

Report On
Operation Management and Planning of a House
Construction

By

Kazi Nusrat Alam
Student ID-20264040

An internship report submitted to the BRAC Business School in partial fulfillment of the requirements for the degree of Masters of Business Administration.

BRAC Business School
BRAC University
Fall-2022

© [2022]. BRAC University
All rights reserved.

Declaration

It is here by declared that

1. The internship report submitted is my own original work while completing degree at BRAC University.
2. The report does not contain material previously published or written by at third party, except where this is appropriately cited it through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

Student's Full Name & Signature:

Kazi Nusrat Alam
Student ID-20264040

Supervisor's Full Name & Signature:

Dr. Syed Mahbubur Rahman
Associate Professor, BBS
BRAC University

Letter of Transmittal

Dr. Syed Mahbubur Rahman
Associate Professor, BBS,
BRAC University
66 Mohakhali, Dhaka-1212

Subject: Submission of Internship Report on Operation Management and the Project of a House Construction.

Dear Sir,

It is a great pleasure for me to submit this internship report. While preparing for this internship report, I have tried my level best to maintain the required standard. I have tried to apply relevant concepts that we have learned from our MBA Program. There might have been some unintentional mission since this paper for which I would like to seek your apology.

I have attempted my best to finish the report with the essential data and recommended proposition in a significant compact and comprehensive manner as possible.

I trust the report will meet the desires and I am always available for any future clarification on any part of this internship for evaluation.

Sincerely yours,

Kazi Nusrat Alam
Student ID: 20264040
BRAC Business School
BRAC University
Date: 31st December, 2022

Non-Disclosure Agreement

[This page is for Non-Disclosure Agreement between the Company and The Student]

This agreement is made and entered into by and between Navana Real Estate Ltd. and the under signed student at BRAC University, Kazi Nusrat Alam.

Acknowledgement

Firstly, I am extremely pleased with our Almighty Allah for his help and kindness to me. I would not have been able to finish my work if he had not made it possible.

Then, I would like to express my sincere appreciation to my honorable supervisor, Dr. Syed Mahbubur Rahman, Associate Professor, BRAC Business School (BBS), for providing me with crucial assistance, sound counsel, and the necessary direction to do this assignment properly.

I want to express my gratitude to the staff at the Navana Real Estate Ltd. where I worked, and received practical work experience. I also want to thank Navana Real Estate Ltd. Coordination Department and my supervisor, which assisted me by providing me with useful knowledge and guidance.

Finally, I would like to express my appreciation to the BRAC University. I am eventually grateful to the university and its excellence that works for education, encouraging me and creating knowledge.

I want to express my gratitude to my parents and guardians for always having faith in me, and also to my Loveable Wife who encourages me to fulfill my degree. Last but not least, I want to thank all of my university friends and classmates for constantly lending a hand.

Kazi Nusrat Alam

ID: 20264040

MBA, BRAC University

Executive Summary

This report based on the internship program. This report is important or in a word it is a requirement of my Masters of Business Administration (MBA) program at BRAC University. The main objective of this report is to know about the Supply Chain and Operation Management and also about the project of a House Construction.

Internship in Navana Real Estate Ltd was a great practical experience for my carrier life. Navana Real Estate Ltd is a first rank real estate company under the NAVANA Group in Bangladesh. Recently it changes it mission, vision and business goals.

Every organization (Real Estate, Bank, Hospital, NGO, factory, etc.) has an operation or Coordination Department. An organization is nothing without an operation or Coordination department. Operation is so important for an organization to plan for a well-planned workforce. Operation or Coordination department assist a well-planned organization. It helps employees to operate their skills in right way and gives maximum output, such as profitable and committed business. It develops the plan for making a profitable business in a proper time.

All the activities are mainly covered by the Coordination department and also include all types of work done with the engineering terms and MS project support. I have worked as an Executive at Navana Real Estate Ltd .in Coordination Department. The data provided by me is accurate or approximate in Calculating time and budget. The Coordination is a part of the operation, is a completely organized and well-reputed team.

Keywords: SCM, Operation Management, Coordination, Planning, Project, MBA.

Table of Contents

Declaration	ii
Letter of Transmittal	iii
Non-Disclosure Agreement	iv
Acknowledgment.....	v
Executive Summary	vi
List of Table.....	x
List of Figures.....	xi
List of Acronyms	xii
Chapter 1	
Overview of Internship	
1.1. Introduction.....	1
1.2. Significant of the Study	1
1.3. Scope of Study	1
1.4. Objective of the study	2
1.5. Methodology	2
1.6. Limitations.....	3
Chapter 2	
Company over View	
2.1. About NAVANA.....	4
2.2. NAVANA Real Estate Ltd.....	5
2.3. NAVANA’S Vision.....	6
2.4. NAVANA’S Mission	6

2.5. Values	7
2.6. Goal of NAVANA Real Estate Ltd	8
2.7. Responsibilities of Executive Body of NAVANA Real Estate Ltd.....	8
2.8. Activities of NAVANA	9
2.9. SWOT Analysis	10
2.10.Organization Structure	11
 Chapter 3	
Educational Part	
3.1. Concept of Supply Chain Management	15
3.2. Inventory and Store Management.....	16
3.3. Demand and Supply Management	16
3.4. Transformation Process of Production.....	17
3.5. Total Quality Management	18
3.6. Procurement Process	19
3.7. Product Testing Process	21
3.8. Lean Production System.....	22
3.9. Operation Management.....	22
 Chapter 4	
Project Part	
4.1.Introduction	24
4.2.Description	24
4.3.WBS of Project Structure.....	25
4.4. Estimated Budget.....	26

4.5. Developing of Schedule	27
4.6. Gantt Chart.....	27
4.7. Critical Path Method.....	29
4.8. PERT	30
4.9. Risk Management.....	32
4.10. Conclusion.....	32
4.11. Recommendation	32
5.Conclusion of the Report	33
6.References	34

List of Tables

Table 1: Estimated Budget.....	26-27
Table 2: Gantt chart.....	28

List of Figures

Figure1: NREL Head Office.....05

Figure2: Gantt chart.....29

List of Acronyms

NREL	Navana Real Estate Ltd
SCM	Supply Chain Management
WBS	Work Break Down
OPN	Operation Management
ICS	Internal Communication Sheet
KPI	Key Performance Indicator
CSR	Corporate Social Responsibility
CEO	Chief Executive Officer
CFO	Chief Finance Officer
CE	Chief Engineer

Chapter1

Overview of Internship

1.1 Introduction

The total administration of an assiduity from raw material to finished product to customer is known as force chain and operation. Real estate is one of Bangladesh's most important sectors. This paper is about the exploration of Supply Chain and Operation Management, as well as a house construction design at Navana Real Estate Ltd. The force chain operations ranged from raw accoutrements to finished product, finished product to service sector, and service sector to R&D. Real estate is a company in which the raw material is land and the end product is a ready-made domestic or marketable flat or home that's handed to its stoner or client. The report's thing is to examine the Supply Chain and Operation Management, as well as the House Construction Project.

1.2 Significant of the Study

When information and literacy are linked with thesis and practice, they come to a head. With sensible operation, academic information becomes perfect. Because our educational system is substantially content- grounded, considering a feasible introductory program as a scholarly element is an exception to the rule.

1.3 Scope of the study

As an intern, my liabilities were oppressively circumscribed. I had saved some sanctioned formality in the data collecting for my report.

1.4 Objective of the study

Major objective:

- The study's major thing is to give a report on SCM and operation, as well as a comprehensive house construction design in Bangladesh.

