Three specific ones that you see here.

你在这里看到的三个具体的。

Both those 10 times.

这 10 次。

And that specific model, it's been around since the 1950 and they are considered.

这个特定的模型，它自 1950 年以来一直存在，并且它们被考虑在内。

Pitch more and more than when it comes to the success of a project.

推销比项目成功时要多。

And this model. These three constraints together are often called as the triple constraints or iron triangle or the project management triangle. So all three names are relevant. So if you are asked.

还有这个模型。这三个约束通常被称为三重约束或铁三角或项目管理三角。所以这三个名字都是相关的。所以如果你被问到。

The two elements of an iron triangular scope and post what's the first one should be time I mean the question that we like I could report it to as the triple constraint and it still refer to this thing that you see over there.

铁三角形示波器的两个元素和帖子，第一个应该是时间，我的意思是我们喜欢的问题，我可以将其报告为三重约束，它仍然指的是你在那里看到的这个东西。

So we looked at our module as a project last week and.

因此，我们上周将我们的模块视为一个项目。

Briefly trying to.

短暂地尝试。

See what difference all in the constraint of a project are, including spoke time and course and other elements as well. And in the future lectures we will be covering importance elements and their respective knowledge area individually.

看看项目约束有什么区别，包括发言时间和课程以及其他元素。在以后的讲座中，我们将分别介绍重要元素及其各自的知识领域。

How this? What do you mean by balancing these constraints?

这是怎么回事？平衡这些约束是什么意思？

How do they define the success of a project? We'll look at that now. So scope basically refers to what's the?

他们如何定义项目的成功？我们现在就来看看。所以范围基本上是指什么？

Work that protects. So what's the work that will be done as part of the project? Last week I mentioned while defining the boundary scope of a project, it's important to like be clear on what's inside, like what will be done and what's on the outside aspect. OK, this will be done. This is on the scope of the project.

保护工作。那么，作为项目的一部分，将完成哪些工作呢？上周我提到，在定义项目的边界范围时，重要的是要清楚内部的内容，例如将要完成的内容以及外部方面的内容。好的，这将完成。这是在项目范围内。

And this will not be done like this is outside the boundary. This is outside the scope of the project. So what work will be done as part of the project? What unique outcome like a product or a service or a

research?

这不会像在边界之外那样完成。这超出了项目的范围。那么，作为项目的一部分，将完成哪些工作呢？什么独特的成果，如产品、服务或研究？

Will come as the output of the project. Like what will the stakeholders like the customers or the sponsors will be expecting? But what are the state world stakeholders expecting from that project that's defined by the state?

将作为项目的输出。比如客户或赞助商等利益相关者会期待什么？但是，国家世界利益相关者对国家定义的项目有什么期望？

Time pretty straightforward.

时间很简单。

So what's the total duration that is taken to complete that project? So overall you will be looking at the starting and the ending, but when you go into particulars, you have specific time durations for individual activities that make up the entire project. So the term project schedule basically refers to the time aspect of it. Then you have cost. Usually we by course we refer to the monetary resources.

那么完成该项目所需的总持续时间是多少？因此，总的来说，您将看到开始和结束，但是当您进入细节时，您有构成整个项目的各个活动的特定持续时间。因此，项目进度表一词基本上是指它的时间方面。然后你就有了成本。通常我们当然指的是货币资源。

But there are other resources as well. But in general when we are talking about the constraints or the different constraints, that's the many elements that we are talking about.

但也有其他资源。但总的来说，当我们谈论约束或不同约束时，这就是我们谈论的许多元素。

So what is the overall budget? And just like that, just like the time element, we have the overall budget, but for each of the components, for each of the activities, we have their specific posts associated with them as well. So what do you mean by?

那么总体预算是多少？就这样，就像时间元素一样，我们有总体预算，但对于每个组成部分，对于每个活动，我们也有与之相关的特定职位。那么你是什么意思呢？

Balancing these things. So if you look at that triangle over there, you have the different constraints on.

平衡这些事情。所以如果你看那边的三角形，你就会有不同的约束。

The triangle and you have quality in the middle.

三角形，你在中间有质量。

So.

所以。

We have this code or like a good fast cheap choose two. So this is where the balancing part comes into play.

我们有这个代码，或者喜欢一个好的快速便宜的选择两个。所以这就是平衡部分发挥作用的地方。

There is no way you can have all these three so.

你不可能拥有这三个。

Imagine.

想象。

You have a project, so initially the project has had a certain budget at a

certain schedule or a time frame, and it has a specific scope. This is the overall goal of the project.

你有一个项目，所以最初这个项目在特定的时间表或时间范围内有一定的预算，并且它有一个特定的范围。这是该项目的总体目标。

Imagine the clients or the sponsor of the project wants to push the deadline of the project like a bit back. Like you're supposed to end by the end of April, but they want to pull it back to end of March, so they are changing the.

想象一下，项目的客户或发起人希望将项目的最后期限推迟一点。就像你应该在四月底结束，但他们想把它拉回三月底，所以他们正在改变。

Time constraint here.

这里的时间限制。

So if the other two elements, the other two constraints of scope and post remains the same.

因此，如果其他两个元素，则范围和帖子的另外两个约束保持不变。

That means the quality of the project would be affected.

这意味着项目的质量将受到影响。

So we initially analyzed the project and decided that this is the time that we're gonna take to finish the project. This will be the budget and these are the things we'll be doing as part of the project and if suddenly there is a pressure to like reduce the time.

因此，我们最初分析了这个项目，并决定这是我们完成项目所需的时间。这将是预算，这些是我们作为项目的一部分将要做的事情，如果突然有压力，可以减少时间。

To pull back.

后退。

The deadline of the project, if the others 2 parameters are kept constant, definitely the quality will be badly affected, but the balancing if the quality has to be maintained.

在项目的最后期限内，如果其他 2 个参数保持不变，肯定会严重影响质量，但如果要保持质量，则保持平衡。

We need to balance the other two factors. For example, if the deadline has to be made earlier, we need to pump in more money into the project. That means the cost is seems there or the scope has to be reduced like originally we were supposed to do.

我们需要平衡其他两个因素。例如，如果必须提前完成截止日期，我们需要为项目注入更多资金。这意味着成本似乎已经存在，或者范围必须缩小，就像我们最初应该做的那样。

Things 1-2 and three and four as part of the project, but since our time is reduced, we are deciding OK, we are not doing item number four, we are reducing the scope. Thus the quality of the product can be balanced as well.

