**Room 11-20240430 165653-Meeting Recording**

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Where is this transcript? Okay. Hello? Does this work? Wow, it works! Okay, exercise four. The structure is a steel wire frame without floors, consisting of rods connected by hinges.

Displacement of all structural points at ground floor level are constrained, and x, y and z directions with rotations are free. The structure is currently unstable. You may try stabilizing the structural design by adding rods diagonally, or replacing rods with beam elements.

Rods is an individual truss element that is only able to take normal forces. Its connection to the structure always with a hinge. A beam element can take all forces in moments.

Its connection to the structure is fixed. The figure shows both methods. There the portal, just an example of how beams can be applied.

Substituting one beam for a rod does not create a fixed connection by itself. Note, you do not need to consider buckling. Therefore, the direction in which a diagonal rod is positioned does not matter, and cross-bracing is unnecessary.

There are two conditions for the placement of rod elements. Structural elements are not allowed to span diagonally through the interior of space. An element should not span more than one bay.

An artificial intelligence tool is able to stabilize any structural design, consisting of rods and beams. In this program, a suggestion can be asked of which rod or set of beams is placed, or the message, the structure is stable. Okay, next step.

You have a moment to go to the design task. It is more important that you shale out. It is important that you shale out everything.

Blah, blah, blah. Next step. Yes.

Stabilize the structural design with minimum structure. Placements are constrained by ground level. Does it have to be stable in all three directions? If I make beams of 266, 234 and 172, you have the parts table.

I'm curious what AI wants to suggest. Except 165 and 195. And in the other direction, there is also a diagonal.

Wrong button. Maybe also 169 and 178. 169, 178.

I'm curious what AI wants me to do. 220 and 147. 147 and 213 to make it stable in two directions.

It's becoming a bit of a mess, but I'm just gonna try to make another diagonal. Ruben, does this not work? What doesn't work? Those output files don't work. Which assignment did you have? There was an Excel in that folder.

Yes. Oh. Then you have to put your finger on it.

I'm just gonna use AI for everything. I believe it. Maybe another one.

How do I know if it's... I have no clue if it's stable now. Oh, you have the same one. You can also use it.

Oh yeah, nice. The USB-C. USB-C? Oh, I thought you had HP.

Yes, I have... We had to switch. I have the same adapter. We had to switch.

Yes. Yes. Yes.

Thank you. Thank you. Thank you.

Thank you. Thank you. Thank you.

Thank you. Thank you. Thank you.

Thank you. Thank you. Thank you.

Thank you. Thank you. Thank you.

Thank you. Thank you. Thank you.

Thank you. Thank you. Thank you.

Thank you. Thank you. Thank you.

Thank you. We are making more input with a couple of robots we have in Europe. Hopefully, I hope it's worth it.

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