Specific objective:

- To learn about the purpose of SCM;
- To identify different types of Real Estate systems;
- To identify Navana Real Estate Ltd.'s problems; and
- To make suggestion to management system

1.5 Methodology

This report was created grounded on the experience gained throughout the internship time. This study also used data from Navana Real Estate Ltd's periodic report, request, and website. This study uses several maps and tables to describe the experience and findings. Then exploration was carried out in Dhaka, where the company is grounded. The check population included members of the operation platoon who are involved in operations, force chain, dispatch, and so on, as well as some frequent and occasional consumers.

Data sources method:

To complete this study, both primary and secondary sources of knowledge are used. The following are the two sources -

Primary sources include

- Face- to- face meeting with directors, directors, and the department's head.
- Visiting NREL's colorful systems.
- Discussion with the client.

Secondary sources include-

- NREL's periodic report.
- NREL papers of numerous types.
- Various handbooks.
- NAVANA's sanctioned website.

1.6 Limitations

While preparing this internship report, this exploration must deal with a variety of issues. At the same time, the study is balanced with those issues. These are the problems limitations-

- It's relatively delicate to get data from colorful work forces for the task limitation.
- The assiduity's structure was precluding the discovery of certain information and data for a variety of reasons.
- The directors are generally busy since the business is grounded on 24- hour manufacturing, and I didn't admit acceptable attention from the directors.
- Some hypotheticals were made due to a lack of knowledge. As a result, there may be many crimes in this report.
- The time constraint.

Chapter2

Company overview

2.1. NAVANA

NAVANA Bunch is one of Bangladesh's largest private associations, with a long and estimable trading history. In the time 1953, Alhaj Jahurul Islam, one of Bangladesh's energetic business attractions, began his trip by establishing a development company called Bengal Improvement Enterprise (BDC) and snappily expanded his business into the real- estate and machine sectors by establishing new companies similar as Eastern Housing Limited and NAVANA Limited. Following the establishment of Navana Constrained (pre-arranged by an agreement with TOYOTA of Japan under a select distributorship, to parade Toyota vehicles in also- East Pakistan) in 1964, the business grew presto, and the Islam Group was formed under the Chairmanship of Alhaj Jahurul Islam.

The following are NAVANA Gather's businesses-

- NAVANA Limited.
- NAVANA Batteries Limited
- NAVANA Real Estate Ltd.
- NAVANA CONSTRUCTION Ltd.
- NAVANA Interlinks Ltd.
- NAVANA Limited
- NAVANA Electronics Ltd.
- NAVANA Renewable Energy Ltd.
- NAVANA Logistics Ltd.
- NAVANA Petroleum Ltd.
- NAVANA Engineering Ltd.
- NAVANA LPG Ltd.
- NAVANA Welding and Electrode Ltd.
- NAVANA FURNISHINGSLTD.
- NAVANA Foods Limited

2.2. NAVANA Real Estate Ltd.



Figure-1

NREL has a beautiful history that deserves to be reported. It's the narrative of a decade and a half of progress, perceptivity, and an irrepressible inventive station. Since its commencement in 1996 by its Chairman, Mr. Shafiul Islam, NREL has proven its value as a proud Navana Group enterprise. Navana Gather is now the request leader in multi-diversified commerce conditioning, from development to vitality, manufacturing to swapping. NREL, as a family business of Navana Group moment stands out as one of the major real- estate company in the nation which is regarded formerly as" Super Brand". Lately, under the banner of "Navana". NREL has been successful in making the bourns of both original occupants and NRBs a reality.

ESTABLISHMENT- 1996

PRODUCT&SERVICES

Apartment, commercial space and land sales

The Navana Way

The Navana Way describes our vision, mission, values and guiding principles. It establishes a common understanding of what we believe in, what we aspire for and how we work as an organization.

2.3. Vision

“To Attain Excellence across Our Businesses with Talented People and Commitment to the Planet”

NREL believe that excellence is a journey, which can be made successful, not only with talented people, but also with a shared sense of responsibility to the environment and the community in which we operate. This portrays a broader sense of purpose and responsibility, which can only be deserving of a large group of companies as Navana Group. Climate change is a strategic priority for countries across the world including Bangladesh and corporate that commit to the planet are likely to have a competitive edge, both at a local and global scale.

2.4. Mission

We are committed to the Following Measurable and Time bound Mission Statements:

- To be in the top percentile of the market and customer choice
- To double the profitable sales growth in all our SBUs in 5 years
- To ensure all SBUs are profitable before tax and interest in 2 years
- To create the most engaged working environment with the right people at the right role & become an employer of choice in 5 years
- To be successfully digitalized in 2 years

2.5. Values

Our values define who we are, how we operate, how we grow and how we sustain.

- **Ethics-**We stand by our purposes and achieve results the right way even amidst difficult circumstances. We respect the law of the land and hold ourselves accountable. We conduct our business with high ethical standards.
- **Commitment-**We deliver on our commitment to make our customer experiences better than expected. We also deliver the assurance we promise to our stakeholders above and beyond their expectations.
- **Transparency-** We value the trust of our stakeholders has on us. We demonstrate clarity in our thoughts and actions.
- **Entrepreneurship-** We take ownership and explore new possibilities that make us a sustainable organization.
- **Innovation-** We values the power of diverse perspectives that help us innovate new concepts and businesses. We recognize foresight for future readiness.
- **Empathy-** Our people are our greatest asset. This remains possible through mutual respect and empathy, not only towards each other, but also to the greater causes that we share with our stakeholders.
- **Teamwork-** We leverages from collaboration towards a collective interest that serves our vision. We believe in team work as instrumental to our success.

2.6. Goal of Navana Real Estate Ltd.

Navana Real Estate Ltd. is Bangladesh's first developing company. They've a variety of operations in Bangladesh's major metropolises, as well as a general flat trade. Our focus is concentrated on our guests' pretensions and solicitations. Because effective client need consummation begins with appreciation, we do everything we can to comprehend our guests' viewpoints. We probe their demand. We pay attention and respond. We want to come a part of each customer's requirements

2.7. Responsibilities of Executive Body of Navana Real Estate Ltd.

The Board of Executives is responsible for establishing the group's marketable pretensions, as well as overseeing and covering the group's business operations. Moment, the company's operation and other operations, as well as the perpetration of its plan, are entrusted to Managing Directors, Administrative Directors, and elderly directors. The Bunch's labor is estimated to be roughly 1050. Each member of this group is devoted to achieving the pretensions by sincerity, intentness, commitment, and promptitude. Considerably good and educated Official Chiefs are visionary in assembling stated objects, Board of Executives directions, and achieving points as the Company's Head. They seek for continuous improvement in the company's operations.

2.8. Activities of NAVANA

- **Construction of two flyovers by Navana**

The 8.7- kilometer-long Mouchak- Malibagh- Moghbazar Flyover was erected in the capital's main center. MCCC (No. 4)- Toma JV Ltd and Simplex- Navana Construction banded on the construction. In 2017, the flyover was made functional. The launch gantry and gantry crane are being erected at the same time as the flyover. The 8.7- kilometer-long Mouchak- Malibagh- Moghbazar Flyover was erected in the capital's main center. MCCC (No. 4) - Toma JV Ltd and Simplex- Navana JV banded on the construction

- **Navana conveyed firefighting vehicles to three airports**

Our Airplane terminals are more ensured & secured as Gracious Flying Specialist of Bangladesh (CAAB) has presented most progressed Airplane Protect and Firefighting Vehicles/ARFF. Navana Interlinks as of late conveyed three ARFF to CAAB for Hazrat Shahjalal Universal Airplane terminal, Osmani Universal Air terminal, Sylhet and Saidpur Air terminal.