事情 1-2 和 3 和 4 作为项目的一部分，但由于我们的时间减少了，我们决定确定，我们不做第 4 项，我们正在缩小范围。因此，产品的质量也可以得到平衡。

So I we looked at the concept in a very generic way, I know. So we can try and look at it in the context of.

所以我以一种非常通用的方式看待这个概念，我知道。因此，我们可以尝试在上下文中查看它。

Software project now and we do an activity based on that as well right

now.

现在的软件项目，我们现在也基于此进行活动。

So this would count towards your active participation rate and I'll just explain it and split into groups right after that. So the context is so imagine a start up like there are likely startup they are.

因此，这将计入您的积极参与率，我将对此进行解释，然后立即分成几组。因此，背景是想象一个初创公司，就像他们很可能是初创公司一样。

Concentrating on mobile applications, both Android and iOS apps, and they've decided alright, we're gonna create an application for managing To Do List like your daily tasks. So it's to do a mobile application.

专注于移动应用程序，包括 Android 和 iOS 应用程序，他们已经决定了，我们将创建一个应用程序来管理待办事项列表，就像您的日常任务一样。所以它是做一个移动应用程序。

So they have picked up the project, so they had a scope. So when it comes to a software project, scope pertains to these are the functionalities. So we have an application, we have this mobile application is going to work both on Android and iOS and we have these certain functionalities. So the user can see all their to do activities, they can see it's based on the dates, they can add new activities. Once they have finished it, they can.

所以他们接手了这个项目，所以他们有一个范围。因此，当涉及到软件项目时，范围与这些功能有关。所以我们有一个应用程序，我们有这个移动应用程序可以在 Android 和 iOS 上运行，并且我们有这些特定的功能。因此，用户可以看到他们所有的待办事项活动，他们可以看到它是基于日期的，他们可以添加新的活动。一旦他们完成了它，他们就可以了。

Check it off.

检查一下。

And they have the option to add an alarm or reminder for each of the tasks. So this was the original spoke it was supposed to be.

他们可以选择为每个任务添加警报或提醒。所以这是它应该是原来的发言。

One person. So that's an option to sing your To Do List to the cloud and by you have a server on the background so once you have Internet connectivity the servers things your To Do List so it works both locally and over the Internet as well.

一个人。因此，这是一个选项，可以将待办事项列表唱到云端，并且您在后台有一个服务器，因此一旦您有 Internet 连接，服务器就会处理您的待办事项列表，因此它可以在本地和 Internet 上工作。

But it was originally planned as a single user application.

但它最初计划为单用户应用程序。

But halfway through the development or like the developers are working hard on it and we have been somewhere across the middle of the development and some of the senior management suddenly thinks that it would be a good idea to add a collaborative aspect, a collaborative feature to the To Do List application like so. Till now it was a single user thing, as in multiple users can obviously sign up, but the To Do List was supposed to be yours only.

但是在开发进行到一半的时候，或者像开发人员一样，我们一直在努力工作，我们已经在开发的中间阶段，一些高级管理层突然认为，像这样在待办事项列表应用程序中添加一个协作方面，一个协作功能是个好主意。到目前为止，这是一个单一用户的事情，因为在多个用户显然可以注册，但待办事项列表应该只属于您。

But one senior.

但是一位前辈。

Manager in the company saying that we are going to add this specific feature where you can actually share your To Do List with.

公司经理说，我们将添加此特定功能，您可以在其中实际共享您的待办事项列表。

With your friend or family using their e-mail ID. So both of you are now sharing a common To Do List so you can both add items to it. You can both check off items from it so it has become a collaborative or a shared To Do List.

与您的朋友或家人使用他们的电子邮件 ID 在一起。因此，你们俩现在共享一个共同的待办事项列表，以便你们都可以向其中添加项目。你们都可以从中勾选项目，这样它就变成了一个协作或共享的待办事项列表。

So.

所以。

Now it's up to you. What I want you to do is I'll explain 1st and then split you into groups. So what is the constraint that is being changed here?

现在由你决定。我希望你做的是，我会解释第一个，然后把你分成几组。那么这里要改变的约束是什么呢?

Discuss and write that down and.

讨论并写下来。

One strategy strategy the company can employ here to maintain the quality by adjusting the.

公司可以在这里采用一种战略策略，通过调整来保持质量。

The time constraints, but keeping everything else constant and one other strategy to maintain quality.

时间限制，但保持其他一切不变，以及另一种保持质量的策略。

By they are given the option to change the cost so it could be increasing. Decreasing doesn't, so it's up to you that's what you're supposed to write.

通过他们可以选择更改成本，因此它可能会增加。减少不会，所以你应该写什么取决于你。

But all the other constraints have to be kept constant.

但所有其他约束必须保持不变。

And imagine a scenario, so the same senior.

想象一下一个场景，所以同样的前辈。

Manager.

经理。

Who added this feature to the?

谁添加了此功能？

Application they are also saying that but we already have a fixed deadline, so we have this delivery specific delivery date for the app that cannot be changed and we already have a fixed budget that cannot be changed as well. But this feature has to be included so in that scenario.

应用程序他们也这么说，但我们已经有一个固定的截止日期，所以我们有这个无法更改的应用程序的交付特定交付日期，并且我们已经有一个

无法更改的固定预算。但是，在这种情况下，必须包含此功能。

What would happen or what would be the iconic result of that and?

会发生什么，或者会是什么标志性的结果？

What can be a suitable strategy that you can employ here to like mitigate? If there are there are any negative outcomes to it, What's 1 strategy that you can employ to mitigate that situation?

您可以在这里采用什么合适的策略来缓解？如果有任何负面结果，您可以采用什么策略来缓解这种情况？

So I'm gonna make it.

所以我要成功了。

Group Activity so.

小组活动如此。

How many rows each we have 123.

我们每个人有多少行 123。

So the first three rows here from the bottom.

所以这里的前三行从底部开始。

Group One the.

第一组。

Three after that.

在那之后的三个。

223123 and the rest of the.

223123和其他人。

Three or four there will be Group 3 same here. 1.23 will be approved, 123 will be the next group and everyone is behind like from.

三到四个，这里也会有第三组。1.23 将被批准，123 将是下一组，每个人都像 From 一样落后。

After row 6.

