety.
11. In time of Installation, Buyer will provide workers accomodation, necessary electricity & safety.
12. This BOQ may change during Final drawing/actual site condition.
13. Scope of Work: Supply, Installation, Testing & commissioning.
14. The Price of Pipe & Fittings should be reviewed when work order will be issued. EMACO Solutions Ltd. reserves the right to alter the pricing in case of Govt. export policy changes including export tariffs and export rebates etc. before order shipment.
15. Offer Validity Time: 2 Weeks.

Sincerely,
(Signature)
Borhanuddin Baki
Assistant Engineer
Welltech Solution
Cell : +8801821160377
Email: welltechsolu@gmail.com
Web: www.welltechbd.com

Sub-Head

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Figure 3: OderDetail From The Company

Entity Taken From Here:

OrderDetail

Attributes:

Date

Reference

SINo

Particular

SupplyAmount

InstallationAmaount

Total

[illegible]

Figure 5:Receipt

Entity Taken From Here

-> Entity : Supplier

attributes:

- Name
- Address
- Lisence
- ContactInfo
- Sign/remarks

->Entity : Item

attributes:

- ID
- Name
- Rate
- Price
- Detail

-> Entity: Driver

attributes:

- Name
- contact
- carOwner
- RegiNo
- Contact

->Entity : Shipping Detail
attributes:

Product_Name

Quantity

Rate

Price

DriverInfo

Date

Status

C.Updating Inventory:

Date	Description	Quantity	Price	Total
01/06/22
02/06/22
03/06/22
04/06/22
05/06/22
06/06/22
07/06/22
08/06/22
09/06/22
10/06/22
11/06/22
12/06/22
13/06/22
14/06/22
15/06/22
16/06/22
17/06/22
18/06/22
19/06/22
20/06/22
21/06/22
22/06/22
23/06/22
24/06/22
25/06/22
26/06/22
27/06/22
28/06/22
29/06/22
30/06/22

Figure 6:Updating Inventory1

Ms Rod

daily

Date	Name of Material	Receive Qty	Total Stock	Issue Qty	Balance Qty	Remarks
10/01/20	Chakra No.					

① Window grill
② Thai
③ Stair Railing
④ Marble stone
⑤

CML

① MS Rod
② Cement
③ Stone Chips
④ Brick 1st class
⑤ Tile
⑥ Door
Sanitary Material

Electric

Stock Register. monthly

Date	Opening Balance	Receive Qty	Name of Material	Total Material	Issue Qty	Balance Quantity	Signature	Remarks
10/01/20	50	100	Ramul	150	20	130	BM	

Figure 7: Updating Inventory (Daily And Monthly)

Inventory table :

Date	Name of or Serial	Unit of Item	Brand Name	Chassis No	Driver name	Received Material	Total quantity	Material quantity (In use quantity)	Balance	Signature	Remarks
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SUST SWE
Technoquest
2023

orbitax

Organized
SWE
Society

Figure 8: More Detailed Update

Receiving Register

Sl. No.	Received Date	Invoice / Challan Date	Invoice / Challan No.	Purchase Req. No.	NMI Date Entry (1 No.)	Material Name	Supplier Name / Manufacturer Name	Country of Origin	JMI / Supplier Lot No.	MFG. Lot	EXP. Date	Unit	Received Quantity	JMI No.	Signature & Date	Remarks
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																

NJI-74-02-002104-02

Figure 9: Basic Inventory Update Form

Entity Taken From Here:

Entity : Inventory

Attributes:

Date

AvailableStock

IssuedItemName

In/out

RecieptID

ChalanNo

PurchasedQuantity

MaterialBalance

ExpiryDate

Total Entities

- 1.Storekeeper,Admin
- 2.inventory
- 3.item
- 4.Order Detail
- 5.Supplier
- 6.Shipping Detail
- 7.Driver
- 8.Requisition Detail

