

Criterion C: Creating the solution

TASK 1- Outline a plan, which considers the use of resources and time, sufficient for peers to be able to follow to create the solution.

List the steps taken to create the 3D product.

Logical PLAN

Date	A task to be completed	Time required	Materials /Tools	Task Completed Yes/No
24 th October	Create a logical plan that describes in detail each task that needs to be completed. This task is referring to this table. This needs to be done before I create my product because I need to make sure that I know exactly what I am going to create including everything that I planned in Criterion A and B.	This will take me around 30 minutes for planning as all I need to do is gather my ideas as well as look at my previous work.	This will be done in a Word document which is this table.	Yes, I have completed this task.
25 th October	Creating the basic shapes of the smart hospital bed and the features. (While taking screenshots and explaining the steps in detail). I will create the shapes before combining them straight away because it will help me create the structure of the shape better as I can see exactly what it	Creating the shapes will take me around 40 minutes because I need to choose the color and sized carefully.	This will be done using tinkercad's shapes and connectors section which is where I will get most of my shapes from.	Yes, I have completed this task.

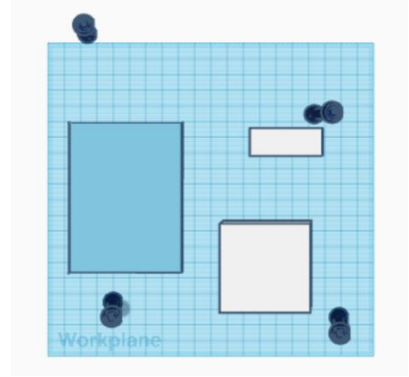
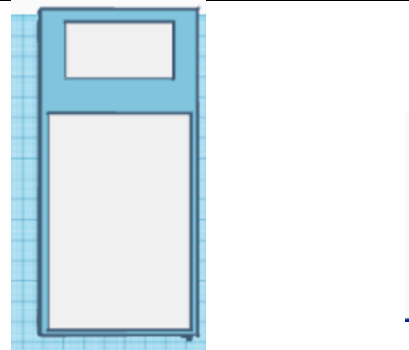
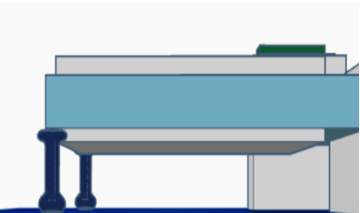
	looks like.			
26 th October	Adjusting and combining all the shapes (While taking screenshots and explaining the steps in detail). I will be now adjusting the shapes into their shapes and sized then combining them together to my hospital.	Adjusting and combining will take me around 45 minutes because I need to make sure everything is connected perfectly and that my bed structure looks good before I add any extra features.	This will be done on tinker cad . I will be mostly adjusting things from my previous task as well as using some more objects and shapes.	Yes, I have completed this task.
26 th October	Finalizing and finishing the product and adding extra features and details (While taking screenshots and explaining the steps in detail)	This will take me a little less than 1 hour as I need to finalize everything, add the extra features of the bed that makes it unique as well as I plan on adding some stuff around the bed to look like a hospital room. Then I need to	This will be done in Tinkercad again I might need to add some furniture and thing in a normal hospital room so I might use objects that I found in tinkercad.	Yes, I have completed this task.
27 th October	List the changes made to the chosen sketch and product when making the solution. I will basically be comparing my final 3D design that I have created and my final chosen sketch design that I have	This will take me around 30 Minutes because I have basically followed my sketch exactly, however, it will be quite difficult to create the bed on tinker cad so	This will be done in task 4 in this Word document.	Yes, I have completed this task.

	created in Criterion B.	there could be some differences.		
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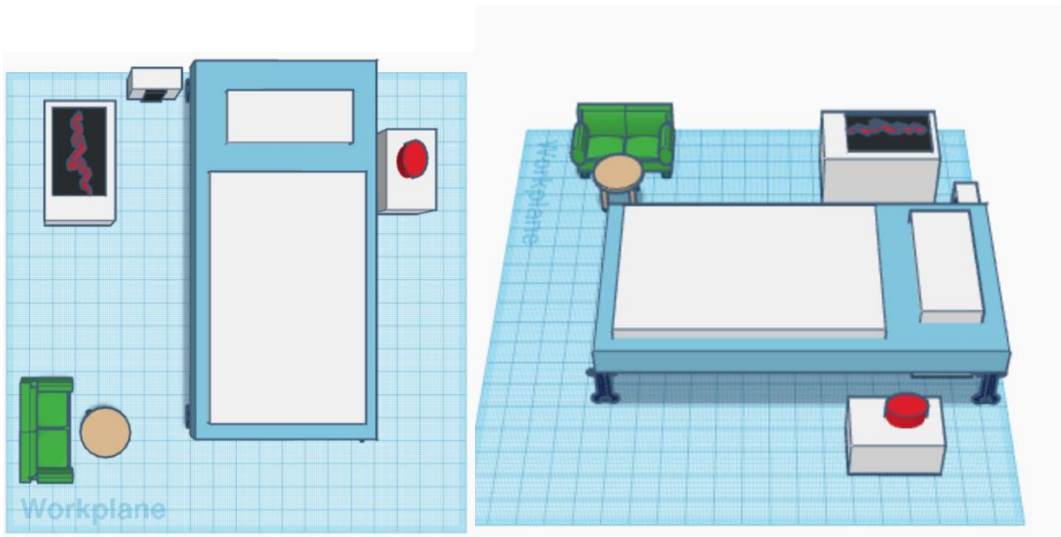
TASK 2 – Demonstrate excellent technical skill when making the solution