在第 6 行之后。

So I want you.

所以我想要你。

To submit the answer in a piece of paper.

在一张纸上提交答案。

And I want you to write down everyone's everyone in your group's name and student ID. Yeah.

我希望你写下你小组名称和学生证中每个人的每个人。

So it's the grouping here.

所以这是这里的分组。

July 7th, July 6th, right?

7月7日，7月6日，对吧？

6.

6.

Discuss the topic.

讨论这个话题。

Yeah, exactly.

是的，没错。

So what do you think about the constraint is being changed here? The one question what the question one and then the question one?

那么，您如何看待这里正在改变的约束？一个问题是什么，一个问题，然后一个问题？

What constraint is being changed here?
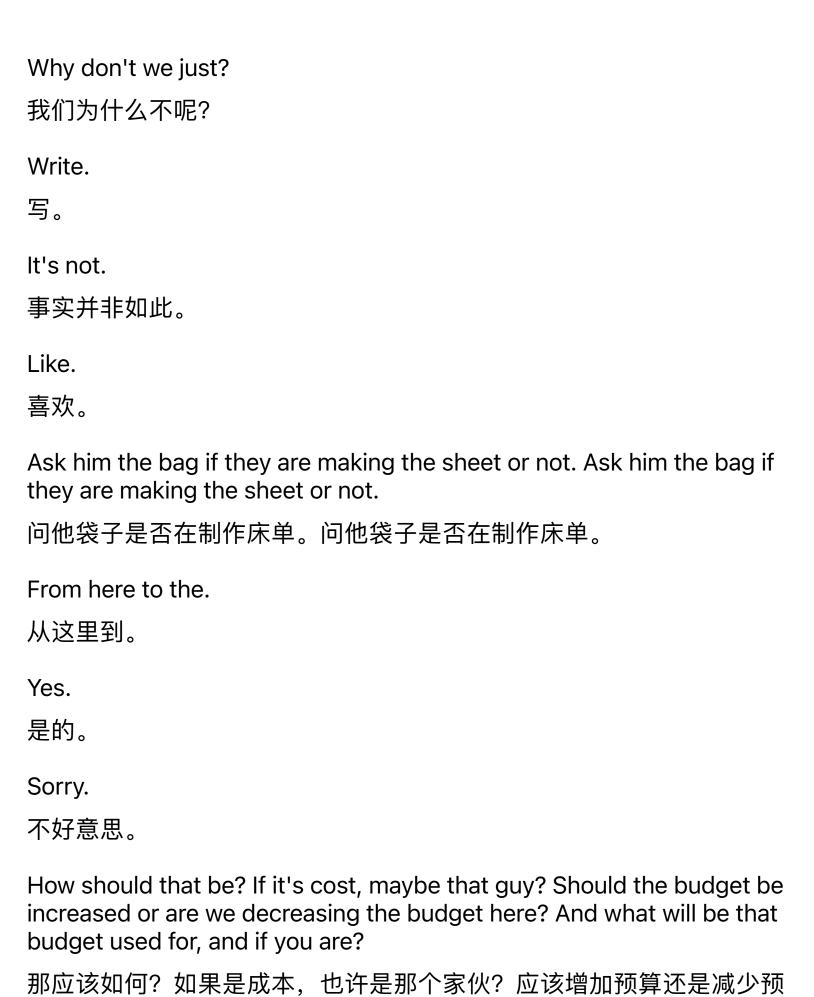
这里更改了什么约束？

What's the score?

分数是多少？

There were three constraints, 3 things in the triangle, if you remember. Yeah, I know. The cost, the power, the goal. Yeah, there are the constraints for the project.

如果你还记得的话，三角形中有三个约束条件。是的，我明白。成本、力量、目标。是的，项目有限制。

Translated in your language, you understand. I know you get it. I get it.

用你的语言翻译，你懂。我知道你明白了。我明白了。

So only the three principal to concentrate. This is the one. What is the answer of the question one.

所以只有三个主要人要集中精力。就是这个。问题一的答案是什么。

Why don't we just?

我们为什么不呢？

Write.

写。

It's not.

事实并非如此。

Like.

喜欢。

Ask him the bag if they are making the sheet or not. Ask him the bag if they are making the sheet or not.

问他袋子是否在制作床单。问他袋子是否在制作床单。

From here to the.

从这里到。

Yes.

是的。

Sorry.

不好意思。

How should that be? If it's cost, maybe that guy? Should the budget be increased or are we decreasing the budget here? And what will be that budget used for, and if you are?

那应该如何？如果是成本，也许是那个家伙？应该增加预算还是减少预

算？这些预算将用于什么，如果你是的话？

Changing the deadline if you are changing the time aspect by increasing the time like what exactly you increase the time.

如果您通过增加时间来更改时间方面，请更改截止日期，就像您增加时间的确切内容一样。

Some new people.

一些新人。

If we adjust for time. So this causes. What we need to do about this?

如果我们根据时间进行调整。所以这会导致。我们需要做些什么？

Just in time.

恰好及时。

It can decrease or decrease the time.

它可以减少或减少时间。

You can increase or decrease the time.

您可以增加或减少时间。

New work has to be there. It could take some time, right? Yeah.

必须有新的工作。这可能需要一些时间，对吧？是的。

So that's all that sounds like we have nothing to talk about this, talk about this topic.

所以这就是听起来我们没有什么可谈的，谈论这个话题。

Just basic stuff.

只是基本的东西。

If I change the time, if I.

如果我改变时间，如果我。

Decrease or decrease the time it will be in fact with or with my cost.

减少或减少实际的时间，或与我的成本。

As well be in fact, my cost. Of course I will pay them more and more money, yeah.

事实上，我的成本也是如此。当然，我会付给他们越来越多的钱，是的。

The developers are working for more time if I don't want to pay more money.

如果我不想支付更多的钱，开发人员会工作更多时间。

If I don't want what you don't want, If I don't want money, pay more money.

如果我不想要你不想要的东西，如果我不想要钱，就多付钱。

Don't have enough chance if I have enough time to do about this.

如果我有足够的时间做这件事，就没有足够的机会。

If it was happening, so that's the food scenario, you don't have extra money, you don't have extra time, so that's when quality will be compromised.

如果它发生了，这就是食物的情况，你没有多余的钱，你没有额外的时

间，所以这就是质量会受到影响的时候。

Right, Yeah.

