



Preface

Ahoy there, adventurous souls and seekers of the boundless seas! Welcome to a journey that will transport you across the waves of history into the heart of an era where the Black Pearl flew high and the call of the open sea beckoned the bold and the brave.

This project sets sail on a grand expedition into the captivating realm of pirate ships. The following pages we sail shall take us on to voyage filled with amusement that transcends time with a vessel that rides turbulent waves and a current of passion, love, and creativity. The sketches that lie ahead hold boundless fascination and love for maritime history. This project celebrates daring journeys, audacious characters, and the legacy of the golden age of piracy- which left an inevitable mark on our imaginations.

Our journey commences with the construction of a legendary pirate vessel which was nothing short of a pirate's true companion and a loyal friend on whom he can always depend. It was more than a moving home, a character in its own right filled with courage and trust that can cut through any waves of the sea.

As we hoist the anchor and set sail into the unknown, let these pages be your compass and you shall explore the vessel its full might, ready to set sail for a new voyage. Navigate through the cranky pages of murky waters, encounter the infamous figure who terrorized the high seas, and uncover the secret haven where these outlaws sought refuge.

May your soul be filled with winds of curiosity as we embark on a journey of the mighty sea's strongest soul where history meets legend



Free hand Sketches, Dimensions, Modifications

NAME: Luv Agarwal
PART NAME: Cannon
ROLL NO.: 23110189

Part: Cannon

Functions of cannon

Cannon has been an integral part of pirate ships, serving many functions during the golden age of Piracy. Some of them are as follows.

- **Offensive Weaponry:** They are the primary weapons for offense on pirate ships. Pirates used them to disable enemy vessels and destroy boats and their hulls, rigging, or crew by firing cannon balls. this would make it easier to capture and seize control of vessels.
- **Intimidation:** “Fear of fear is more fearful than fear itself.” Pirates used this strategy to fear away other enemies thinking of attacking them. The presence of heavy, heavyarmed pirate ships with cannons ready to attack could intimidate merchants into surrendering without a fight. This will help in reducing casualties.
- **Salutes:** Pirates would also use cannons in celebration or as a greeting when visiting other pirate friends or their port.
- **Defence:** “Offence is the best Defence.” Pirates also used cannons as a means of defence. Pirates would use cannons to fend off pirate hunters or other pirate ships.
- **Signalling:** Pirates use different patterns of cannons to communicate with other pirate ships or to send signals to shore.

Dimensions of Cannon

The main logic behind choosing the dimensions of the cannon was to incorporate the cannon in the middle part of the ship such that there also remains space for other interiors and

structures. Cannon's internal dimension needed detailed attention so the structure would not look out of place. And the different reinforcement rings should all be concentric while taking care of space for the cannon balls. The dimension of the cart was chosen in such a way that the cannon rested easily on it and was very portable, and cannon balls were designed to go in the cannon's bore and muzzle perfectly.

Other reasons that pirates might also have been as follows-

- Firepower- A giant cannon with a broad bore and large muzzle could fire projectiles which will cause more severe damage to ships than projectiles by a short cannon. However, it will not be economical to maintain such a large cannon. Buying gunpowder for a giant gun will not be cheap either.
- Range-Smaller cannons, which might fall short on firepower, have excellent rangers helping aim at far-away enemies.
- Manpower and cost - Larger cannons needed more manpower and a high price for set up and maintenance with an additional cost of more gunpowder for large guns.

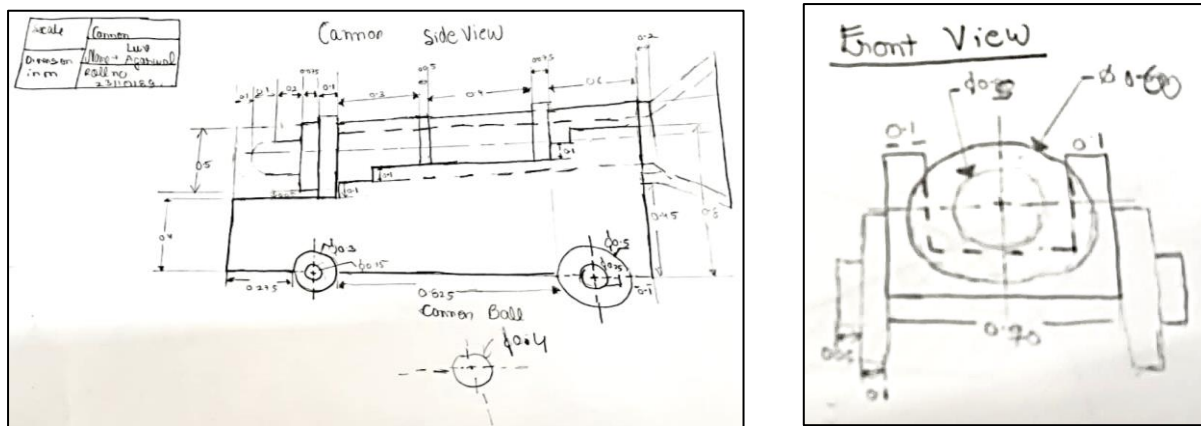


Fig 1 – 3d view of Cannon with dimension drawn by Luv Agarwal

Materials Used

Materials to make cannon parts?

Cannons.

A wide range of materials could be used to make cannons. Cannons were primarily constructed with the following materials-

- Bronze -The most preferred material during the era, known for its durability, and corrosion resistance.it is also lighter than iron. Plus the metal could also withstand bad weather conditions.
- Iron- Iron cannons were cheaper but prone to rusting. And might also fail to work in harsh weather conditions.

Cannonballs

Typically made from iron, first melted and then put in spherical Molds to create cannon balls.

Cart

Generally made of wood with necessary fittings of iron wherever necessary. These iron fittings are required to hold recoil when a cannon is fired