- The Rosenbauer Puma is one of the foremost fruitful, effective, and variable ARFF vehicles around the world. Its multi-award-winning plan and powerful performance make it the foremost present day fire battling vehicle of our time. An underwriter for economical aftercare of ARFF vehicles! For including this sort of vehicle CAAB went one step advance. We are pleased to be a portion of this victory.
- Navana pipes for Padma multipurpose bridge

2.9. SWOT Analysis

1. Strengths

- Experienced administration and huge number of ventures around the Bangladesh
- Quality products and services
- Company reputation and goodwill
- Expansive number of Branches all over the nation
- Expanding market, expanding sales & profitability
- A well industry segment with quality business
- Great acquiring control of target clients bunch
- Government keen interest to solve housing problem with the rapid increase of urban population
- Open market economy, recent housing policy etc. may favor economic development of lodging industry. Dependency of the major housing companies in the market

2. Weakness

- Lack of adequate marketing (advertising and promotion) effort
- Lack of full scale automation
- Lack of training facilities for the employees
- Strong competition among the existing players of the industry
- Expanded cost of mechanical materials will be troublesome to pass on the clients since the assertion in reaction of the cost and development standard is made 2 to 3 a long time some time recently the real giving over of the apartments

3. Opportunities

- Regulatory terrain favorable to private sector development
- Value addition in products and services
- adding coping power of people
- adding trend in transnational business
- adding the population of Bangladesh
- A high salutory investment occasion for people as well as fiscal institutions
- A really wide compass is also winning for remote bookmakers
- Despite the fact that the show promote of the loft commerce is confined inside tall pay bunches of the society; there exists possibility for middle and lower-level income groups.

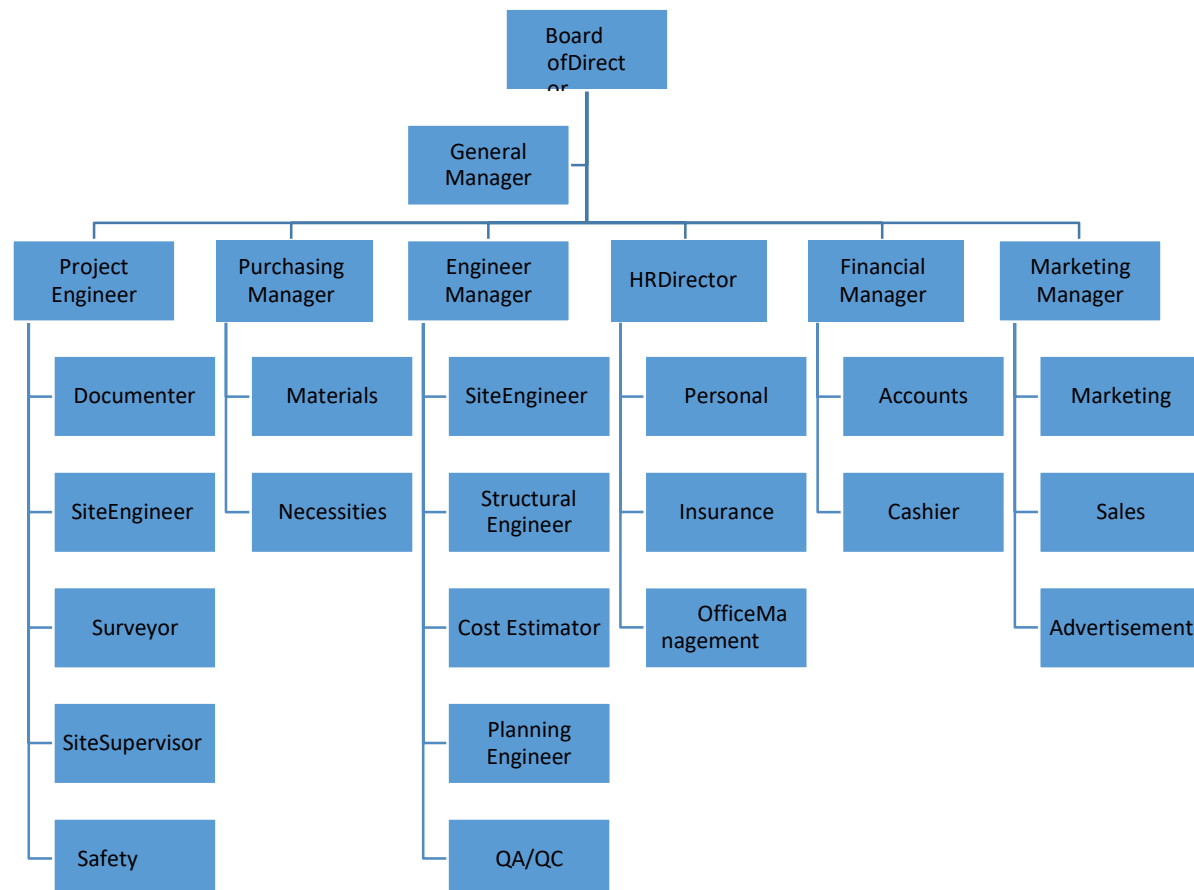
4. Threats

- The Bangladesh Government's or RAJUK's frequent revisions in habitation rules
- Market pressure to reduce lending rates
- National and international political upheaval
- Bangladesh's lack of land
- Political insecurity and turmoil endanger all business sectors, including the housing industry, directly or indirectly.
- The bureaucratic complexity imposed by RAJUK, WASA, DESA, and many other government and semi-government entities
- Cooperation and services offered by the rational revenue board in connection to taxation and import facilities (Tax Concession)

2.10. Organization structure

NREL is a functional organization structure in which all managers' reports to Board of Director. The company contains diverse utilitarian units, which are working down

independently. Function units include Project managers, Purchasing managers, engineer managers, H&R directors, financial managers, and marketing managers. The organization structure depicts with the assistance chart, which appears the Graphical representation of the company structure. The graphical representation appears to Workers and partners to recognize the working relationship, so they know precisely how the company works.