对，是的。

So that's if I want more time as well be wrong with my cost and my.

所以那是如果我想要更多的时间，我的成本和我的也是错误的。

What I mean I need to do the one thing is balance to the different transport.

我的意思是我需要做的一件事是平衡不同的交通工具。

You have to balance that triangle triangle.

你必须平衡那个三角形的三角形。

I know and the balance is trying.

我知道，平衡正在尝试。

The senior management guide is expanding the boundary of like what is expected to be done in the project. So it's the scope constraint that we are changing. So yes.

高级管理指南正在扩大项目中预期完成的类似工作的边界。因此，我们正在改变范围限制。所以是的。

The answer is.

答案是。

So I will ask the rest of it.

所以我会问剩下的。

Different looks so.

不同的外观如此。

One strategy to maintain quality by.

一种保持质量的策略。

Assisting just the time, so by changing just the time.

只协助时间，所以只改变时间。

That's good. How can you maintain the quality of the final application that you're publishing?

很好。如何保持所发布的最终应用程序的质量？

Second one, one strategy to maintain quality by adjusting the course group here.

第二，通过调整这里的课程组来保持质量的策略。

We are employees in the team. Sorry on the project. We add employees on the project.

我们是团队中的员工。对不起这个项目。我们在项目中增加员工。

And can you like elaborate on that?

你能详细说明一下吗？

So you said you spent more, and so by spending more, how does it like quality? Why would you spend the money on?

所以你说你花了更多，那么通过花更多的钱，它对质量有什么影响？你为什么要把钱花在？

The university, the people working, so if we had more people.

大学，工作的人，所以如果我们有更多的人。

That will do the specific task.

这将完成特定的任务。

Then we say then we must come back in the budget. Exactly so.

然后我们说，那么我们必须回到预算中。正是如此。

So at this level, at this level of abstraction, this is the answer that I'm like I'm expecting you expecting from you in this but.

所以在这个层面上，在这个抽象的层面上，这就是我的答案，就像我期待你在这里期待你一样。

One tricky thing when it comes to, especially when it comes to software projects, is in an ongoing project.

当涉及到软件项目时，尤其是当涉及到软件项目时，一件棘手的事情是在一个正在进行的项目中。

Just by adding new resources. So it's like if you worked on a group project according project with an academic project.

只需添加新资源即可。所以这就像你根据一个学术项目做一个小组项目一样。

That you've been working on it for a month. A new member is introduced to it. So he doesn't know anything. He or she doesn't know anything about the code know. They don't know what's going on. They don't know how the.

你已经为此努力了一个月。向它介绍了一个新成员。所以他什么都不知道。他或她对代码一无所知。他们不知道发生了什么。他们不知道怎么

回事。

Architecture of the whole application works. They don't know what the specific responsibilities of each developer is tester is. So they need a detailed onboarding process to you actually.

整个应用程序的体系结构有效。他们不知道每个开发人员的具体职责是什么。因此，他们实际上需要为您提供详细的入职流程。

The useful resource for that project, so adding new resources may not always be the best way to spend your money on when it comes to.

该项目的有用资源，因此添加新资源可能并不总是花钱的最佳方式。

A software project. It might not have the results that you expect, but again, we are looking at it from a very abstracted overall overview.

一个软件项目。它可能没有你所期望的结果，但同样，我们从一个非常抽象的整体概述来看它。

Level here, so this is the expected answer.

这里的水平，所以这是预期的答案。

So specifically since you are mentioning quality, you can say that you can spend more on instead of having a junior developer instead of just increasing the number of developers.

因此，具体来说，既然您提到了质量，那么您可以说您可以花更多的钱而不是拥有初级开发人员，而不仅仅是增加开发人员的数量。

You can have a more serial developer instead of a junior guy there like you would be spending more on that. You can add more testers or quality assurance people in the project into the project to maintain the quality. Make sure that you know developers, then give it up like a fast like quick deadline. They might be able to come up with, you know

finish things on time but.

你可以有一个更连续的开发人员，而不是一个初级的家伙，就像你会花更多的钱一样。您可以将项目中的更多测试人员或质量保证人员添加到项目中以保持质量。确保您了解开发人员，然后像快速截止日期一样放弃它。他们也许能想出，你知道按时完成事情，但是。

The software might be buggy, there might be a lot of bugs in there.

该软件可能有问题，其中可能有很多错误。

You spend more on the QA, they might be able to catch these bucks on tight, so that's the way of spending more and still maintaining the quality and still maintaining the deadline. So scenario where?

你在 QA 上花更多的钱，他们可能会在紧张的情况下抓住这些钱，所以这就是花更多钱的方式，仍然保持质量，仍然保持最后期限。那么场景在哪里呢？

Project release can't be delayed and your original budget can't be exceeded. The second group here.

项目发布不能延迟，也不能超出原预算。这里是第二组。

So what happens then? So the senior guy is saying that we need this, but deadline is fixed, money is fixed. This is our budget. What basically happens?

那么会发生什么呢？所以老家伙说我们需要这个，但截止日期是固定的，钱是固定的。这是我们的预算。基本上会发生什么？

So if you stick to that, quality definitely goes down South. You might end up with a buggy software like with a lot of issues.

因此，如果你坚持这一点，质量肯定会下降。您最终可能会遇到一个有问题的软件，就像有很多问题一样。

So as a project manager, so the guy who said you need this feature is like a senior management who isn't.

因此，作为项目经理，说您需要此功能的人就像不需要的高级管理人员一样。

Basically working on the project on a day-to-day basis, but you are the project manager, so how do you like mitigate the situation? What's something that you can possibly do if you are like in such a scenario? So this is not a question that I expect a solid answer like a specific answer, it would vary and it could all be right. So what do you guys think you could put back on other features in the app cluster?

基本上是每天都在做项目，但你是项目经理，那么你喜欢如何缓解这种情况？如果你像这样，你可以做些什么？所以这不是一个我期望像具体答案那样可靠答案的问题，它会有所不同，而且可能都是对的。那么，你们认为可以把什么放回应用集群中的其他功能呢？

Yeah, so.

是的，所以。

The senior guy said this is a very important feature, so that has to be there. So you could go back to your original list of features which defines your scope and there could be some feature like you had social media login, you had Google and Facebook and Twitter logged in there or the Twitter authentication in there. You are thinking, oh this is not much of A priority, we could just have Google login.