NAME: Madhup Sankhla

PART NAME: Deck

ROLL NO.: 23110190

Part: Deck

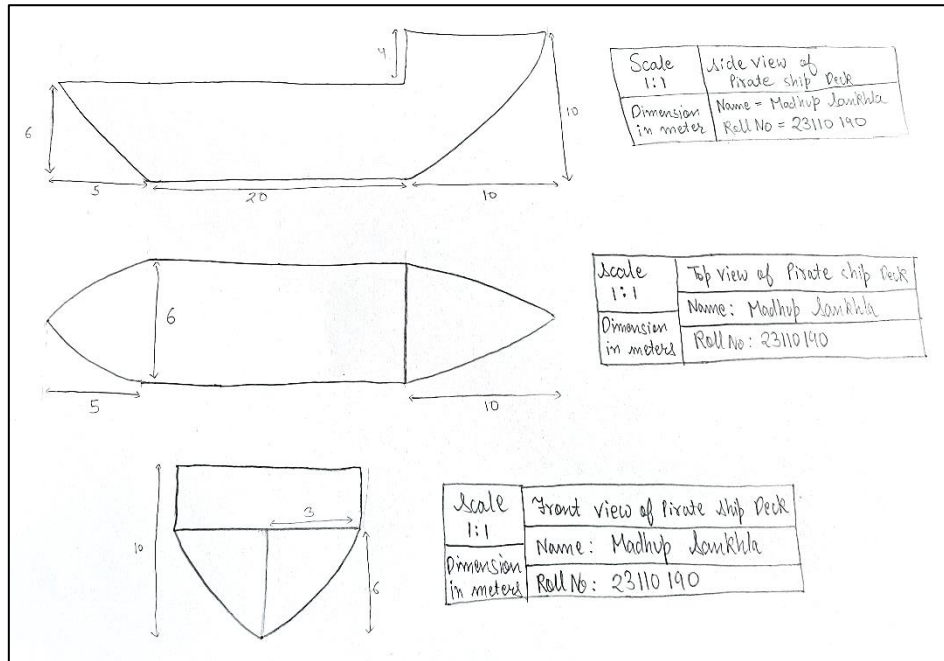


Fig 2 – 3d view of Pirate Ship Deck with dimension drawn by Madhup Sankhla

Why is Dimensions Important?

The dimensions of a pirate ship play a crucial role in both the historical accuracy and the practicality of the vessel, whether it's for a movie set, a theme park ride, or a recreation. Here are several reasons why the dimensions of a pirate ship are important and why we had selected these dimensions:

1. **Historical Accuracy:** our goal is to recreate a historically accurate pirate ship, getting the dimensions right is essential. Pirate ships from different eras had varying sizes and shapes. Capturing the specific dimensions of a particular historical period ensures authenticity in design and appearance.
2. **Functionality:** The dimensions of a pirate ship impact its functionality. The ship's size, shape, and proportions influence its speed, manoeuvrability, cargo capacity, and overall performance. A ship with accurate dimensions will behave more realistically in terms of its intended function.

3. **Safety:** safety is paramount. Ensuring that the dimensions adhere to safety standards is crucial to protect everyone on the ship
4. **Space Utilization:** Pirate ships often have various components, including masts, rigging, cannons, and deck space. Proper dimensions ensure that these elements are proportionate and functional. For example, cannons should fit on the deck, and masts should be appropriately sized to support the sails.

In summary, the dimensions of a pirate ship are crucial; that's why we had selected these dimensions given below:

Length of Ship = 20 meters

Width of ship = 6 meters

The height of the ship from the bottom to the lower deck is 6 meters

The height of ship from the bottom to the upper deck is 10 meters

Why Material is to be specified?

In ancient times, pirate ships were primarily constructed using wood. This choice of material was influenced by the technology and available resources of the era. The type of wood used often depended on the region and the specific trees that were accessible. Oak, teak, and pine were among the commonly used woods for building pirate ships in ancient times.

Wood had several advantages for shipbuilding in ancient civilisations:

1. **Abundance:** Wood was readily available in many regions, making it a practical choice for ship construction. Different types of wood were used depending on what was abundant in a particular area.
2. **Workability:** Wood could be shaped and carved relatively easily, allowing for the creation of intricate ship designs, including the hull, masts, and other components.
3. **Buoyancy:** Wood's natural buoyancy made it suitable for shipbuilding, ensuring that the vessel could float and navigate the waters effectively.
4. **Strength:** Certain types of wood, like oak, were known for their strength and durability. This was important for withstanding the stresses and challenges of maritime life, including rough seas and battles.
5. **Repairability:** Wooden ships could be repaired and maintained by skilled shipwrights, extending their operational lifespan.
6. **Tradition:** In ancient times passed down the knowledge and techniques for working with wood from one generation to the next. Wood had a long history of use in shipbuilders and shipbuilding

Overall, wood was the most popular material for building pirate ships in ancient times because it was readily available, workable, buoyant, and strong. These wooden vessels played a significant role in the age of piracy, serving as the iconic symbol of pirate lore and maritime adventure.

NAME: Maitri Chaudari

PART NAME: Ship Interior

ROLL NO.: 23110192

Dimension & Material

I am working on Ship interior design, which has 3-4 parts.

1. Ladder

Choosing the proper measures and dimensions for a ladder on a pirate ship is essential for several reasons, as it affects both the functionality and safety of the ladder. My ladder dimension is $5 \times 1 \times 0.25$. There are 11 steps, each placed 0.332 m away from the other, and the thickness is 0.1 m. The size and configuration of the ship play a significant role in determining ladder dimensions. A ladder with a 5-meter length might be suitable for reaching areas like the deck, crow's nest, etc. comfortably. A 1-meter width provides ample space for crew members to climb up and down safely. The 0.25-meter depth might be chosen to ensure the ladder doesn't protrude too much, minimizing the risk of falling.

A ladder can be made of multiple materials, like wooden rungs on a metal frame. A ladder made of metal ensures durability and safety, and wooden rungs will give a traditional appearance to the ship. The ladders made of metal are relatively low maintenance and the best choice for pirate ships.