ER DIAGRAM of IICT Construction Site Raw Material Management

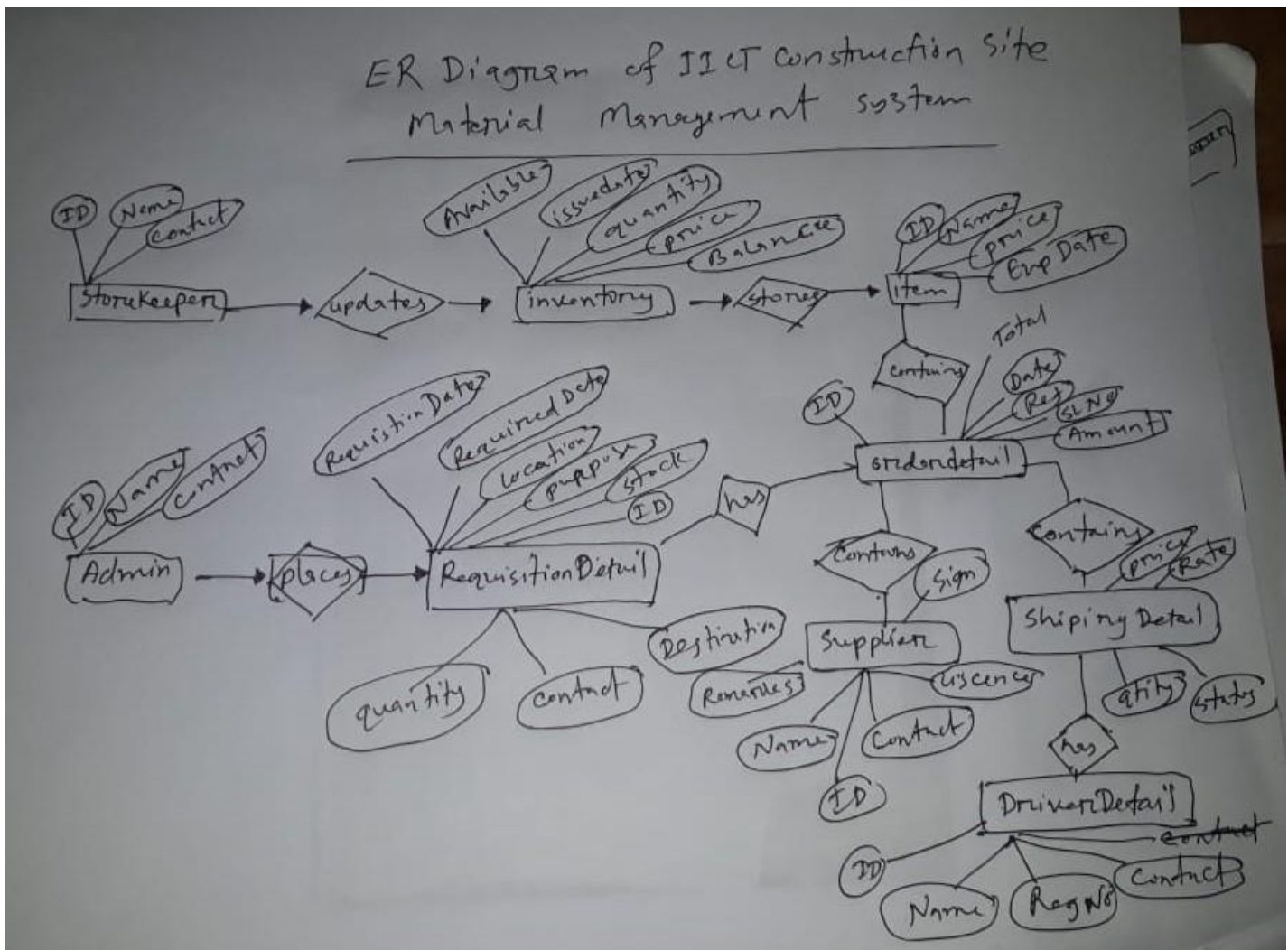