这位资深人士说，这是一个非常重要的功能，所以必须有这个功能。因此，您可以返回定义范围的原始功能列表，并且可能有一些功能，例如您登录了社交媒体，登录了 Google，Facebook 和 Twitter，或者 Twitter 身份验证。你在想，哦，这不是优先事项，我们可以让谷歌登录。

Anything else to add to that? So that was a good example. So anything

else that any of the other groups want to add on to this? How can we mitigate this situation?

还有什么要补充的吗？这是一个很好的例子。那么，其他任何团体还有什么想补充的呢？我们怎样才能缓解这种情况？

So you are still sticking to the deadline, so you so if it's an agile, so you have one iteration, so you are releasing the product now, but you are saying that OK, this specific feature we are keeping it in the backlog, we are not just throwing it out, we have it in the pipeline, but in the next iteration we will be developing that. Yes. So that is that is another excellent way of you know in a software.

所以你仍然坚持最后期限，所以你所以如果它是一个敏捷，所以你有一个迭代，所以你现在发布产品，但你说好的，这个特定的功能我们把它放在待办事项中，我们不只是把它扔掉，我们有它正在管道中， 但在下一次迭代中，我们将开发它。是的。所以这是你在软件中了解的另一种很好的方式。

Development specific context. That's a good way of.

特定于开发的背景。这是一个很好的方法。

Dealing with such a situation.

处理这种情况。

Or again like combining the answers from you two guys like since the.

或者再次像结合你们两个人的答案一样。

Said that, just feature has to be there, you can't displease him.

话虽如此，只要功能必须在那里，你不能惹他不高兴。

For him for the reason of being the big shot in the company, so.

对他来说，因为是公司的大人物，所以。

The shared collaboration feature you can do it in this iteration, finish that on the current deadline and some other feature like the social login, you can put it for a late writers.

共享协作功能，您可以在此迭代中完成，在当前截止日期和其他一些功能（如社交登录）中完成，您可以将其放在迟到的作家中。

So I hope that the activity.

所以我希望这次活动。

Concept of triple constraints. So right The iron triangle is more clear to you so.

三重约束的概念。所以对了，铁三角对你来说更清楚了。

Will move on to the second aspect that we are looking at today, so.

我们将继续讨论我们今天要研究的第二个方面。

The project we already looked at that, but before we.

这个项目我们已经看过了，但在我们之前。

Move on to see what program and the portfolio is. We quickly have a recap of what the project was so.

继续查看计划和投资组合是什么。我们很快就回顾了这个项目。

Three main attributes, or.

三个主要属性，或。

The features that define a project.

定义项目的功能。

Was that it is temporary, so it does. It's never like perpetually ongoing, so it has a start date and an end date.

是不是暂时的，所以它确实如此。它永远不会永远持续下去，所以它有一个开始日期和一个结束日期。

And it's unique in nature, so the result of the output is always something unique. There might be similar projects, but the output of these projects is ultimately might have something different from all the other projects out there and it creates a value that's an output like it could be a product, it could be a service Oregon a result that.

它本质上是独一无二的，所以输出的结果总是独特的。可能有类似的项目，但这些项目的输出最终可能与所有其他项目不同，它创造了一个价值，它就像一个输出，它可能是一个产品，它可能是一个服务俄勒冈州的结果。

You get as the final result of that product.

你得到的是该产品的最终结果。

So of that project so.

所以这个项目是这样。

That being a project, now we move on to. So this is a hierarchy. We are building a hierarchy.

这是一个项目，现在我们继续。所以这是一个层次结构。我们正在建立一个等级制度。

So one level.

所以一个层次。

Projects. We have something called programs and I know it's.

项目。我们有一个叫做程序的东西，我知道它是。

Pretty big definition, but we will try to dissect it element by element. So what does the program consist of? So program of is a group of related projects, so.

相当大的定义，但我们将尝试逐个元素地剖析它。那么该计划由什么组成？所以程序是一组相关的项目，所以。

What is important here is that it is not like a set of projects. You are combining it all together. They are not random projects, but they are somehow related to each other. So it could be a group of related projects.

这里重要的是，它不像一组项目。你把它们组合在一起。它们不是随机项目，但它们在某种程度上相互关联。因此，它可能是一组相关项目。

Or it could be subsidiary programs, so you have.

或者它可能是附属计划，所以你有。

Larger program.

更大的程序。

And a smaller program below it, so subsidiary program and a parent program about it. So either could be a related projects, so program on top and related projects below edge or it could be a larger program that subsidiary programs below which.

在它下面有一个较小的程序，所以附属程序和一个关于它的父程序。因此，要么可以是相关项目，那么程序在上面，相关项目在边缘，或者它可能是一个更大的程序，其子程序在下面。

And the other activities that are required to manage these.

以及管理这些活动所需的其他活动。

So we saw that we have last week we compared programs and another term. So what was the counterpart that we looked at?

因此，我们看到上周我们比较了课程和另一个学期。那么我们看到的对应物是什么？

So I mean projects. So project was ongoing, temporary, unique and it creates a unique value. But on the other hand we had something that's ongoing and repetitive. What was that?

所以我的意思是项目。因此，项目是持续的、暂时的、独特的，它创造了独特的价值。但另一方面，我们有一些持续和重复的事情。那是什么？

Operations. Exactly so.

操作。正是如此。

In a program you can have.

在程序中，您可以拥有。

Related projects A set of related projects.

相关项目 一组相关项目。

Subsidiary programs and some operations or activities that are done like in a repetitive manner to manage all these programs or the projects that come under it. So why are they managed together? So they are managed in a coordinated manner to obtain benefits and control not available from managing them individually.

附属计划和一些操作或活动，以重复的方式管理所有这些计划或其下属

的项目。那么，为什么要将它们放在一起管理呢？因此，它们以协调的方式进行管理，以获得单独管理无法获得的利益和控制权。

So you have individual similar projects.

所以你有单独的类似项目。

So when they are grouped together.

所以当它们组合在一起时。

So you realize some benefits that you don't get from managing them individually. So when we move on to an example, I'm sure it will become more clear so.

因此，您会意识到一些单独管理它们无法获得的好处。因此，当我们继续举一个例子时，我相信它会变得更加清晰。

What are the benefits that you can realize from?