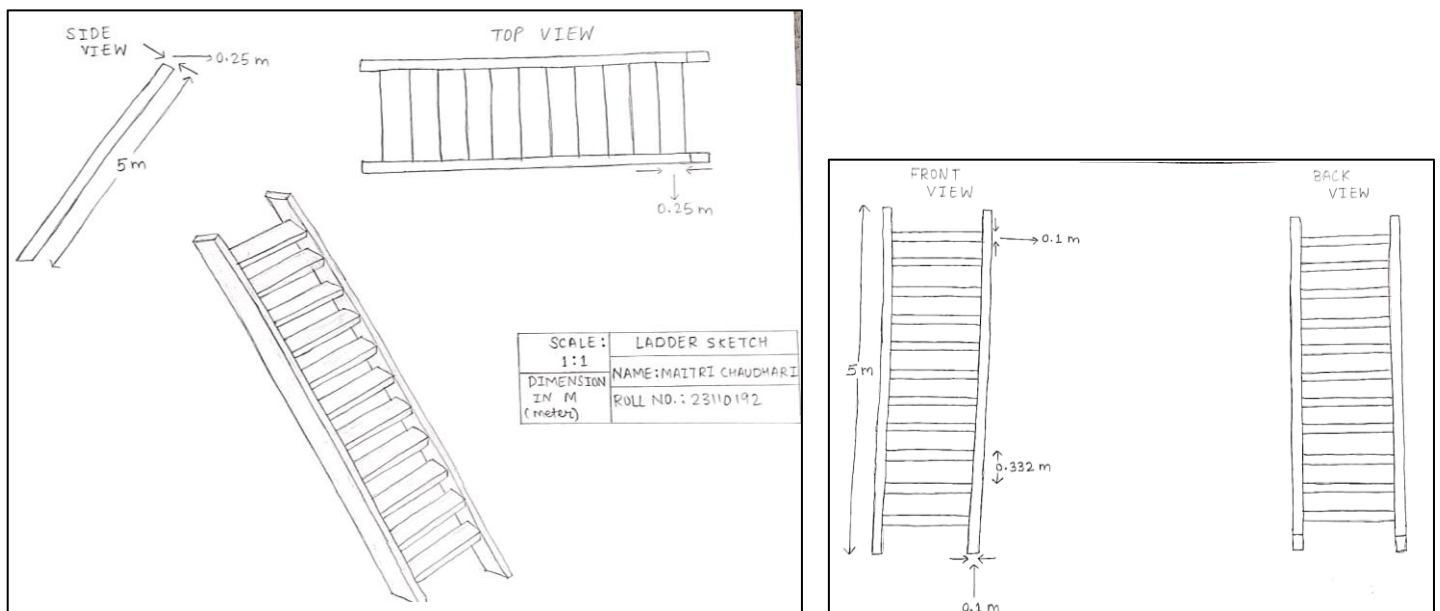


Fig 3.1 – 3d view of Ladder with dimension drawn by Maitri Chaudari

2. Tables and Chairs

The shape of the table is Circular in the form of a radius of 1m and legs of length 0.8 m. A 1 m table provides sufficient space for meetings and dinner, and 0.8 m legs provide proper stability to the 1m circular table. We also need to consider the ship design for choosing this dimension.

The dimension of the base of the chair is $0.4 \times 0.3 \times 0.03$ m, and the leg length is 0.3 m. This measurement was chosen to optimize space in the ship. The chair of this dimension is sufficient for comfortable seating.

Wood is a popular choice for the furniture on pirate ships. We can make furniture with a combination of different materials, like wooden tables with metal legs, which provides durability. For chairs with cushions, we can use canvas or fabric.

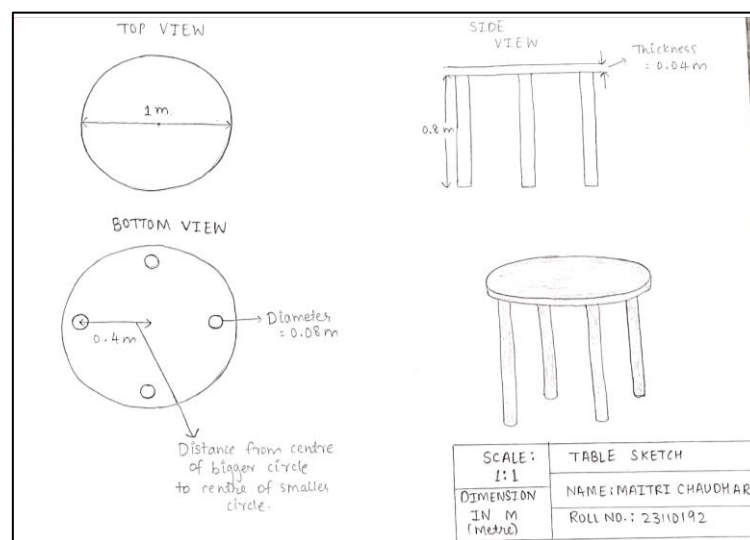


Fig 3.2 – 3d view of Table with dimension drawn by Maitri Chaudari

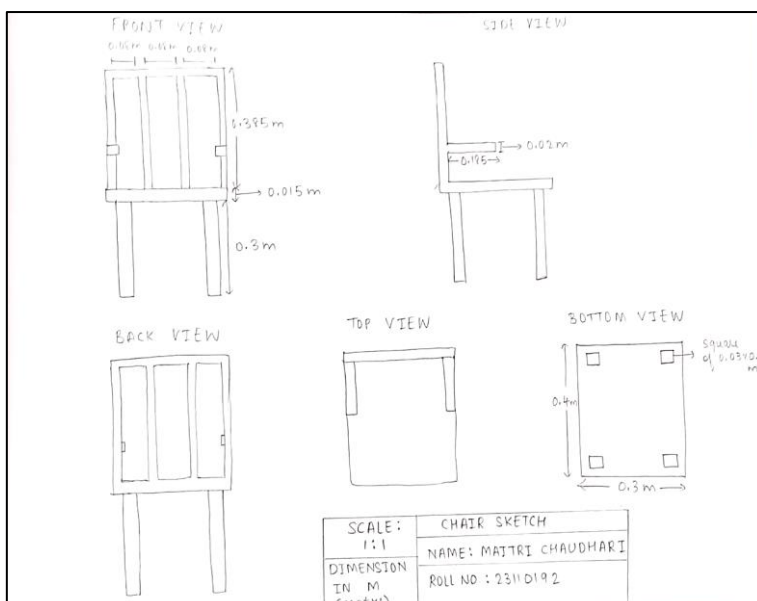


Fig 3.3 – 3d view of Chair with dimension drawn by Maitri Chaudari

3. Door

The dimension of door is $3 \times 1 \times 0.1$ m. A 1m width is typically wide enough for a person to walk through comfortably. A 3 m height is practical in accommodating passengers and crew members.

Wood is a classical choice for a pirate ship. Hardwoods like Oak , Mahogany which are resistant to moisture can be used to make doors. Wooden doors in pirate ship gives traditional appearance.