Follow the planned steps to create the 3D product. Add snips/screenshots or photos that were taken during the designing and making of the 3D product. You can have more than one photo.

Explain the stage of creation when the photo was taken.

	<p>25th October- This image shows the basic shapes of my product like the sheets and stand of the bed, the pillow, and the legs. I have used a 'box' in tinker cad shapes to create most of the bed, but I have changed the size and shape as well as the colors of them. I have used a 'ball handle' in tinker cad connectors to create the legs and stools of my bed. The reason I created the shapes before I create my bed is because it will help me visualize what the bed will look like and it will also save time because all I need to do is connect them since I have already adjusted the size and colors and I already have an idea on what I will do next.</p>
	

26th October- These images shows all the shapes connected and combined together to create the bed. I have included the top view to show the base and structure of the bed and its features like the pillow and sheets. I have included the side view to show how the legs and lever of the bed turned out after I have adjusted and combined all the shapes and connectors that I have placed out yesterday like the boxes, stools, legs, levers, and more. I am very pleased with how the smart hospital bed turned out. On the 28th I plan to add all my features and decoration to finalize my 3D product.



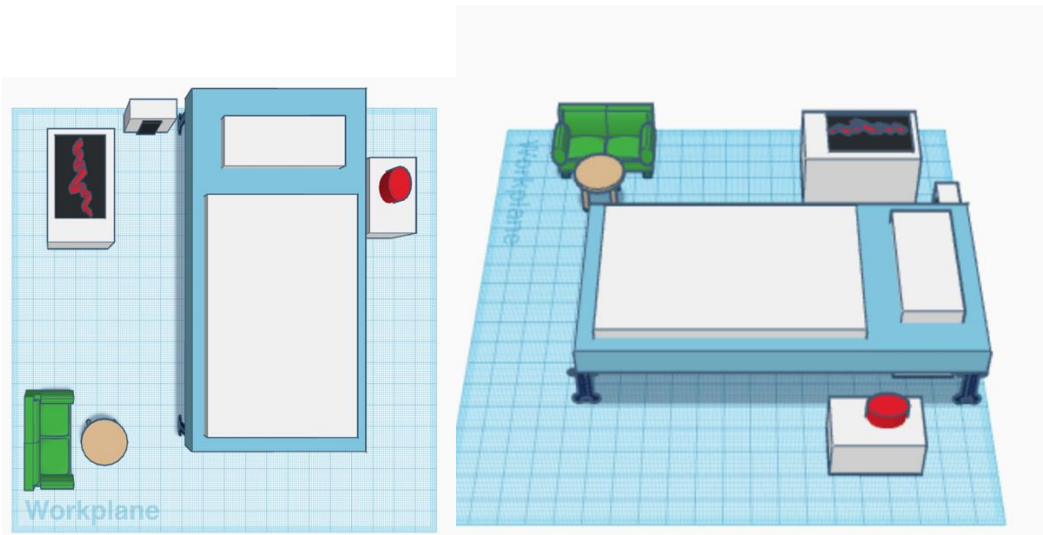
28th October- (Final product) As shown in this image, I have added extra features and things that you would see in a regular hospital room. First, I added my diagnosis machine which is the big white box with a screen on top of it showing the heart rate in a red line. I have created these using boxes and the scribble shape for the line. Then I added my alarm which is the red cylinder on top of the white box. I have also added a charging doc at the back of the bed for the patient to charge their phone. Again, this is made with different sized boxes. I have also created a lever under the bed for the patient to adjust it, I have created this using the same shape as the legs of the hospital bed. I have also added a sitting area for guests. I have created this using the furniture section in tinkercad.

TASK 3 - Follow the plan to create the solution, which functions as intended

Present your 3D product

Insert the snips/screenshots of the 3D product or links of the 3D product file below.

Insert the snips/screenshots of the 3D product



This is my final 3D design of my smart hospital bed. I have followed the logical plan and previous plans to include all of the features I planned to add to help my target audience, Sub Saharan region of Africa, which is a part of countries in Africa that are still developing and do not have good hospital facilities as in those countries they do not prioritize healthcare and sanitation. Smart hospital beds contain sensors for body temperature, heartbeat, blood, oxygen and pressure sensors, and more. All of these signals are already required and necessary for the doctors to monitor the health of the patients. However, I have added my own twist to make it unique, I have added an alarm as a reminder to take medicine or temperature checks and the main feature I am adding is a diagnosis machine which is something to diagnose diseases before later stages of that disease comes about. Late-stage diagnosis of a disease increases the risk of negative health outcomes which is very common in Sub Saharan Africa.