您可以从中获得哪些好处？

Managing women a coordinated way you can streamline the management, staffing, purchasing and other stuff.

以协调的方式管理女性，您可以简化管理、人员配备、采购和其他工作。

To make the overall.

使整体。

Projects more economically.

项目更经济。

So Please note that when I say it's, you're combining a group of

projects. A program is not a name for a like a large project or a mega project.

所以请注意，当我说它时，你正在组合一组项目。程序不是大型项目或大型项目的名称。

It's a set of related projects, alright. So we look at the definition of portfolio as well and we look at an example of how the hierarchy works.

这是一组相关的项目，好吧。因此，我们也看一下投资组合的定义，并看一个层次结构如何运作的例子。

So we had.

所以我们有。

Projects in the bottom layer, then programs, and on the top we have portfolios.

底层是项目，然后是项目，顶部是项目组合。

So Portfolio is a collection of projects.

因此，Portfolio 是项目的集合。

Programs or subsidiary portfolios?

项目还是子公司？

So here we had group of related projects, but we portfolio is one layer on top of that. So we can have individual related projects and multiple programs and even smaller portfolios as the children of a larger portfolio.

所以这里我们有一组相关的项目，但我们的作品集是上面的一层。因此，我们可以拥有单个相关项目和多个项目群，甚至更小的投资组合作为较大投资组合的子项。

And their related operations, just like the program had their program activities, we have the related ongoing operations as part of it.

他们的相关业务，就像项目有他们的项目活动一样，我们有相关的持续运营作为其中的一部分。

So they are managed as a group to achieve strategic.

因此，他们被作为一个群体进行管理以实现战略。

Objectives. So what do you mean by?

目标。那么你是什么意思呢?

Strategic objective here. So when it comes to an organization, software company, any business group.

战略目标在这里。因此，当涉及到一个组织、软件公司、任何业务集团时。

The strategic goals are there, long term goals and missions.

战略目标就在那里，长期目标和使命就在那里。

It could be financial. So the goals of a specific project are short term, like we need to finish this project, we'll have this much of financial benefit from it and we'll achieve this and that. But strategy goals are long term. They could span over multiple years. A company could have a strategy for like 5 years, so could be financial like in five years.

它可能是财务上的。因此，一个特定项目的目标是短期的，就像我们需要完成这个项目一样，我们将从中获得如此多的经济利益，我们将实现这个和那个。但战略目标是长期的。它们可能跨越多年。一家公司可以有 5 年的战略，因此可以像 5 年一样拥有财务。

Our overall revenue should cross 1 billion.

我们的总收入应该超过 10 亿。

It could be.

它可能是。

Related to your growth or your ==presence==, so in five years, our company should have presence in five different countries. So that's a strategic goal. So what portfolio does is that. So to achieve these specific strategic goals you invest. So the term, the important term when it comes to portfolios is invest.

与您的成长或存在有关，因此在五年内，我们公司应该在五个不同的国家开展业务。所以这是一个战略目标。所以投资组合的作用就是这样。因此，为了实现这些特定的战略目标，您需要进行投资。因此，当涉及到投资组合时，术语，重要的术语是投资。

So which are the projects that your company should invest on? Which are the areas that your company should invest and focus on to make sure that your company achieve these long term, five year or ten years strategic goals?

那么贵公司应该投资哪些项目呢？贵公司应该投资和关注哪些领域，以确保您的公司实现这些长期、五年或十年战略目标？

That's what you.

这就是你。

Realize as the outcome of managing A portfolio. So it basically contributes to the entire enterprises success. It is not about a very specific project specific thing but.

实现作为管理投资组合的结果。因此，它基本上有助于整个企业的成功。这不是一个非常具体的项目，而是关于一个具体的事情。

Contributes you to the entire company or enterprises success so the hierarchy will look at it.

为整个公司或企业的成功做出贡献，以便层次结构会关注它。

With an example in construction now.

现在以建筑为例。

So we will start from the bottom.

因此，我们将从底部开始。

So we have projects in the bottom layer.

所以我们在底层有项目。

So imagine a house construction project. Alright, so.

所以想象一个房屋建设项目。好吧，所以。

It is a single family house that you are building. So what happens in the neighborhood at this level we are not bothered about. So it is a specific house. So that is a specific project. Alright, construction of one house.

这是您正在建造的单户住宅。因此，在这个层面上，我们并不担心附近发生的事情。所以这是一个特定的房子。所以这是一个特定的项目。好吧，建造一栋房子。

One single family house. It has a start date, it has an end date. It's you has a specific scope, so you have a blueprint and based on that you are constructing that house.

一栋独栋住宅。它有一个开始日期，它有一个结束日期。你有一个特定的范围，所以你有一个蓝图，并在此基础上建造那所房子。

So that is the project.

这就是项目。

When we move to the next level in the hierarchy, you have a program. So imagine that it is a residential area, it's a new development area and your company is constructing.

当我们移动到层次结构中的下一个级别时，您就有一个程序。所以想象一下，这是一个住宅区，它是一个新的开发区，你的公司正在建设。

15 similar single family houses in that residential area. So each of those by itself is a single project, but they are related project like they are all based on the same plan. Alright, so their requirements are pretty like the outside structure of all the houses are gonna be seen. The interiors might differ a bit, but from the outside they are all gonna look the same. The projects are quite similar.

该住宅区有 15 栋类似的单户住宅。因此，它们中的每一个本身都是一个项目，但它们是相关的项目，就像它们都基于相同的计划一样。好吧，所以他们的要求就像所有房屋的外部结构一样。内部可能略有不同，但从外观上看，它们看起来都是一样的。这些项目非常相似。

So you combine all the construction of those 15 houses, all those 15 projects into one program called like a single family homes in that specific residential area. So it's 15 projects you are combining into.

因此，您将这 15 栋房屋的所有建筑、所有这 15 个项目合并到一个程序中，就像该特定住宅区的单户住宅一样。因此，您正在合并到 15 个项目中。

One program. So in the definition I mentioned that.

一个程序。所以在定义中我提到了这一点。

By combining similar projects.

通过组合类似的项目。

Into a program you realize.

变成一个你意识到的程序。

You can take advantage of things that you may not benefit from when you are managing those projects individually. So you have 15 different houses that your company is constructing and you are managing it as.

您可以利用在单独管理这些项目时可能无法从中受益的东西。因此，您的公司正在建造 15 座不同的房屋，并且您正在对其进行管理。

Single program.