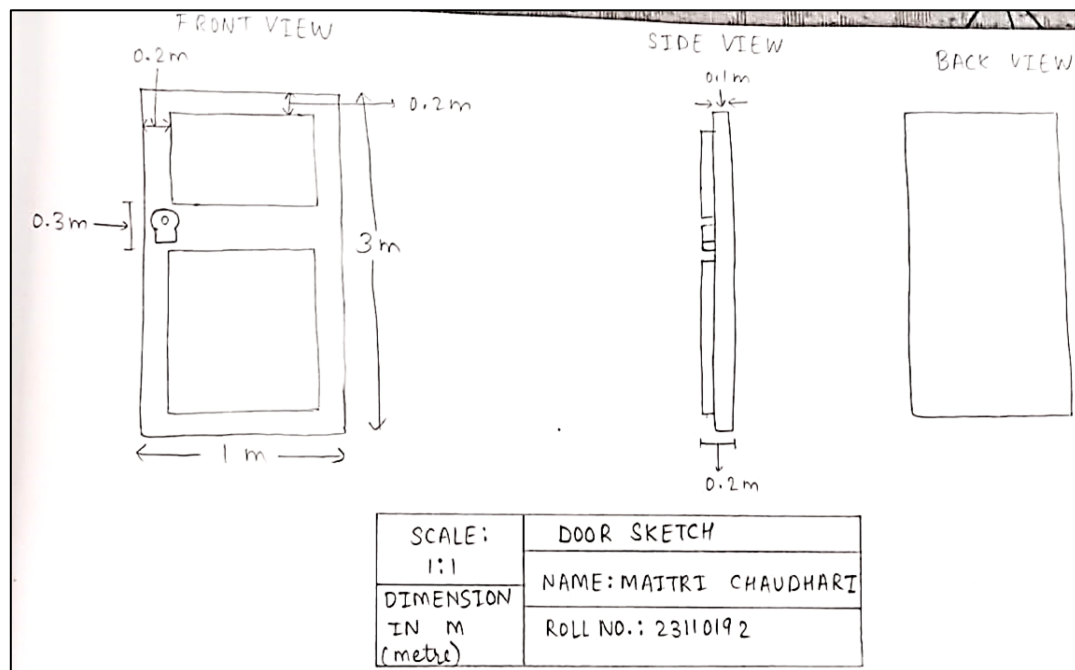


Fig 3.4 – 3d view of Door with dimension drawn by Maitri Chaudari

NAME: Makkena Lakshmi Manasa

PART NAME: Ship Interior

ROLL NO.: 23110193

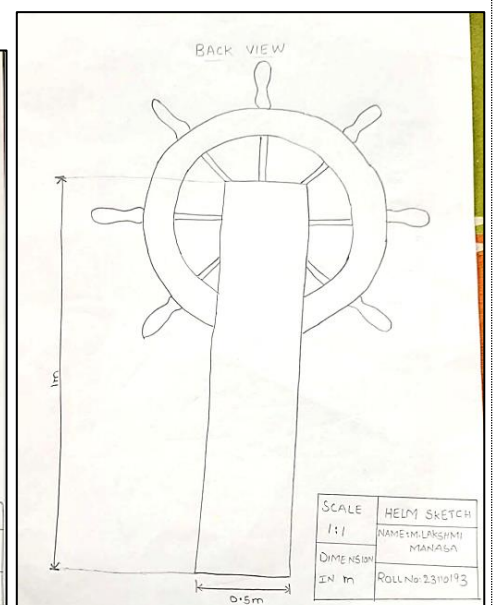
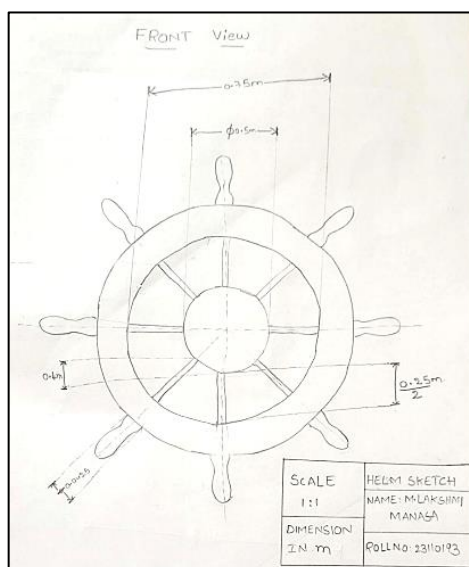
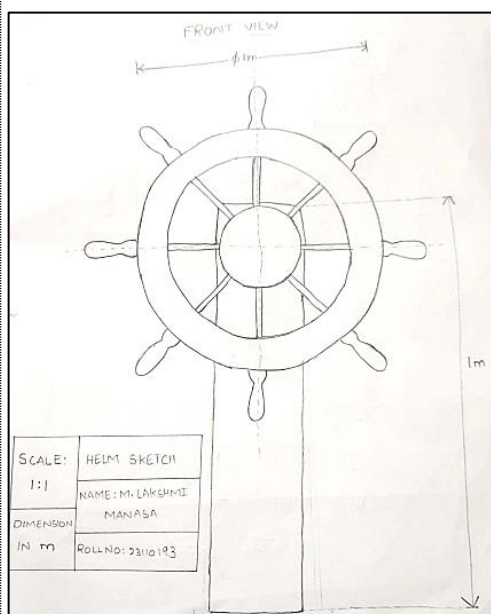
Part: Helm

I have chosen a radius of 1 meter and a height of 1 meter for the helm because these dimensions fit the aesthetic and style we envisioned for the pirate ship. These dimensions can also make the helm appear visually balanced and proportional to the rest of the ship's design. I have chosen an inner circle radius of 0.5 meters to create a practical and functional design. It provides a comfortable space for a pirate or ship's captain to stand or sit while steering the ship. This dimension ensures enough room for a person to operate the helm effectively. Choosing wood as the material for the helm is a common choice for ship design, especially for traditional or historical vessels like pirate ships.

I have chosen wood for the material of the helm. Wood is sturdy, readily available, and has a classic maritime feel. It's also relatively easy to work with in terms of modelling and rendering in Autodesk Inventor. The capabilities of Autodesk Inventor may also influence my choice of dimensions and material.

Pirate ships from the Golden Age of Piracy often had wooden helms, and the measurements I have chosen to reflect typical sizes for such helms. These dimensions would also allow for installing steering mechanisms and other controls. The inner circle with a radius of 0.5 meters is a convenient size for a person to reach the rules and have a good view of the ship's surroundings.

The proportions I have chosen, with the inner circle being half the radius of the outer ring, can give the helm an aesthetically pleasing and balanced appearance. Wood is relatively lightweight, making it suitable for components like the helm. It's also durable and can withstand exposure to the elements, essential for ship components often exposed to harsh marine conditions. Wood is a material that can be easily worked with standard woodworking tools, making construction more feasible



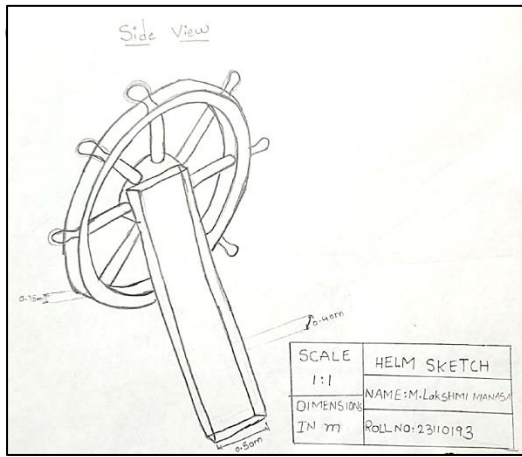


Fig 4.1– 3d view of Helm with dimension drawn by
Makkena Lakshmi Manasa

Part: Bowsprit

I have chosen these dimensions because the bowsprit length is 3m and the radius is 0.5m because a longer bowsprit can give the ship a more majestic and imposing appearance. In contrast, a thicker radius can provide stability and strength to support sails and rigging. Bowsprits serve several functions on a ship, including extending the reach of the sails and providing a point for attaching rigging. The chosen dimensions result from calculations based on the ship's size and intended use, ensuring that the bowsprit effectively serves its purposes.

The length and radius of a bowsprit can affect the handling and performance of a ship. A longer bowsprit might provide more stability or allow additional sails, while a shorter one might be more manoeuvrable in tight spaces.