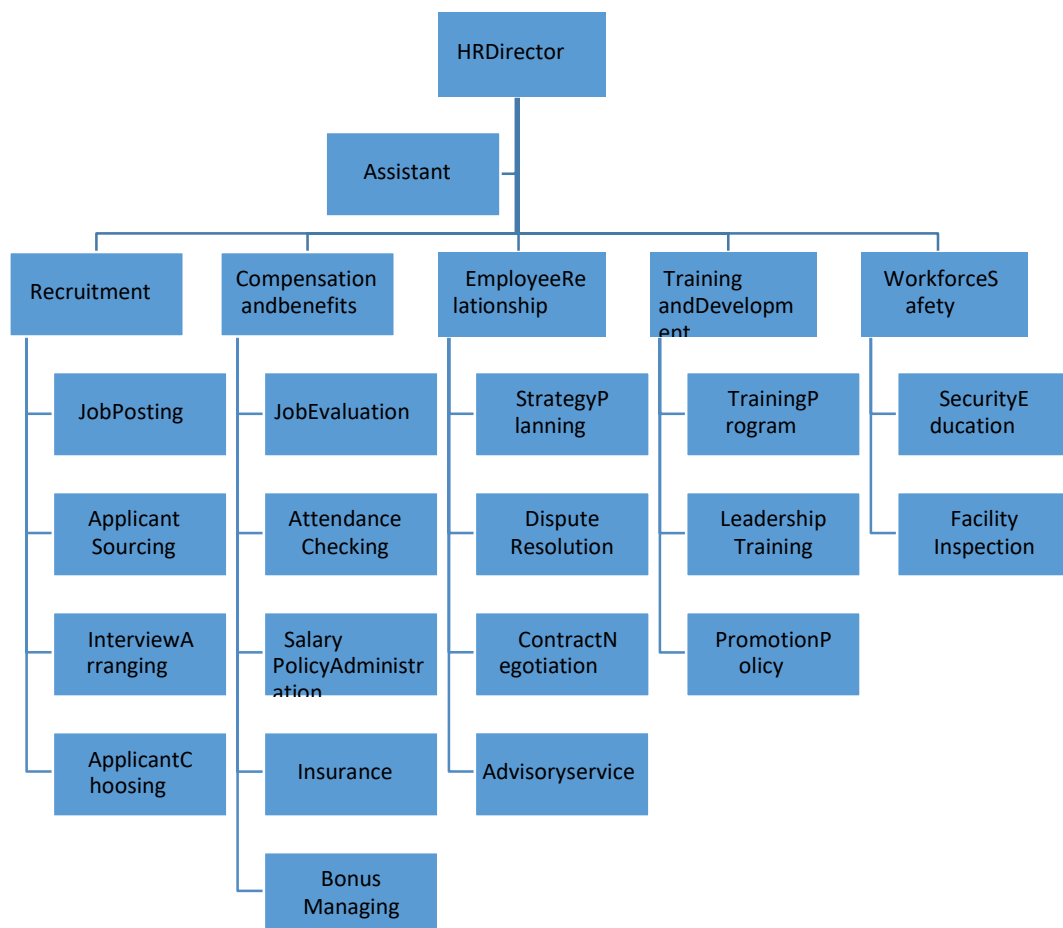


1. Financial Department

The financial department controls the cash flow interior the company and exterior the company. It has mindfully to guarantee the fund's accessibility to extend to meet the day-to-day installments. The money related office incorporates the taking after subunits:

2. Human Resources Department

The human assets office needs to guarantee the staff contracting on day by day compensation or month to month compensation depend on empty position. It is also responsible for the training of the staff, record of everything in an organization, insurance of the employees or workers, compensation and benefits, and employee relations.



3. Marketing Department

Notice and advancement of the company is the fundamental duty of the showcasing office. It is also responsible for the sale of the company, pricing of different things, market research and strategy, and all the activities, which are related to public relations.

4. Engineering Department

The engineering department is developing the office and doing overviews of the position for Venture development. It's also in charge of planning the structure design. The engineering department is assessing the check data, planning, and supporting any design- related enterprises.

5. Project Department

The Venture Division's primary responsibility is to plan and supervise the adventure. The adventure director guarantees the budget for the duration and assigns specialists and representatives to complete the design on time in agreement with the contract. It's far too reliable for the specialists' safety.

6. Purchasing Department

The copping division's primary responsibility is to buy fabric for the extension. It's also in charge of the company's day- to- day operations. They look for the topmost effects that are nicely priced and of high quality.

Chapter 3

Educational Part

3.1. Concept of Supply Chain Management

The operation of accoutrements, data, and accounts as they flow from provider to patron to distributor to retailer to client is known as force chain administration. force chain operation entails organizing and integrating these movements both outside and between businesses. It's believed that the ultimate thing of any sustainable force chain operation strategy is to reduce force.

Chopra and Meindl- Supply chain administration is the operation of overflows between and among force network stages in order to enhance force chain profitability.

Simchi- Levietal – force chain operation is a set of approaches used to efficiently integrate suppliers, manufacturers, storages, and guests so that wares is produced and distributed at the right quantities, to the right position, and at the right time in order to reduce frame-wide costs while meeting service- position conditions.

Mentzeretal.(2001) illustrates a force chain as" a group of three or further substances(associations or persons) directly incorporated in an upstream and downstream sluice of products, services, finances and information from a source to a customer.

Components of SCM:

Macro-level force chain operation factors

SRM- stands for supplier relationship operation.

ISCM-stands for internal force chain operation.

CRM -stands for client relationship operation.

3.2. Inventory and Store Management

An adventure's stock is the force of particulars and inventories it has on hand, or the products and accoutrements themselves. A shop, on the other hand, is a business that stores effects for trade to guests or collects coffers for use as an input in manufacturing operations. Numerous enterprises' most precious asset is shown, representing up to 50 of total invested capital.

Stock administration is the operation of non-capitalized offers (stock) and stock particulars. Stock administration, an element of force chain administration, oversees the inflow of particulars from manufacturer to distribution center and from these services to point of trade.

3.3. Demand and Supply Management

Demand- Demand is a financial principle that expresses the desire and readiness to pay a price for a given good or service.

Supply- is a basic economic term that specifies the total amount of certain commodities or services accessible to consumers.

Demand Management

Supply and demand are patterns derived from a contemporary economic concept. Each product or service will have its own supply and demand designs based on cost-utility utility and individual reference. If people seek a good and are ready to pay extra for it, the manufacturer will add it in the supply. Given the same amount of demand, the cost will decrease as supply increases. In an ideal market, the supply equals the demand for a certain price point; at this moment, consumer utility producer profits are maximized.

3.4. Transformation process of Production

Historical evaluation of production and operation management

The operation has been regarded as an essential aspect of a country's fiscal success for over two centuries of generation and operation. The traditional view of manufacturing administration began in the eighteenth century when Adam Smith linked the fiscal benefits of worker specialization. He proposed breaking down jobs into subtasks and feting experts for specific tasks in which they would come extremely talented and complete. Smith's studies on the developed scientific operation were enforced by F.W. Taylor in the early twentieth century.

Production

product is the gradational metamorphosis of one type of material into another. Production is the process of converting inputs into labor. As a result, product refers to the creation of goods and services. It's done to fulfill mortal desires. Thus, manufacturing is a transformational process.

Operation

The operation handle is the combination of inputs, change prepare, yield, and stock, brought, and quality control. Unnaturally, operation converts inputs into labors.

The process of transformation

Edwood Buffa describes product as " the process of creating goods and services."

The metamorphosis process is carried out in the following ways:

Decomposition A single input (raw accoutrements) is employed to induce numerous forms of affair.

Integration is the application of several inputs to induce a single affair.

Service In this case, the regard of the thing is increased by furnishing service.

3.5. Total Quality Management (TQM)

An each- encompassing approach to long- term success that sees a harmonious change in all aspects of an association as a plan rather than a short- term thing. It aims to profoundly alter associations by gradationally changing stations, practices, structures, and processes. Total quality operation goes beyond the product quality approach to include everyone in the business and every function administration, dispatches, distribution, product, marketing, planning, training, and soon. TQM (total quality operation) refers to a quality trip that involves everyone in a company. This system is divided into two testaments. The first is a no way - ending trouble to ameliorate, known as a nonstop enhancement; the alternate is a thing of client satisfaction, which entails reaching or surpassing consumer prospects.

The International Organization for Standardization (ISO)

The International Organization for Standardization (ISO) is a global standard- setting body made up of representatives from colorful public organizations. The association, which was innovated on February 23, 1947, promotes global personal, artificial, and marketable norms. It's grounded in Geneva, Switzerland, and as of March 2017 workshop in 162 countries. It was one of the first associations to be granted UN Economic and Social Council general exemplary status.

Quality Management System

The QMS provides the base for describing and meeting our assiduity's global quality norms. It has been designed to meet the conditions of the European Union (EU), the Food and Drug Administration (FDA), and the World Health Organization (WHO). These executive sources give the standard criteria that are used to produce and manage the QMS content. For case, in addition to executive conditions, the QMS incorporates specific GSK marketable prerequisites deduced from quality and compliance applicable GSK Commercial Arrangements and Measures, as well as Quality Alert guidelines.

Quality control (QC)

Quality Control could be a handle through which a trade looks for to guarantee that item quality is kept up or progressed and fabricating mistakes are decreased or finished. Quality control requires the business to create an environment in which both management and employees strive for perfection. This is done by training personnel, creating benchmarks for product quality, and testing products to check for statistically significant variations.

Quality assurance (QA)

Quality affirmation (QA) may be a way of anticipating botches or absconds in fabricated items and dodging issues when conveying arrangements or administrations to clients; which ISO 9000 characterizes as “portion of quality administration centered on giving certainty that quality necessities will be satisfied”.