单个程序。

So what will be the different benefits that you can realize from managing it together like elements like?

那么，通过像元素一样一起管理它，您可以实现哪些不同的好处呢？

Stopping purchasing and other stuff that economically benefits that are economically beneficial in this example.

停止购买和其他在本例中具有经济效益的东西。

So instead of managing these construction projects individually, you have a program manager who is overseeing the construction of these all these booking houses.

因此，您无需单独管理这些建筑项目，而是拥有一位项目经理来监督所有这些预订房屋的建设。

Or there could be some overlap.

或者可能有一些重叠。

So what are the advantages? What do you think will be the

advantages?

那么有什么优势呢？您认为优势是什么？

So rather than hiring 15 accountants, you can just have one for those.

因此，与其雇用 15 名会计师，不如只雇用一名会计师。

Exactly. So that's one night, one day you have in the staffing department. So it's gonna be.

完全。所以那是你在人事部门的一个晚上，一天。所以它会是。

Since the projects are similar, the accounts are gonna be somewhat similar as well.

由于项目相似，因此帐户也会有些相似。

So having one account that might be sufficient.

因此，拥有一个帐户可能就足够了。

What else?

还有什么？

You can have the same construction team.

您可以拥有相同的施工团队。

The building, so it's like quality is the same.

建筑，所以质量是一样的。

Exactly. And so also there is a way that you can paralyze the work like.

完全。因此，还有一种方法可以使工作瘫痪。

So if you have a team of carpenters working on.

因此，如果您有一个木匠团队在工作。

One house at one time and you have a group of Masons working on the other house and.

一次一栋房子，你有一群泥瓦匠在另一所房子里工作。

After the carpenters finished working here, you can move those people here and vice versa. I know there are some dependencies to it, but there is some parallelization you can achieve here by moving the resources around these different constructions.

木匠在这里工作完毕后，你可以把这些人搬到这里，反之亦然。我知道它有一些依赖关系，但是您可以通过在这些不同的结构周围移动资源来实现一些并行化。

Instead of having a dedicated team for each of these different constructions.

而不是为这些不同的结构中的每一个都有一个专门的团队。

Anyone else chasing bulk? We can do bulk purchasing exactly instead of doing single. So the plans are the same for all the houses.

还有人追逐散装吗？我们可以完全进行批量采购，而不是进行单一采购。因此，所有房屋的计划都是一样的。

So the raw material that you would require for all these constructions are going to be pretty much the same. So instead of sourcing the resources individually, the raw materials individually, you can buy them in bulk and definitely that will give you a financial advance. So excellent answers overall. So like hope that becomes the concept of project and programs and what are the advantages that we are talking about.

因此，所有这些结构所需的原材料将几乎相同。因此，您可以批量购买它们，而不是单独采购资源、原材料，这绝对会给您带来财务预付款。总的来说，答案非常好。因此，就像希望一样，这成为项目和计划的概念，以及我们正在谈论的优势是什么。

When we say managing them together.

当我们说一起管理它们时。

So programs, we move up one more layer and we get portfolios. So the company is called APC constructions and their portfolio consists of different programs including the single family homes that we were talking about South. They are building 15 single family homes in a specific area, but on a different area they have, they are constructing some new apartment buildings.

因此，程序，我们再上一层，我们得到投资组合。因此，该公司被称为APC建筑，其投资组合由不同的项目组成，包括我们谈论的南部单户住宅。他们正在一个特定地区建造 15 个单户住宅，但在他们拥有的不同区域，他们正在建造一些新的公寓楼。

And.

和。

Somewhere else in the city, in the middle of the city, they are constructing some office buildings as well, so.

在城市的其他地方，在城市的中心，他们也在建造一些办公楼，所以。

All these programs together.

所有这些程序在一起。

Make up the companies portfolio.

组成公司投资组合。

So when you look at it is not just residential.

因此，当您看到它时，它不仅仅是住宅。

Projects that the company has. So you can say that they have diverse portfolio, they are investing both in residential and office constructions as well. So that is what I mean by in the portfolio level, you are looking at things from an investment level, so a portfolio manager.

公司拥有的项目。因此，您可以说他们拥有多样化的投资组合，他们也投资于住宅和办公建筑。这就是我在投资组合层面的意思，你是从投资层面看事情的，所以投资组合经理。

Looks at things from Looks at things in a long term, broader vision, so.

从长远、更广阔的视野看事物，所以。

They want the company not to depends only on housing construction, residential construction. They want a diverse portfolio say they say that we should, you know our USP, we've been working on residential projects all these years. You know that's what we do well in. But if you want to expand, you know our city is turning to be you know, a technological hub. There are lot of requirements for office spaces coming up.

他们希望公司不要只依赖住房建设、住宅建设。他们想要一个多元化的投资组合，他们说我们应该，你知道我们的USP，这些年来我们一直在从事住宅项目。你知道这就是我们擅长的地方。但如果你想扩张，你知道我们的城市正在变成一个技术中心。对办公空间的要求很高。

There are lots of companies, IT companies starting to invest in our city. So there is a potential for building new office buildings in the middle of the city with somewhere with good accessibility. So that is a financial

investment decision that they are making. So such financial investment decisions on which are the different projects and programs that the organizations of all the company should invest on.

有很多公司，IT公司开始在我们的城市投资。因此，有可能在城市中心建造新的办公楼，并具有良好的交通便利性。所以这是他们正在做出的金融投资决定。因此，这种财务投资决策是所有公司组织应该投资的不同项目和计划。

That's what we deal with in a portfolio level.

这就是我们在投资组合层面处理的问题。

Again, a generic structure. This was a specific example, so this is.

同样，通用结构。这是一个具体的例子，所以这是。

A generic structure of how the hierarchy looks. So you have shared resources and stakeholders in the bottom. So when we talked about what are the advantages of grouping different projects into programs, we said that we can buy the resources in bulk.

层次结构外观的通用结构。因此，您在底部共享了资源和利益相关者。因此，当我们谈到将不同的项目分组到程序中有什么优势时，我们说我们可以批量购买资源。

We say that you can have the same accountant say that you can have the same team of workers working on different projects. So you have shared resources and stakeholders for different projects. So you have project 1234.