Visit this Link to have a better look at my product:

<https://www.tinkercad.com/things/jpOcLUEAz63-criterion-c-product-hospital-bed/edit>

TASK 4 - list the changes made to the chosen design and plan when making the solution.

If you made changes in your plan during the creation of the 3D product, complete the following to justify the changes made.

if you have not made any changes, just mention that you didn't make any changes. However make sure your final product is just the same as your sketches in Criterion B.

You can have as many tables as the changes made.

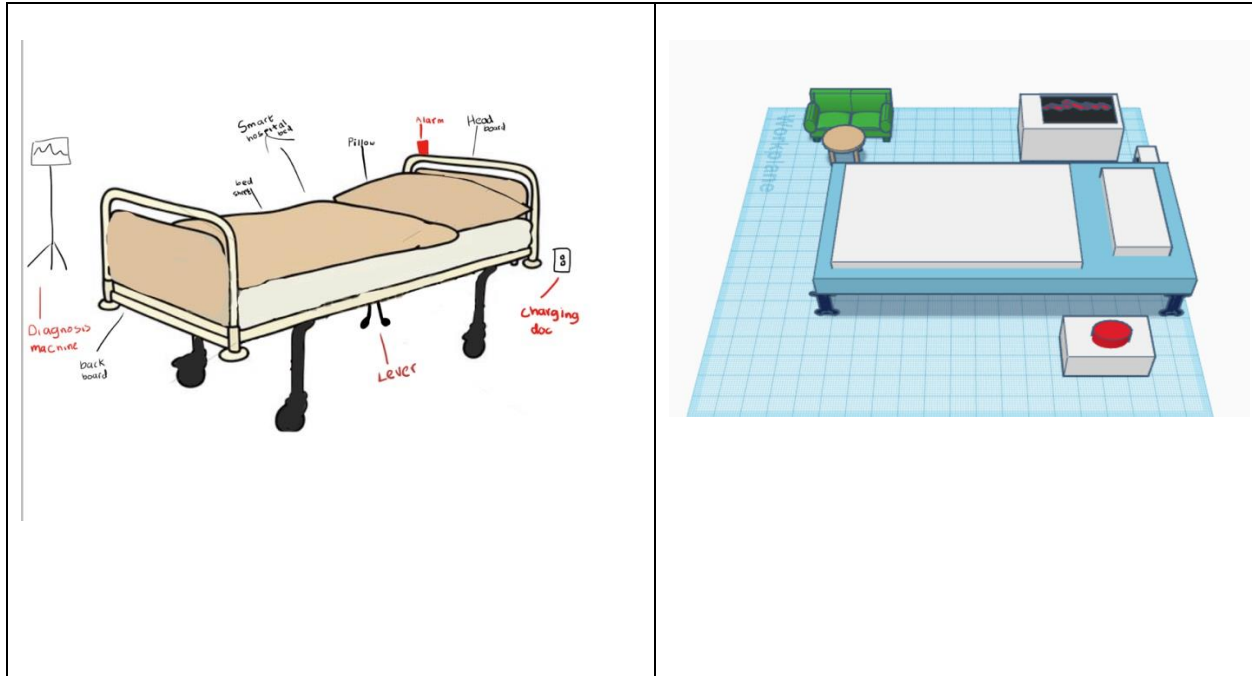
Design/Plan	Changes: Placement and structure of some features

I have changed the placement and structure of many features like the alarm, diagnosis machine, headboard and backboard, and structure of the bed. The reason I have not added an alarm on top of the bed instead I have placed it on a box. This is because I decided not to add a headboard and backboard because it would hide the bed and people won't be able to see the bed in all angles. I have changed the structure of the diagnosis machine because it wasn't clear in my sketch and I thought it would look better if I structured it from scratch. I have changed the overall structure of the bed because I couldn't find shapes that would be useful for my bed other than boxes

Design/Plan	Changes: Color scheme

I have changed the color scheme in my sketch as I thought the shades of brown and beige in my final sketch were not suitable for a smart hospital bed and it won't be the best for patients. Therefore, I decided to create a new and more appropriate color scheme. I ended up deciding on picking being blue, white, black, and other colors like red and green for some features which I think worked really well together.

Design/Plan	Changes: Furniture
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I have decided to add a seating area with a small table a couch on the edge of work plane. The reason for this is that I wanted to create the 3D model of my product based on how the whole room would look like and not just my bed and my features. I also think that this is required in every hospital for guests to visit the patient and for the patients' family to visit as they could be very ill or have a serious and in the hospital for a long time.