3.6. Procurement Process

Procurement refers to the procurement of products or services in exchange for a financial payment. Procurement is the process of locating, negotiating conditions, and carrying products, services, or works from a third party through a extending or competitive bidding procedure. When factors like as quality, volume, time, and position are considered, the process is used to insure that the buyer receives products, services, or tasks at the stylish possible price. Organizations and open bodies open characterized forms with the stopgap of advancing respectable and open competition for their trade while avoiding threat, similar as the preface of highway robbery and conspiracy. Nearly all acquiring druthers integrate rudiments like vehicle and running, limited advantage, and cost variations.

Acquiring frequently entails making copping opinions under conditions of scarcity. However, it's a good idea to hone fiscal inquiry procedures like a cost- benefit examination or cost-mileage examination, if good information is available.

There are some processes of procurement

- Demand
- Examine the pricing vacuity and other considerations
- Make a name for yourself, Get supplier offers
- Examine supplier proffers
- Choosing a supplier
- Creating a purchase order Purchase product blessing
- Check the status of your order
- Upon damage of the package
- Examine the tab
- Payment was approved and transferred to the dealer
- Returns of process
- Effects to Consider While Choosing an Effective Supplier

There are several factors to consider while picking a productive supplier for a company's manufacturing procedure.

- Technological aptitude
- manufacturing capability
- responsibility
- after- deals service,
- supplier position
- JIT capability
- standard quality once request performance

The following terms are used in the procurement process

- Request for Information (RFI)
- Request for Citation (RFQ)
- Request for Offer (RFP)
- Request for Tender (RFT)(EOI)

Procurement operations are divided into two distinct orders direct and circular spending. Direct expenditure refers to product- related procurement, which includes all goods that are part of final products, similar as raw accoutrements, factors, and corridor. Coordinate accession, which is at the heart of force chain operation, has a direct impact on manufacturing enterprises' product plans. In discrepancy, circular procurement deals with on-production-related purchases. Circular procurement includes a wide range of goods and services, ranging from common effects similar as office inventories and machine lubricants to complicated and precious products and services similar as heavy outfit.

3.7. Procedure for Product Testing

Product testing, frequently known as client testing or comparison testing, is a system of assessing the rates or performance of effects. The notion is that the appearance of mass production manufacturers develops ingrained effects that they certify and request to be identical within a many technical norms. Item testing seeks to insure that guests understand what effects will negotiate for them and which have the most value. Item testing may be used to increase customer assurance by vindicating pledges made via marketing strategies similar as promoting, which are by description in the consumer's interest. The preface of product testing marked the launch of the contemporary consumer movement. The most typical artificial element is to give effects and services that meet assiduity norms. Certain measures will be purposeful or obligatory in any sector (which implies that a government issues a regulation).

3.8. Spare Manufacturing System

Incline manufacturing is a gathering line technology developed first for Toyota for vehicle manufacturing. It's also known as the Toyota manufacturing frame or just- by- time product. THE TEN spare product RULES • Reduce waste • Reduce force • Increase inflow • Produce

in response to consumer demand • Match client needs • Do it duly the first time • Empower workers • Plan for speedy transfiguration • unite with a supplier

Incline fabricating is a gathering line technique created initially for Toyota and fabricating of automobiles. It is additionally known as the Toyota generation framework or just-in-time production.

3.9. Operation management

Operation administration is the way of compellingly planning and guiding the operations of those sections of a design that are responsible for the factual transition of accoutrements to finished particulars. One of the abecedarian capabilities of operation administration is stock operation across the force chain. Operations administration is apprehensive of original and global patterns, client demand, and available coffers for product. Operation administration addresses the purchase of inventories and labor employment in a accessible, cost-effective manner to meet the customer's requirements. Force situations are constantly maintained to insure that inordinate amounts aren't on hand. Operation is responsible for locating suppliers that can offer the right particulars at reasonable costs and deliver the product on time.

Planning: implicit problems and decides how the generation should be carried out during development.

Planning pretensions includes

1. Reducing product time and
2. Reducing product costs.
 - To negotiate product- related collaboration across different departments.
 - To develop a respectable plan of action for men, plutocrat, accoutrements, machine

accoutrements, tools, and product outfit.

- Choosing nearly the generating target to be met while keeping the deals in mind.
- Maintaining nonstop product operations.
- To get the asked request share.
- To find the applicable guys for the right jobs.
- Carrying the necessary degree of earnings. • To make every trouble to exclude any implicit impediments to smooth product.
- Realizing the economics in a generation has cost money and time.
- Begin manufacturing on contemporary lines.
- To run the plant at the specified level of efficiency.
- To devise alternative strategies in order to deal with any crisis or situation.

Chapter 4

Project Part

4.1 Introduction

Project: A project is a one-time-only set of inter-related activities with a definite beginning and ending point in time to create a unique product/service system.

Project Purpose: The basic purpose of the project is to make a project report for the Kazi construction house using all the material, which is studied in books, and lectures to help us to understand the project.

4.2 Description

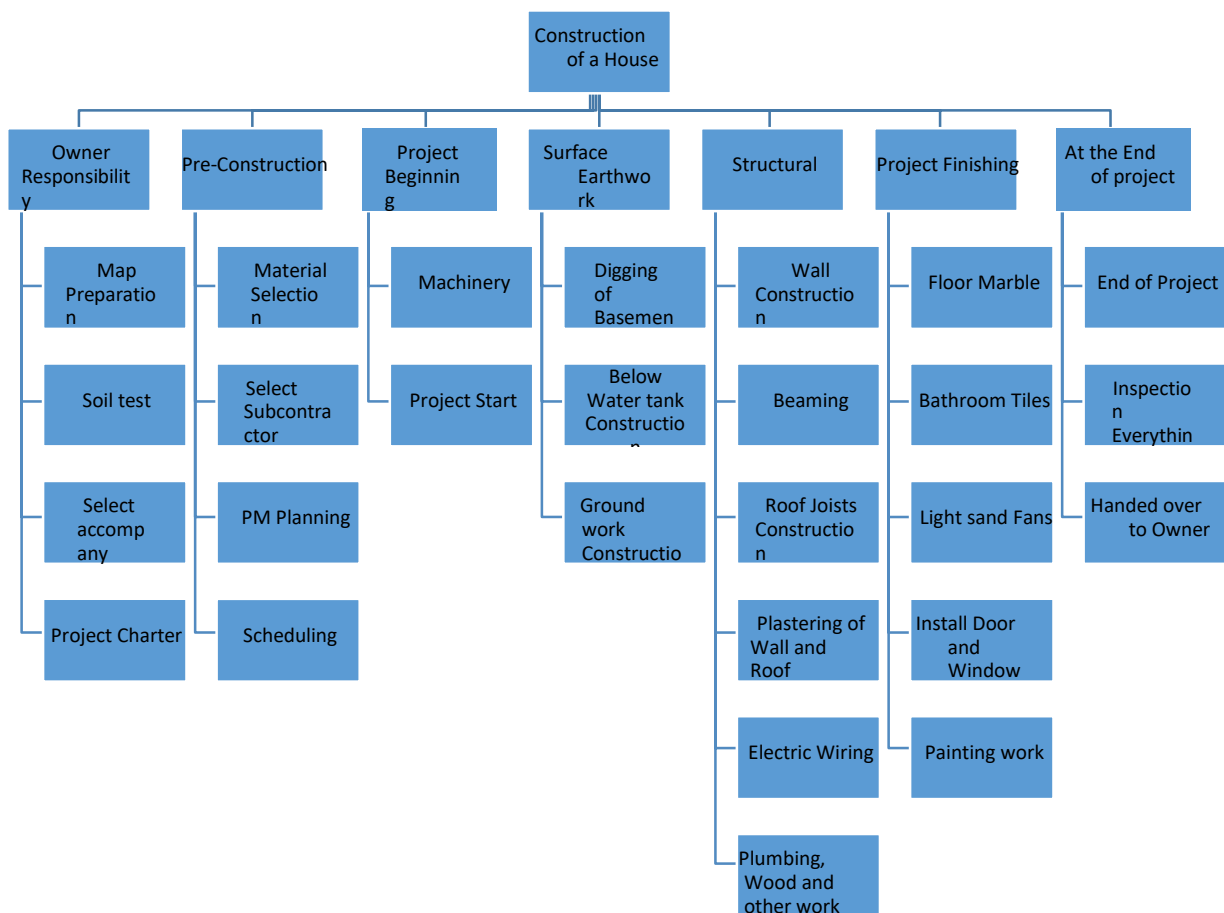
The first stage in starting a design is determining whether it's a new construction design or a being design that needs to be acclimated. By subscribing an agreement named the design duty and with the stakeholders to begin the project. Therefore, originally, the design compass is specified, and also all fiscal offers are calculated. Relating to stakeholders who will be involved in internal or external design. This is known as the Recognizable evidence of Project phase. The first stage of home structure is to produce design contract papers known as a "duty of the Project," which will be linked by the proprietor of the house and the temporary worker to fairly authorize an adventure. The contract contains the brief introduction of the project and documenting the entire initial requirement that fulfill all the customer need and expectation.