We have chosen wood as the material for bowsprit. Historically, wooden ships were constructed primarily from wood, and this tradition carries over to modern recreations and models of pirate ships. Using wood for the bowsprit helps maintain the historical authenticity of the vessel. Wood is easy to work with using traditional shipbuilding tools and techniques. Shipbuilders can shape, carve, and craft wood to create the intricate and curved designs often found in bowsprits. When properly maintained and treated, wood can be durable for ship components. It can withstand the rigours of a maritime environment, primarily if it is regularly maintained and protected from moisture

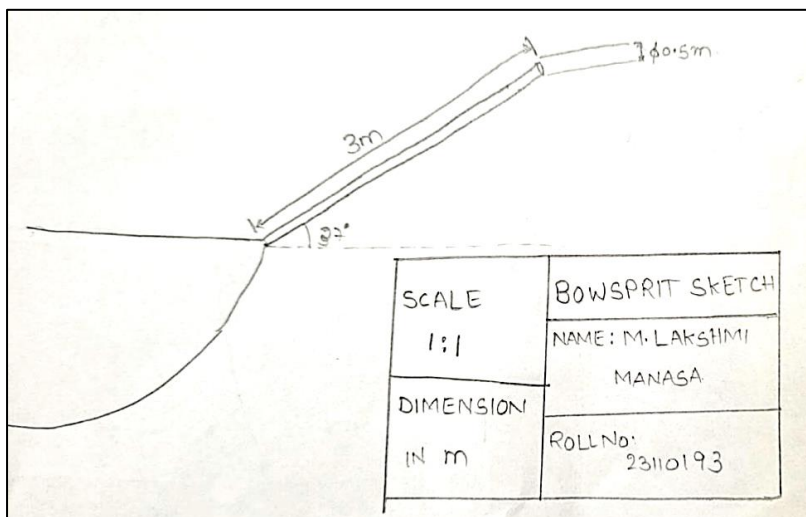


Fig 4.2– 3d view of Bowsprit with
dimension drawn by
Makkena Lakshmi Manasa

NAME: Maloth Siddhivinayak

PART NAME: Anchor

ROLL NO.: 23110194

Part : Ship Anchor

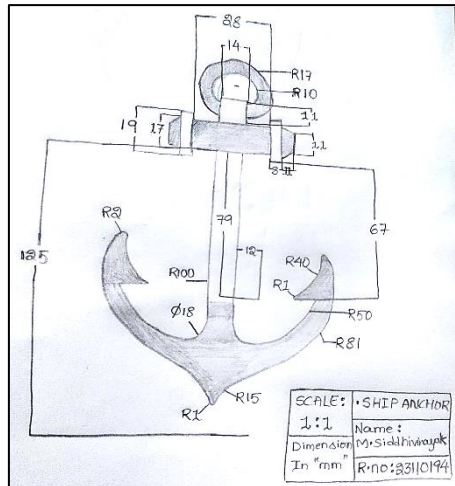


Fig 5 – 3d view of Anchor with dimension drawn by Maloth Siddhivinayak

Reason for selected dimensions

1. **Holding Power:** An anchor with the correct dimensions is designed to grip the seabed effectively. This ensures the anchor securely holds the ship, preventing it from drifting in adverse conditions like strong winds or currents.
2. **Weight Distribution:** Proper dimensions help evenly distribute the anchor's weight, allowing it to penetrate the seabed and provide a stable hold. Anchors with incorrect measurements may need to be appropriately dug, reducing their holding power.
3. **Compatibility:** Anchors must be appropriately sized and shaped for the specific type and size of the ship. Using an anchor that's too small or too large can compromise safety and effectiveness.
4. **Safety:** A well-dimensioned anchor reduces the risk of dragging or fouling, which can lead to accidents or damage to the ship and its equipment.
5. **Efficient Stowage:** Correctly sized anchors are easier to handle and stow on the ship, ensuring they can be deployed quickly and efficiently when needed.

In summary, perfect dimensions for a ship's anchor are crucial for securely anchoring the vessel, ensuring safety, stability, and effective operation in various maritime conditions.

Materials

Creating ship anchor parts requires specialized materials to ensure durability and reliability in marine environments. Some critical materials commonly used for ship anchor part manufacturing include:

1. **Steel:** High-strength steel is a primary choice for anchor parts due to its durability and resistance to corrosion in saltwater. Common grades include Grade 2 and Grade 3 steel.
2. **Galvanized Steel:** Galvanization involves coating steel with a layer of zinc, which is very important. Galvanized steel is often used for anchor chains and other parts that are submerged in seawater.
3. **Stainless Steel:** Stainless steel is resistant to corrosion and staining, making it suitable for anchor components exposed to harsh marine conditions. Marine-grade stainless steel, such as 316L, is commonly used.
4. **Forged Steel:** Forging strengthens steel and enhances its structural integrity. Forged steel parts are often used for anchor shanks and flukes to ensure they can withstand the forces exerted during anchoring.
5. **Alloy Steel:** Certain anchor components may require specific alloy steels to meet strength and corrosion resistance requirements. Alloy steel can provide these properties while maintaining weldability.
6. **Cast Iron:** In some cases, cast iron is used for anchor parts like the stock (the vertical position of the anchor). It's known for its weight and durability.
7. **Bronze:** Bronze is used for parts like anchor pins and bushings due to its corrosion resistance and compatibility with seawater.
8. **Polymer Materials:** Some modern anchors incorporate polymer materials in various parts, such as the anchor fluke or stock coating, to reduce weight and improve performance.
9. **Rubber:** Rubber is used for anchor rollers and other parts that come in contact with the hull to prevent damage.
10. **Nylon and Polypropylene:** These materials are used for anchor lines and ropes due to their strength, flexibility, and resistance to UV degradation.

NAME: Mamilla Aniruddh Reddy

PART NAME: Rigging and Sail

ROLL NO.: 23110195

Part: Sails

Choosing the dimensions of sails for a pirate ship is a crucial decision that directly impacts the vessel's performance, speed, and mobility on the high seas. We have some factors that influence the dimensions of sails in a ship:

1. **Ship Size and Type:** The size and type of your pirate ship play a significant role in determining sail dimensions. Larger ships generally require larger sails to harness the wind effectively. Smaller vessels may opt for smaller, more maneuverable sails.
2. **Mast Height:** The height of your ship's masts is directly related to the maximum sail area they can support. Taller masts can accommodate larger sails, but they also make the ship more top-heavy and challenging to handle.
3. **Crew Size and Skill:** The number and expertise of your crew members matter. A skilled crew can handle larger sails, but it's essential to strike a balance between sail size and the crew's ability to manage them efficiently.