Figure 10 :ER diagram

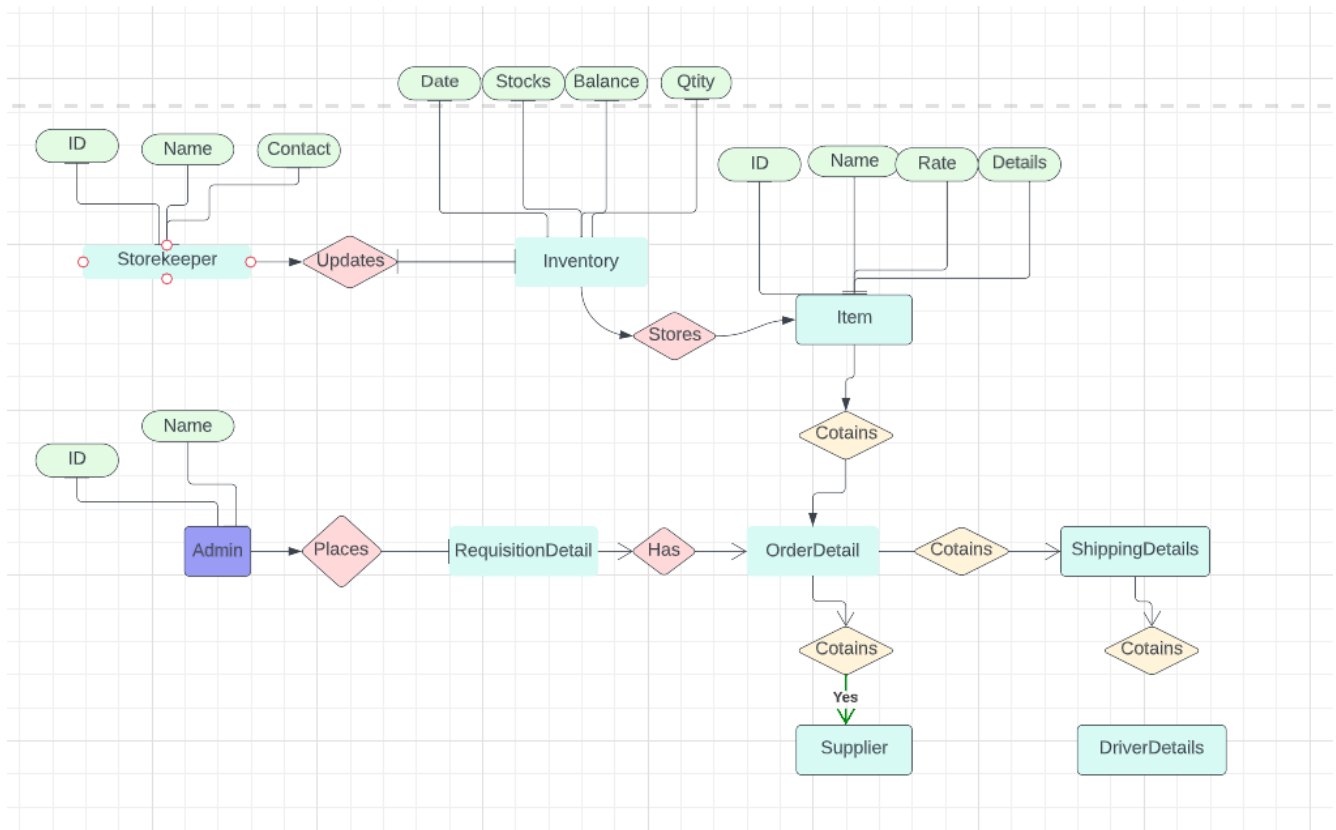


Figure 11: ER Diagram_2

Thank You!!
Any Question?