NREL Corporation has been working on the structure point for the once 25 times. It might be a secure association in the field of in-house development. The primary purpose of NREL is to achieve the thing in the distributed time while also satisfying the client's abecedarian demands and implicit results. The consumer receives an ultra-expensive structure at a fair price from NREL.

4.3 WBS of Project structure

WBD denotes the extended work break down structure. WBS is used to complete a delicate and multi-step extension. WBS is a map that divides large systems into lower portions in order to complete the task more snappily and precisely. The main purpose of the WBS is to be completed to the topmost extent possible. WBS allows the design director to decide whether or not to accept the recommended strategies or adaptations grounded on the issues of the colorful scripts. After the WBS inflow map is completed, all conditioning feel affiliated and no important tasks are left out. All of the duties are written in boxes in primary textbook sequence. The full modest assignment, which is readily written, does not wish to be at the bottom of the chart.

A figure depicts the interrelated elements of the house's growth.



Still, it may have an impact on the other, if we acclimate one task. The lines also change as a stopping gravestone if a cause and effect well-structured quality control of the adventure errand, threat administration of each work, scheduling, and procurement operation are needed.

4.4 Estimated Budget

The accoutrements were chosen and bought from original commerce. There's no compromising on fabric quality, and only the loftiest quality cloth is used. First, we cipher the structure brought, and also we calculate on finishing brought. Plot taken a risk, Burrowing, and other unidentified charges will also be added to the total budget hand taken a risk.

SL	Activity	Cost per Unit	Unit	Quantity	Total Cost
Structural Cost					
1	Labor	340.00	sft	580.00	197,200.00
2	Sand, Bricks, And Others				-
	Bricks		Nos	140,000.00	1,120,000.00
	Sand		Cft	5,120.00	107,520.00
	Others	118,400.00		1.00	118,400.00
3	Cement and Steel Bar				-
	Cement	530.00	Bag	1,700.00	901,000.00
	Rod	90,000.00	Ton	11.00	990,000.00
4	Pipes and Wires				-
	Pipes	600,000.00		1.00	600,000.00
	Copper Wire	100,000.00		1.00	100,000.00
5	Threshold, Front Gate and Grill				-
	Steel Threshold	120,000.00		1.00	120,000.00
	Front Gates	750.00	Sft	122.00	91,500.00
	Outside grill	170,000.00		1.00	170,000.00
6	Miscellaneous				-
	Spray	50,000.00		1.00	50,000.00
	Chemical	40,000.00		1.00	40,000.00
	Water Tank	45,000.00		2.00	90,000.00
	Boundary Wall	250,000.00		1.00	250,000.00
Total Cost of Structure					4,945,620.00
Finishing Cost					
7	Marble and Tiles				-
	Marble	150,000.00		1.00	150,000.00
	Tiles	465.00	Pcs	3,500.00	1,627,500.00
	Labor	150,000.00		1.00	150,000.00
8	Electrical Item				-
	Main Circuit Board	90,000.00		1.00	90,000.00
	Fans	8,000.00	Nos	16.00	128,000.00
	Exhaust	3,500.00	Nos	21.00	73,500.00
	Switch and boards	850.00	Set	33.00	28,050.00
	Lights	300,000.00		1.00	300,000.00
9	Bathroom Fittings				-

	Basin and Commodes	9,000.00	Nos	8.00	72,000.00
	Sanitary fittings	35,000.00	Nos	8.00	280,000.00
	Accessories	10,000.00	Nos	8.00	80,000.00
10	Kitchen Fittings				-
	Woodwork	50,000.00		1.00	50,000.00
	Sink	8,000.00		1.00	8,000.00
	Marble and granite	70,000.00		1.00	70,000.00
	Accessories	12,000.00		1.00	12,000.00
11	Window, Door Mirrors				-
	Wooden Door	32,000.00		22.00	704,000.00
	Windows	25,000.00		21.00	525,000.00
	Stair Rail	170,000.00		1.00	170,000.00
	Mirrors	70,000.00		1.00	70,000.00
12	Painting				-
	Paints	450,000.00		1.00	450,000.00
	Ceiling Paint	350,000.00		1.00	350,000.00
13	Wooden Work Finish				-
	Door polish	200,000.00		1.00	200,000.00
	Door Fittings	85,000.00		1.00	85,000.00
	Racks	75,000.00		1.00	75,000.00
14	Outer Finish				-
	Lawn	50,000.00		1.00	50,000.00
	Plants	30,000.00		1.00	30,000.00
					-
TotalCostoffinishing					5,828,050.00

Total Cost of House	5,828,050.00	+	4,945,620.00	10,773,670.00
Construction Company Profit		18%	=	12,712,930.60
Mr. Alam Plot Cost	17,000,000.00			
Foundation Cost	300,000.00			
Total Estimated Budget Cost of the Project			=	30,012,930.60

4.5 Developing of schedule

Developing the plan is made in an arranging stage. It may be a key part of venture administration. It may be a timetable that organizes the diverse exercises that which acts to be done and which movement to be wrapped up. It's a handle that organizes assignments, length, assets accessibility, and due dates of the task to total extend in a given period inside the assessed budget additionally allot each assignment to each member who is capable to total it. There are numerous ways to develop a venture plan with the assistance of the Gantt chart, Basic Way Strategy (CPM), and Perky.

4.6 Gantt chart

Microsoft Project 16 is used to construct a Gantt chart for the house of construction, which mentioned each activity, duration, and predecessor of each task. The screenshot of the MS

Venture is joined underneath:

Duration: Start time 01.01.2023 and Finishtime31.12.2023

Task	WBS	Task Name	Duration(Days)	Predecessor
1	1	Owners Responsibility	30	
2	1.1	Soil Test	5	
3	1.2	Map Preparing	10	2
4	1.3	Company Selection	7	3
5	1.4	Project Charter	7	4
6	2	Pre-Construction	28	
7	2.1	Material Selection	8	5
8	2.2	Sub-Contractor Selection	8	7
9	2.3	Project Management Planning	8	8
10	2.4	Scheduling	12	8
11	3	Project Beginning	7	
12	3.1	Machinery	4	10
13	3.2	Project Start	3	12
14	4	Surface Earthwork	30	
15	4.1	Digging of Basement	7	
16	4.2	Construction of bellow U/G Water Tank	5	15
17	4.3	Construction of Basement	22	15
18	5	Grey Structure Construction	90	
19	5.1	Wall	40	
20	5.2	Beaming	20	19
21	5.3	Roof Joisting	20	19
22	5.4	Plaster	20	21
23	5.5	Electric Wiring	10	19
24	5.6	Plumbing Work	10	22
25	6	Project Finishing	54	
26	6.1	Floor Marble	25	
27	6.2	Bathroom Tiles	13	26
28	6.3	Light sand Fans	8	27
29	6.4	Door and window Fitting	8	28
30	6.5	Painting	54	24
31	7	Closing Project	21	
32	7.1	End of Project	20	30
33	7.2	Inspection	20	30