Dimension:

- 1) upper sail: 9m (width)
12m(length)
- 2) lower sail: 7m(width)
6m(length)

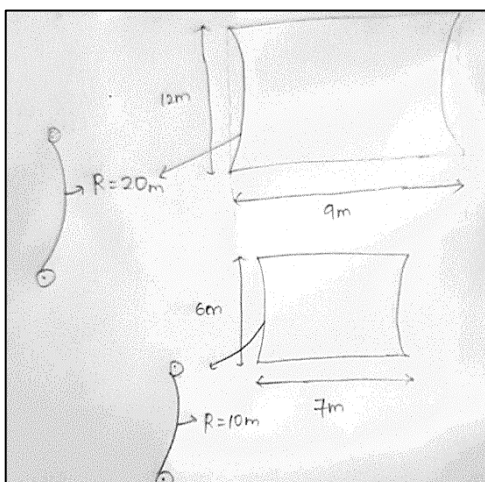


Fig 6 – 3d view of Sail with dimension drawn by Mamilla Aniruddh Reddy

Materials that can be used

Here are some materials commonly used for making sails on pirate ships:

1. Canvas: Canvas was one of the most common materials used for pirate ship sails. It was relatively durable and readily available. Sailmakers would stitch together multiple pieces of canvas to create large sails.
2. Flax: Flax was another natural fiber used for making sails. It was known for its strength and ability to hold up in various weather conditions.
3. Cotton: Cotton sails were lighter and more affordable than some other materials. However, they were less durable and more prone to wear and tear.
4. Silk: Silk was rarely used for pirate ship sails due to its high cost. It was reserved for the sails of the wealthiest and most prestigious ships.

Ropes:

We did not choose the dimensions of the ropes because all the other factors, like the width of the ship and the height of the mast, were fixed, so all other factors constrained the length of the ropes, and we could join the starting and ending point directly.

Materials that can be used

1. Hemp: Hemp was one of the most widely used materials for making ropes on pirate ships. It was strong, durable, and resistant to rot, making it ideal for various applications, including standing rigging and anchor lines.
2. Manila: Manila hemp, derived from the abaca plant, was another popular choice for ropes. It was known for its exceptional strength and resistance to saltwater damage. Manila ropes were often used for heavy-duty tasks like hoisting anchors and securing cargo.
3. Sisal: Sisal ropes, made from the fibres of the sisal plant, were used on some pirate ships. They were less durable than hemp or manila but strong enough for rigging and lashing tasks.
4. Jute: Jute ropes were occasionally used, although they were less common than hemp or manila. They were lighter but not as strong, so they were typically reserved for less critical applications.

NAME: Mandava Manaswi

PART NAME: Name of Ship and Flag of Ship

ROLL NO.: 23110196

Dimensions & Material:

For writing the name of the ship I have taken board of 2x6 meters space. The width of the board is 0.01m. The board of 2X6m is taken to ensure that the ship's name will be visible from a larger distance. The width of 0.01m is taken as there will be enough space for writing name with a proper gap. The width of each letter taken is 0.5m . For writing the name of the ship the board is made of wood . Wood is used due to its durability and ability to withstand exposure to elements in the atmosphere. The other part is the flag of the ship. I took the dimensions of the flag of the ship as 0.75x1 meters. The flag of the ship will not look good if it is too big or too small . So a proper dimension is selected for the flag which is in proportion to the pirate ship size . The size has been influenced by practical factors, such as how simple Autodesk Inventor made it to design and construct the flag. A flag that is excessively small or complicated may be difficult to precisely design or manufacture. The cloth used for the flag of the ship is called sail cloth . Material selected should be strong and long lasting. We selected the material of the sailcloth as nylon. Nylon is lightweight and has high tensile strength. Nylon can be easily processed and fabricated using various techniques. Nylon has good resistance to temperature extremes; it can withstand both high temperature and low temperature.

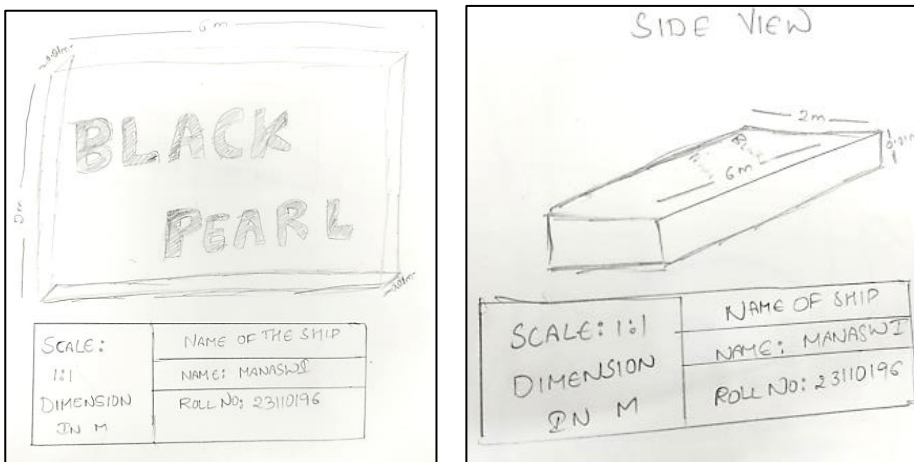


Fig 7.1 – 3d view of Name of Ship with dimension drawn by Mandava Manaswi

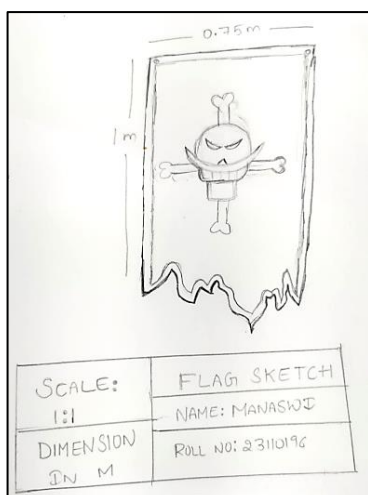


Fig 7.2 – 3d view of Flag with dimension drawn by Mandava Manaswi

NAME: Mangalsing Thakare

PART NAME: : Exterior of Ship and Deck boundary

ROLL NO.: 23110197

Choice of dimensions:

The choice of dimensions for the door, window and deck boundary pillar of a pirate ship would depend on several factors, including practicality, aesthetics, and functionality. Here are some reasons why specific dimensions might be chosen:

- 1. Practicality:** The dimensions of the door and window should be practical for the ship's crew and passengers. The door should be broad and tall enough to allow easy access for crew members and passengers. The window size should provide adequate ventilation and natural light while maintaining the ship's structural integrity. The height and base area of the pillar should be proportional so that it maintains the balance of the ship.
- 2. Aesthetics:** The dimensions should also consider the overall aesthetics of the pirate ship. The door and window sizes should complement the ship's design and be proportional to the ship's size. The dimensions of the pillar should be visually pleasing.
- 3. Functionality:** The door should be large enough to accommodate the movement of crew and passengers. Windows should be strategically designed for navigation.
- 4. Historical Accuracy:** If the pirate ship is intended to be historically accurate, the dimensions of the door and window should align with the design of the original pirate ships, which entirely match with our dimensions of the pirate ship.
- 5. Safety:** The dimensions of the door and window should not compromise the safety of the crew and passengers. The height of pillars should be high so it maximizes the safety of the deck.

