Okay, I started the recording function and it looks like it also started the transcription function. Okay, so I'm going to fix for the first round. And in between the assignments, you can like take a little break.

So that's just, you can arrange this two hours however you want to do these three assignments in this order. Okay. Yeah.

There you go. Okay. This actually looks like.

Different type. Oh, I think. So.

So. So. Okay, so.

That is the most efficient. The top to the bottom. Well, then having.

Oh, but I still need to assign. Process and you also. What's in the form of pledge.

Now to have some. Ability elements and. One national results.

As well as to support some of the. Can deliver structures. To.

And assign. Okay. Okay.

Okay. What are the elements. Not quite logical.

But this. I guess. I know already that I want to make.

Well, so. It also makes sense. Possibility elements in the way that they don't obstruct.

Okay. Openings. The inside for.

But also on the outside. And so on. That was a place.

not only, I need to, there is also the elements at least in two different axes. They can't, they can also not be a rotation point. I'm checking if it's an internal external face and if it's typical for the truss to be placed there.

So the two blocks on the ground floor that don't have a second bar make sense for them to be placed on the ground floor, but they can't be placed on the ground floor. Okay, so let's look at the menu. So far I will just place them all on top of each other on three walls.

Let's see from there and then I will do that also in a location where in the middle of the building where we have three floors, I can place them on top. And I successfully embraced the middle section of the building. It's possible that only one side is necessary to be placed.

Another side. Alright, so now I've found one of the cantilevering elements that I want to embrace. And the second element, and the third, and there's one missing.

Alright, so now the cantilevering elements are embraced. Alright, and we have now one outside. Complete sides.

Bracing. That means we actually have two types of bracing on one x-axis. Which means one side can be removed.

Bracing is until the top. Yeah, alternative design should also be that to create a ability core, but then the bracing would disrupt the internal floor plan. At the moment we just max none in terms of yeah, non-structurally, but then there's also walls and provisions.

Well, I will give this a try. Reading the instructions. So, I'm not too familiar with designing or making design decisions based on strain energy.

I also only see the strain energy for the model that I've created. And for the option two, I don't often read them before I do not do not see the strain energy about that. Am I supposed to see also the energy? I changed the scale to 100%.

I'm not sure if your torch bar is locked or something, but do you have FN enabled or not? If you press FN, I'm not sure if you have FN disabled enabled. You should press F11. Okay.

And again. Yeah, I think you can do a little switch. I'm not sure if it's enabled on Windows 11.

Yeah, I'll just see if it comes up. Oh, yeah, here. And then if you hover over it, it should pop up.

Yeah. Yeah. All right.

Thank you. Maybe you have to check. Maybe you can check if your team's recording is still going well.

Yeah, fair enough. Yes. Okay.

Now, with this out of the way, I'm having a look at the three different AI-generated options. It looks like Model 2 has shear walls everywhere. I'm not sure on the inside.

I can't see it. But that looks very materially inefficient. Yeah, even though that has the lowest strain energy.

I guess the structure is working the least. My structure is working fairly a lot on it. It is working less than option four, which is... Yeah, because I think option four doesn't have any bracing in it.

Okay, it's not. So, yeah. So, can't leave us on any natural loads.

And then option three is... So, it has a lot more bracing than my structure and also more shear walls. Some of the shear walls, I think, are not intuitive to me. And also why we would need so much bracing.

But I don't really like any of the AI-generated ones. But the least bad option for me is still option three. It's not only columns and not only shear walls, but something in between as well.

I'll take that one. All right. Okay, so now I need to completely remove some space.

I can use the strain energy as a basis for that decision. Or I can just have different reasoning, I guess. Yeah, so besides strain energy, removing the space might also be because of the layout.

So, for example, if I remove... I can't remove half or five. I can only remove complete five. So, that would then create a new cantilever, which wouldn't be ideal.

Because the structure also needs to work harder. If I would remove one or two, that would create an even bigger cantilever. So, that's also not ideal.

Yeah, so the biggest structural luxury is probably seven of the cantilever structures. So, if I remove that, then that would probably result in a structure that requires less bracing. Structural support to carry itself.

Another contender could be space 10, because then I reduce the amount of floors. It's less high. So, the high premium is reduced.

But for now, I will start with removing space seven because of the cantilevers. Now, I'm asked to split. Well, if I need to split space, then that will be, you know, it could be five or six.

And maybe in the next iteration, I can... Yeah, that might be an idea. It's symmetrical. It doesn't matter if it's five or six.

Just go with five. Another space and then it's good.

Okay, so percentage value is indicative, high percentage increase indicates a higher diversity. Diversity is not intuitive for me in this context, but not diversity deviation. Okay, so high deviation, smaller deviation.

Okay, I guess an increase or decrease. The next one of those three AI models, okay. Uh, no, sorry.

So there's one that you can't tell, um, or yeah. Yes, uh, yes, we should be okay. Which is one, and then you can continue with this, with, with one and four.

Yeah, yeah, sure. Okay. Okay, so all, um, the AI generate model kept number seven, so that means they kept, um, the overhang.

It's three removed part underneath, so that drastically increases the overhang. I will not show us that for sure. Uh, okay, so I just created a rich panel.

It could be architecturally interesting and shouldn't create too much problems structurally. Yeah, you have to know a bit of an overhang with base nine. Okay, it's spotted one on both sides.