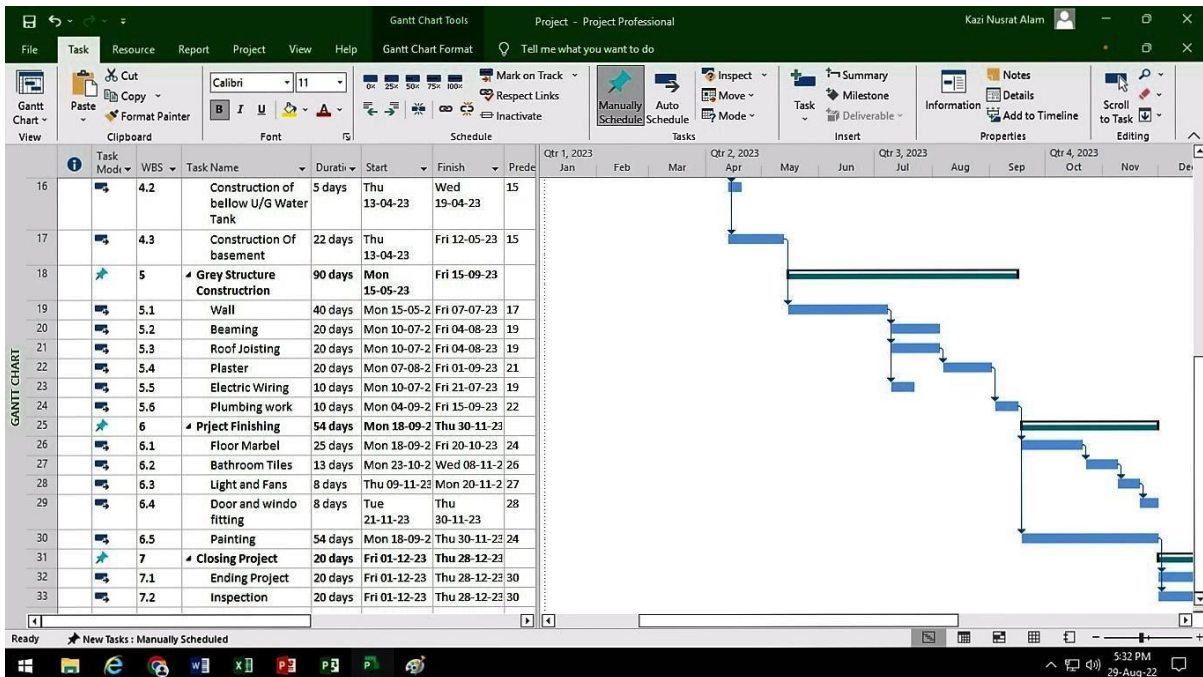
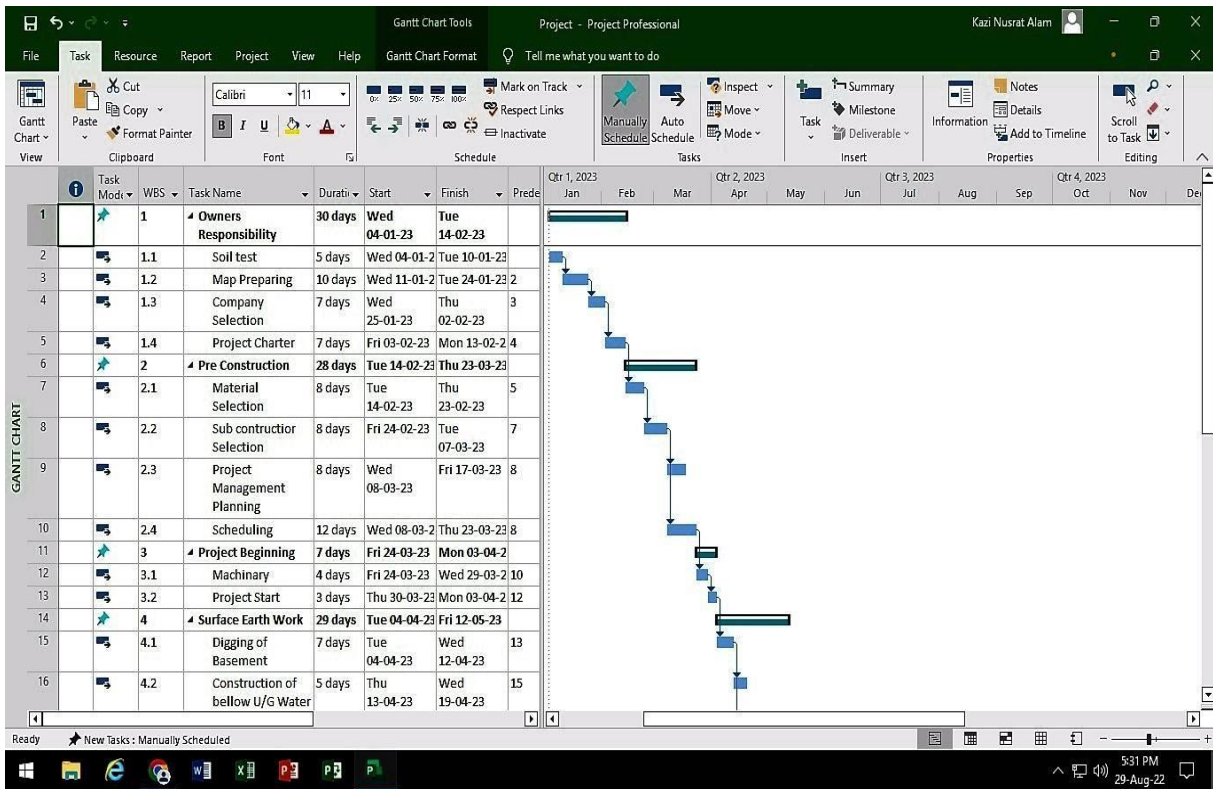


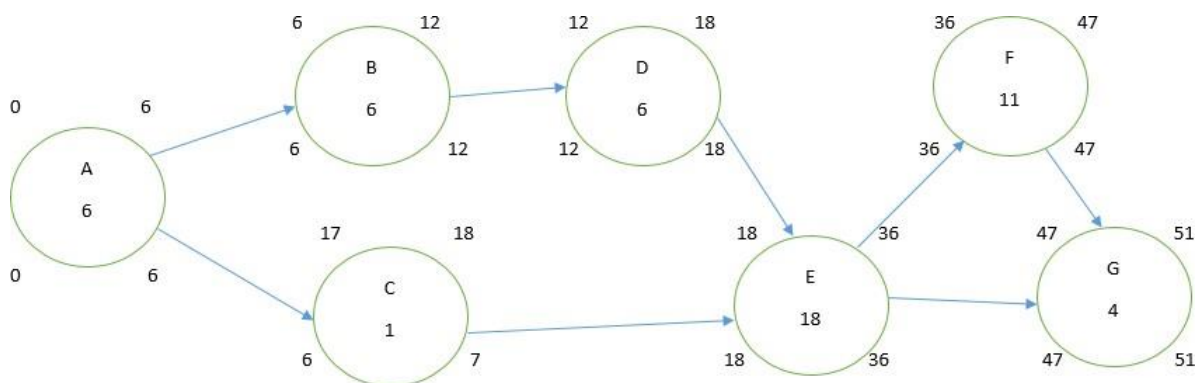
Figure-2

4.7 Critical Path Method (CPM)

The CPM could be a straightforward venture administration procedure that's utilized to distinguish all the assignments lying on the basic way, which is known as basic exercises. In

the event that this basic errand is deferred, the project will also be delayed. When the basic way is recognized, at that point we have an obvious picture of the complete schedule and ready to easily determine the entire venture Duration. Now ready to discover the basic exercises of extend with the assistance of CPM.