Ultimately, the dimensions of the door, window, and deck boundary pillar of a pirate ship should be a well-considered balance of these factors to create a ship that is both functional and visually appealing while meeting safety and security requirements.

Dimensions

vertical height of door=3m

Width of door=1m

Thickness of door=0.3m

Height of window=width of window=1m

Thickness of window=0.3m

Pillar height=2m

Pillar base area=0.5m*0.5m

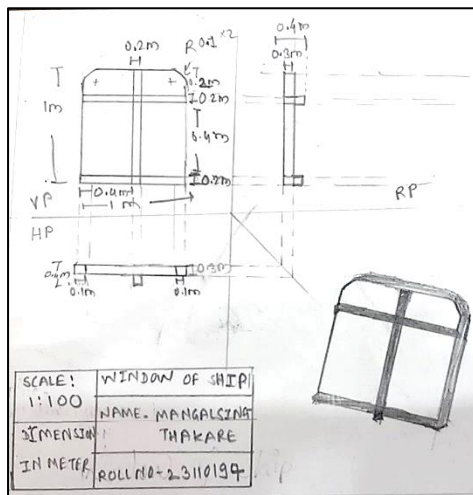


Fig 8.1– 3d view of Window with dimension drawn by Mangalsing Thakar

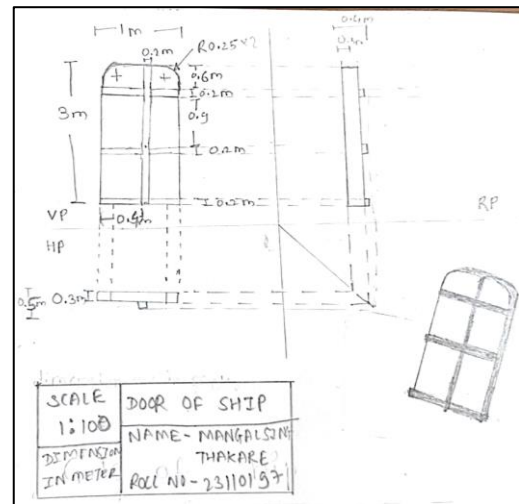


Fig 8.2– 3d view of Outer Door with dimension draw by Mangalsing Thakar

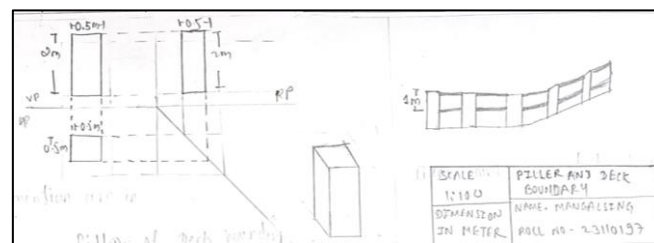


Fig 8.3– 3d view of Deck Boundary with dimension drawn draw by Mangalsing Thakar

Materials use for these parts:

The choices of material for doors, windows, and the deck boundary depend upon various factors like environmental conditions, practicality and for pirate ship historical accuracy.

Outer Doors: The best choice for doors is wood. As it reflects 18th-century ship and also give practicality of wooden doors.

Windows: The windows should be made of glass planes with wooden frames. Glass windows provide visibility, natural light, and ventilation to the ship's interior and wooden frame provides safety to glass.

Deck boundary pillars: Wooden railing and pillars will give historical vibes and also gave safety from sea tides.

NAME: Manmohan Singh Meena

PART NAME: Dinghy

ROLL NO.: 23110198

Part: Dinghy

Choice Of Dimensions:

The selected measurements evoke the historical pirate dinghies that were frequently employed during the golden era of piracy in the 17th and 18th centuries and are designed to satisfy all the factors it's intended to use and safety regulations.

1. **Flexibility:** These dimensions strike a balance, compact for maneuvering, and roomy for crew and cargo. It is essential for a pirate dinghy's versatile roles like boarding, scouting, and carrying loot.
2. **Usefulness on Board:** The size should be compatible with the storage and lifting equipment on the giant pirate ship, guaranteeing convenience for the ship's crew.
3. **Crew Capacity:** A 5-meter size offers room for a small crew, ideal for boarding ships and land adventures, meeting pirates' typical needs.
4. **Escape & Pursuit:** Pirates relied on dinghies for quick escapes and pursuit. These measurements ensure effective handling, offering speed and stability for chasing and evading.
5. **Stealthy Approach:** The relatively small size of the dinghy makes it well-suited for stealthy approaches, a crucial aspect of pirate strategies for quietly approaching unsuspecting targets.
6. **Durability:** Pirates required dinghies rigid enough for piracy's challenges—rough waters and raid damage. These measurements allow robust construction, enhancing durability.
7. **Storage Space:** A height of 1.5 meters offers enough room to store supplies, weapons, and stolen items. Pirates required dinghies that could carry their loot back to the main ship, and these measurements allow for that capability.
8. **Accessibility:** The dimensions make deploying and recovering the dinghy from the pirate ship relatively straightforward, a crucial factor in a swift withdrawal or a sudden assault.

The dimensions of the Dinghy are:

Length: 5 Metre

Width: 1 Metre

Height: 1.5 Metre

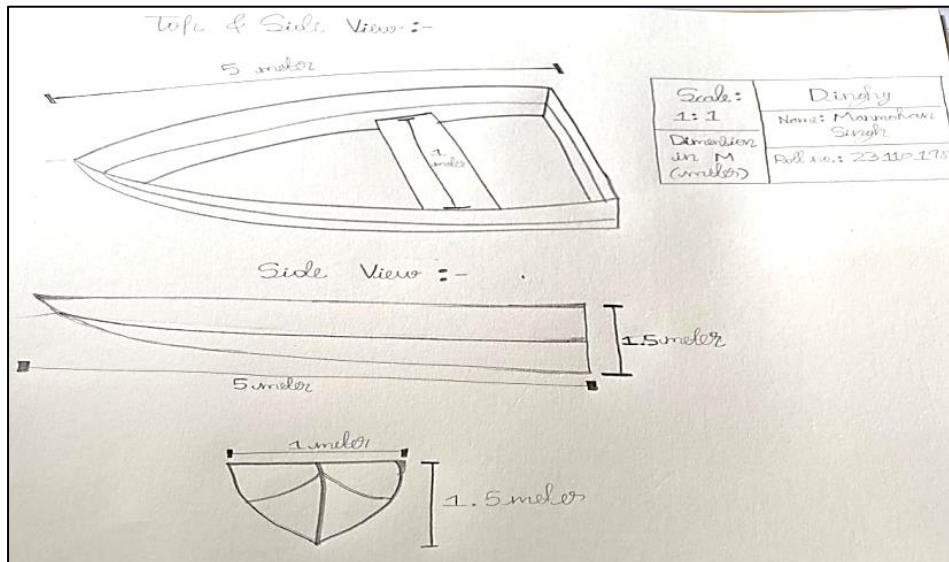


Fig 9– 3d view of Dinghy with dimension drawn draw by Manmohan Singh Meena

Choice Of Materials

Wood is the most authentic material historically used for dinghies on olden-day pirate ships.