That should not be too much of an issue. And option three, sort of, yeah, sorry, option two, um, to remove the top cloth. Um, actually, that is, we are also going to still have a, it's a larger space.

Uh, and removing a floor sort of helps structurally. Um, while it's creating now an extra cantilever section for, helps structurally. Architecturally, four could be more interesting.

So, but for now, really, I just based on the structural performance, I would choose. You know, I review this easy to flip the building upside down. Just click on it.

Easier. Okay, um, I see what I, the original starting point, the AI generated structural elements placement. By removing of the space and I see the AI generated space.

I do not see my placement. Okay, so now we just continue. I guess if they are so familiar, this is the one, the AI generated one is the last floor.

Okay, I'll place again. Uh, structural elements. I guess I'm not placing that above the AI generated one.

I'll place that one again. Um, well, I mean, I will still actually place as much as possible in certain parts. Place bracings, concept trusses.

And again, place them where they can cover, where they're on the facade and where they can go as now. This truss is because they're easier to see. It's important to look for where they are.

It's fine, so I can do that offset from each other. Okay, maybe this would only require bracing because it's in the same axis, let's say Y. And then this is fine. Also not necessary to rest.

Okay, we need somebody on that side. Okay, that's also already covered. Okay, so we also need bracing here.

Okay, yep, so that's the interleaver element. But okay, yeah, so this side can also be there. Okay, yeah, so that's interleaver.

And that friction, so that means bracing. Yeah, that's, so that's good, that interleaver. Oh, that doesn't require bracing.

Yes, we're going to be bracing upside down. Yeah, with this model, it's difficult to tell sometimes. All right, so that also completes the bracing on the facade side.

It's also opposite to each other. It's not opposite reverse. So that's also good.

The only thing I need now is that it is on the interleaver element. Yes, that is unfortunate. It's all sequence of the faces would be really appreciated.

So it makes up now, which is upside down. And I can see it was supported. And it was actually a double supported again.

And that should be work. Okay, so the different bracing skin again, if I only, the highest strain energy, of course, again, it's only supported by columns. These two hits on this one side, there's new walls around.

Yeah, that counts. And then a mix, of course, between sources. Only columns, only few words don't really make any sense.

Three, but this is also, again, far too many bracing. Okay, my reasoning says the same. The first iteration, still don't like any of the error generated ones.

Three, right? So I see the strain energies again, for each of the spaces. And I can remove one of the space. Well, the one that was the most, causes the most issues.

It's the most expensive in terms of structural design. Would be still seven because of the cantilever. So again, remove it.

And I can split space. The splitting of the space stuff is really not necessary. I don't understand because it hasn't carried over at all.

I think that now it's just a duration process. I'm not sure why this is the case because I can also, before, already placed inside these elements, different on a few walls and so on. So yeah, no.

Yes, it's, I don't really do what it does. I'll just split the largest element. So I'll just put nine.

Okay, all right. Interesting, and I find this a bit of a bug actually. It has now added back or removed from the original model.

Yeah, so option three is absolutely not viable because it now has a giant cantilever that is not going to work. But now we have a space 10 again that was already removed. Now going back, we're having now again in the tunnel.

This doesn't make sense in terms of process to me. I said we're only removing space, not adding them back. That might be a bug.

Yeah, it's not just removed, also a space is split. But yeah, it looks like still based on the original design, not the iteration. Since both option three and four are going backwards, that only leaves option.

Ah, okay, something I maybe wasn't aware of. That I might have overwritten in before. So I can also choose my own design.

But that's the case, I will do that because mine has less levels and overhangs. So we'll work with that. Okay, so now, let me see the overall element.

Yeah, so I probably should have chosen actually always, not always, but largely what I did, not what the AI did. Most of the time, it didn't make any sense. It was either over-braced or additional continuers.

Rather unsatisfied, the AI's optimizing algorithm that guides the AI is able to narrow, by some more factors, but unsatisfied. Results are not very attractive. They also don't deliver design insight.

Rather neutral, or rather difficult actually, because the numbering of faces and elements was not intuitive. So it was really difficult to find the right elements to assign a certain design choice. And just a navigation, three navigation, with the mouse a couple of times upside down.

It could also be a bit more smooth. So yeah, so here I made a mistake. So I always thought I need to choose one of the AI ones.

Also take mine. I've always had myself be influenced by this. I think actually, if I would have chosen, otherwise mine always wouldn't have influenced my decision at all.

The options I've generated didn't really make any sense. Well, I think we've been largely the same with our AI. I think maybe I would have second-guessed myself a little bit more.

I think generally, I could have not in this stage or this form, but nice to give feedback. At least consider other options. Or maybe to also feel more secure in the decisions that I've made, because I know what generates don't make sense.

So based on my current experience, I wouldn't use it again. But in general, I would use AI support in the future for my design process. Yeah, so I think just in terms of the user experience, the software could be improved.

The screen navigation could be a bit less fiddly. You could have an indication with, because right now it's just boxes. So there's cantilever, so it's not always clear if you have it upside down or not.

Maybe it would be nice if you could just click the elements in the view and then assign the structural type to it. But having just the elements number in this view would already help tremendously in order to then select in the table the correct elements to change it to a different type. I think the AI should be, they're optimizing for more variables.

It seems to have generated now only the extremes and then the medium solution is still over-braced. Thank you.