Activity	Activity Name	Predecessor	Duration
A	Owners Responsibility	-	6
B	Pre-Construction	A	6
C	Project Beginning	A	1
D	Surface Earthwork	B	6
E	Grey Structure Construction	C,D	18
F	Project Finishing	E	11
G	Closing Project	E,F	4



CPM = A-B-D-E-F-G with zero slack

Only one slack found in activity C =9

4.8 PERT

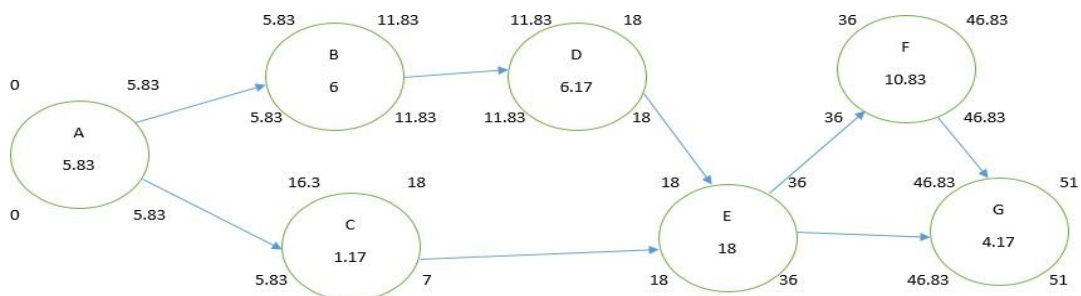
PERT- stands for Project Evaluation Review Technique. A tool is used in project management planning to estimate the duration for finishing the project accurately. Basic way and Sprightly are comparative instruments, both are utilized to calculate the entire term of extend and the assignment to be done on that length of extend.

PERT- activity details chart is below:

Activity	ActivityName	Optimistic- a	Pessimistic- b	Mostlike ly-m	Predecessor
A	Owner responsibility	4	7	6	-
B	Pre-Construction	6	6	6	A
C	Project beginning	1	2	1	A
D	Surface work	5	8	6	B
E	Grey Structure	14	22	18	C,D
F	Project Finishing	8	13	11	E
G	Inspection	3	6	4	E,F

Expected Time and Variance Calculation:

Activity	Predecessor(s)	Duration(Days)			ET = (a+b+4m)/6	Variance= (b - a) ² /6 ²
		Optimistic	Pessimistic	Most likely	Expecte dTime	Variance (V)
		(a)	(b)	(m)		
A	-	4	7	6	5.83	0.25
B	A	6	6	6	6.00	-
C	A	1	2	1	1.17	0.03
D	B	5	8	6	6.17	0.25
E	C,D	14	22	18	18.00	1.78
F	E	8	13	11	10.83	0.69
G	E,F	3	6	4	4.17	0.25



CPM=A-B-D-E-F-G with zero slack

4.9 Risk Management

Chance is the chance or plausibility that something awful happening all the time. Risk management is also used in a whole project for the identification of something bad happen and analyzing the risk which is identified that how much is it serious, and responding to the risk that how to minimize the risk.

There are numerous ways to distinguish the chance but we'll utilize conceptualizing procedures to recognize the chance and minimize it on time.

4.10 Conclusions

Project construction will started on 1st January 2023 and completed on 30 December bypassing through many stages including designing, planning, estimation, construction, and inspection of every phase to control every change in the project. First approved by the owner, purchased the required raw material, and started construction in the presence of subcontract or to implement work according to the schedule. Generally, extend was completed on time and the venture taken a toll will stay inside the assessed which is close 3 corers.

4.11 Recommendations

Design practice is the path to project success. Yet, there are a many crucial areas that must be prioritized in order to help the department's current challenges. The first step is to produce a design schedule, design map, work breakdown structure, and a definite time frame for the design, followed by resource planning and the perpetration of HRM practices from the launch. Arranging groups grounded on an existent's eventuality. also, easily define the rule and individual responsibility. This strategy will help to avoid dissensions throughout the job process. also, developing individualities to boost hand knowledge is regarded as vital since each individual requires a distinct kind of information grounded on his work description. We should always keep in mind that as project complication time increases, so will the project expense. As a result, we must adhere to project deadlines.

5. Conclusion of the Report

The real estate business is expanding and showing signs of unborn expansion. The GDP proportion of real estate and construction is adding. This indicates that this section has a bright future. An increase in home reimbursement, adding need for accommodation, simple backing services, rapid-fire urbanization, inadequate appearance, and several other factors are creating enormous openings for this division to grow. As a result, the total demand for hospices and apartments has sounded to be adding and is anticipated to continue. Despite the fact that it's inadequate, the force of apartments with a number of true birthright contrivers has looked to be on the rise and suggests unborn development. The executive climate has been favorable for the division's development, but the latterly Genuine Domain Administration Law 2008, which is yet to be approved and is anticipated to be largely pivotal for securing purchasers' interests, is likely to be veritably significant. Funding advertising for the genuine sphere division is less delicate and more accessible than ever ahead. Private division casing back is available at a reasonable interested rate for flexible duration, but the volume of advances offered is veritably little when compared to advances in other divisions. The lodging fund division is particularly concerned with strengthening the executive and administrative frame for the financial division, as well as pushing forward and expanding obligation requests. Taking a risk for flat has changed with colorful places and estimates. Redundant costs are necessary for fresh installations. Overall, this study indicates a largely hopeful and favorable tone of expansion, assuming that this sector is given acceptable attention and coffers. It has really come critical to meet the country's rising casing demand while also closing the force deficiency.

6. References

- [1]. Slack, N., Chambers, S., and Johnston, R. (2010) *Operation Management, 6th Ed.* Harlow: Pearson.
- [2]. Green, Y.N. J. and Weaver, P. A. (2006) *An Investigation of the Level of Managers' Satisfaction with Their Sales Forecasting Process in the Restaurant Industry.* *Journal of Quality Assurance in Hospitality & Tourism*, 7(4): 23-47.
- [3]. Krajewski, L.J., and Ritzman, L.P. (2002) *OPERATIONS MANAGEMENT STRATEGY AND ANALYSIS, 6th Ed.* New Jersey: Prentice Hall.
- [4]. John B. Houlihan, (1985) "International Supply Chain Management", *International Journal of Physical Distribution & Materials Management*, Vol. 15 Iss: 1, pp.22 - 38
- [5]. Guinipero, Larry C. and Richard R. Brand. "Purchasing's Role in Supply Chain Management." *The International Journal of Logistics Management*. 7 n.1 (1996): 29-37.
- [7]. Davis, T. (1993), "Effective supply chain management", *Sloan Management Review*, Vol. 34 No. 4, pp. 35-46
- [8]. Teigen R., *Information flow in a supply chain management system*, Diploma thesis, 1997
- [9]. Andersen, P.H. and Rask, M. (2003), "Supply chain management: new organizational practices for changing procurement realities", *Journal of Purchasing & Supply Management*, Vol. 9 No. 2, pp. 83-96.
- [10]. Abernathy, F.H., Dunlop, J.T. and Hammond, J. (2000), "Retailing and supply chains in the information age", *Technology in Society*, Vol. 22, pp. 5-31
- [11]. Jalal Ashayeri Willem Selen, (2005) "An application of a unified capacity planning system", *International Journal of Operations & Production Management*, Vol. 25 Iss: 9, pp.917 - 937
- [12]. Hopkin, S. P. (2013) *Risk Management. 1sted.* United State: Kogan Page Limited.
- [13]. *Internal report and Database.*
- [14]. NAVANA *Official website and annual report.*