1. **Durability:** Wood is well-known for its toughness, especially in marine settings. It has a natural resistance to water damage, making it a suitable choice for a dinghy constantly exposed to saltwater and challenging sea conditions. This sturdiness guarantees that your dinghy will endure life's challenges at sea.
2. **Craftsmanship:** Wooden dinghies offer the opportunity for detailed craftsmanship. By employing traditional shipbuilding methods, you can craft a dinghy with distinctive intricacies and personality, elevating its historical charm and transforming it into a focal point of your pirate ship.
3. **Repairability:** Damaged wooden dinghies can be traditionally repaired, enriching your pirate ship's storyline.
4. **Weight and Handling:** Wood strikes a good balance between weight and strength, making it practical to lift on and off the pirate ship and row ashore in your pirate adventure.

Crafting your pirate ship dinghy from oak or mahogany ensures historical accuracy, durability, and storytelling potential, perfect for an old-age pirate ship adventure

NAME: Manushree Dayaram Sonawane

PART NAME: Tower and Crow's Nest

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Choice Of Dimensions:

The conning tower and the crow's nest are designed in such a way that all the factors like the type of vessel, its intended use and safety regulations are satisfied.

1. Ship type:

This plays a significant role in determining the size of the vessel. For example, naval warships might have larger and more complex conning towers for storage, safety and military purposes while commercial ones might have smaller towers.

2. Visibility:

The height of the tower must be such that it provides a clear elevated position for the crew to have a proper line of sight. The dimensions should ensure that the crew can see over the ship's superstructure and any obstructions that might get in the way.

3. Safety Regulations:

The safety regulations and rules are defined by the maritime authorities which specify some minimum requirements for the conning tower and crow's nest to ensure safety of the crew.

4. Wind resistance and Stability:

The design of the tower must be such that the height of the should strike a proper balance. A taller conning tower may increase the wind resistance, increasing the vessel's stability.

5. Equipment and crew size:

The dimensions should also account for the number of crew members who will occupy these spaces and any equipment they need to operate. Adequate space should be provided for comfortable operation. In the case of pirate ships, this factor is the most important one.

Therefore, keeping in mind these factors and points the dimensions of the conning tower are defined as:

Height: 24 m

Diameter: 1 m

The dimensions of the crow's nest are:

Diameter: 3m(inner) 4m(outer)

Height: 5 m

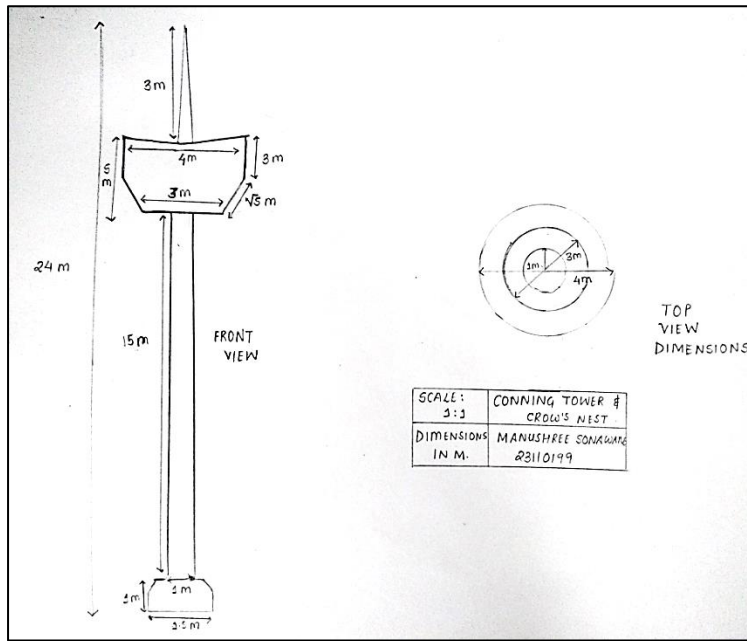


Fig 10– 3d view of Tower and Crow's Nest with dimension drawn draw by Manushree Dayaram Sonawane

Choice of material:

The choice of materials for a pirate ship's conning tower and crow's nest should strike a balance between historical accuracy, functionality, budget, and aesthetics. It is important to keep in mind the desired visual impact and the practicality of maintenance.

There is no well-defined prototype for a pirate's ship hence, the choice of materials solely depends on the wealth and conditions of the pirates.

The following materials can be considered as suitable options:

1. Wood (historical authenticity, friendly budget, aesthetic appeal)
2. Composite materials (durability and maintenance)
3. Metal (Strength and modernization)

After clear thoughts, the best material which we have chosen to use is a hybrid approach, combining wood for the visible exteriors to maintain the pirate ship's classical appearance while using modern materials like fiberglass or metal for structural reinforcement and durability.

Meeting Details

Meeting 1

Date: 1/September/2023

Time: 9:00pm (45min)

Topic: Introduction, brainstorming ideas

Absent: Manmohan

Meeting 2

Date: 3/ September /2023

Time: 9:00pm (1 hour)

Topic: Discussed and finalized pirate ship

Absent: Manmohan

Meeting 3

Date:5/ September /2023

Time: 9:30pm (1 hour)

Topic: Divided the parts of the ship among us and decided a deadline to submit individual proposal document

Absent: Manmohan

Meeting 4

Date:12/ September /2023

Time: 9:00pm (1 hour)

Topic: Collecting individual documents and making corrections before submission

Absent: Manmohan

Group: 19

Meeting 5

Date:20/ September /2023

Time: 9:00pm (45 min)

Topic: Searching for modifications

Absent: Manmohan

Meeting 6

Date:22/ September /2023

Time: 9:00 pm (45 min)

Topic: Discussing about the dimensions

Absent:

Meeting 7

Date:23/ September /2023

Time: 9:00 pm (45 min)

Topic: Finalized the dimensions and decided a deadline for write up on dimensions and free hand sketches

Absent:

Meeting 8

Date: 27/September/2023

Time: 9:00 pm (45 min)

Topic: Combined and reviewed submissions from all members

Absent: Manmohan, Aniruddh, Manushree