我们说，你可以让同一个会计师说，你可以让同一个团队从事不同的项目。因此，您已经为不同的项目共享了资源和利益相关者。所以你有项目 1234。

Till nine there. So it's not just the projects there you have operations as

well. So that is a construction company.

直到九点。因此，不仅仅是那里的项目，您还有运营。所以这是一家建筑公司。

Other than the specific constructions that they are doing, they have their HR operations, they have their payroll operations. Things are happening on a daily basis that supports the entire organizations day-to-day working.

除了他们正在做的具体建设之外，他们还有他们的人力资源业务，他们有他们的工资单业务。每天都在发生一些事情，支持整个组织的日常工作。

So project four and five make up the program B1 and the program B has.

因此，项目 4 和 5 组成了程序 B1，程序 B 具有。

Another program below. So in the definition we saw that it is not just the related projects that make up a program, but you can have subsidiary programs below a program as well.

下面的另一个程序。因此，在定义中，我们看到不仅相关项目构成了项目群，而且您也可以在项目群下拥有子项目群。

And a program and a project here combined it makes a portfolio.

这里的一个程序和一个项目结合起来，就形成了一个投资组合。

So the overall portfolio of the company consists of programs and also it has a subsidy portfolio as well. So there could be questions based on the hierarchy. So you might have a similar structure in your question paper with one of these black doubts, so it could ask you like.

因此，该公司的整体投资组合由项目组成，并且还有一个补贴组合。因

此，可能会有基于层次结构的问题。所以你的试卷中可能有一个类似的结构，其中一个黑色的疑问，所以它可以问你喜欢。

So here in the B1 position what does? Like what level of hierarchy doesn't go there? Like is there?

那么在 B1 位置上有什么作用呢？比如哪个级别的等级不去那里？喜欢吗？

Can what portfolio be here true or false? Can a project be in this position? True or false? So.

这里的投资组合是真是假吗？一个项目可以处于这个位置吗？对还是假？所以。

Important that you understand how the hierarchy of these works.

了解这些层次结构的工作原理非常重要。

Again simplifying the whole hierarchy in.

再次简化了整个层次结构。

Paramedic structure, so you have projects in the bottom and portfolios on top.

护理人员结构，因此您的项目在底部，投资组合在顶部。

Projects have tactical short-term goals. It's about you have specific scope for the project, it's about doing things right for that project. But portfolio on top are strategic goals. They look at things in a long term.

项目有战术性的短期目标。这是关于你对项目有特定的范围，这是关于为该项目做正确的事情。但最重要的是投资组合的战略目标。他们从长远的角度看待事物。

Mission. So it is about doing the right things for the company, So what the company needs.

任务。所以这是关于为公司做正确的事情，所以公司需要什么。

In a long term.

从长远来看。

And you have programs in the middle, so basically realizing the benefits of grouping related projects together what you achieve by that so?

而且你中间有程序，所以基本上实现了将相关项目组合在一起的好处，你通过它实现了什么？

Projects. Doing things right. Doing things? What are right for that? Project? Specific things? Straightforward things?

项目。做正确的事。做事？什么适合呢？项目？具体的事情？直截了当的事情？

Portfolio looks at things so that you do the right thing for the company.

投资组合着眼于事物，以便您为公司做正确的事情。

So that paramedical structure, I will try to explain what goes in there in a bit more detail so.

因此，辅助医疗结构，我将尝试更详细地解释其中的内容。

I said tactic goals and strategic goals. So what exactly do they mean? What are the questions that we are asking ourselves when it comes to?

我说的是战术目标和战略目标。那么它们到底是什么意思呢？当涉及到这个问题时，我们会问自己什么问题？

Project management and portfolio management.

项目管理和项目组合管理。

So in project management, your goal is to achieve the tactical short term goals of that specific project. So are we carrying out the project well?

因此，在项目管理中，您的目标是实现该特定项目的战术短期目标。那么，我们是否很好地执行了这个项目？

And the three constraints that we looked at.

以及我们研究的三个约束条件。

Is our project on budget? Are we exceeding the budget that we originally planned? Are we?

我们的项目是否在预算范围内？我们是否超出了最初计划的预算？我们是吗？

Working in a good place so that we can finish.

在一个好地方工作，这样我们才能完成。

The project on time, the deadline that we originally decided on South, are all the project stakeholders including the client, Are they all doing what they are supposed to do? So these are the questions that you ask yourself when you are managing a project, but portfolio management, you think from a strategic level. So are we working on the right projects? Are we investing in the right areas?

项目按时完成，我们最初在南方决定的最后期限，包括客户在内的所有项目利益相关者，他们都在做他们应该做的事情吗？所以这些是你在管理项目时问自己的问题，但投资组合管理，你从战略层面思考。那么，我们是否在做正确的项目呢？我们是否在正确的领域进行投资？

And does our company have the right resources to be competitive with

the other companies who are working in our same domain?

我们公司是否拥有合适的资源来与在同一领域工作的其他公司竞争？

So I'll ask.

所以我会问。

First stint here?

第一次来这里？

Imagine a project like. We'll go back to the.

想象一个这样的项目。我们回去。

Construction project itself so sometimes.

建设项目本身有时也是如此。

A project that is going so well that is achieving all its tactical goals.

一个进展顺利的项目正在实现其所有战术目标。

All its projects specific scopes.

其所有项目都有特定的范围。

On paper, when you're looking at just that project, it's all going well, but from a portfolio level decision, that project might get cancelled. So based on the construction example.

从理论上讲，当你只看那个项目时，一切都很顺利，但从项目组合层面的决策来看，这个项目可能会被取消。所以基于施工实例。

Can you give a scenario where one such project which has been going so well suddenly get cancelled because of portfolio strategic level level

decision from the?

您能否给出一个场景，即一个进展如此顺利的项目突然被取消，因为投资组合战略层面的决策？

Sorry.

不好意思。

What happened with the student union?

学生会怎么了？

Post at the firm.

在公司发帖。

All right, so can you.

好吧，你也可以。

Bring it to like.

让它喜欢。

A portfolio level decision that the universe, the authorities might have taken in this that can you split it down to.

一个投资组合级别的决定，宇宙，当局可能已经采取了这个决定，你可以把它分解成。

In the project and portfolio.

在项目和项目组合中。

There might be any future in making single home families or something, so they might cut the.

建立单身家庭或其他东西可能会有前途，所以他们可能会削减。

You don't wanna continue with the student union.

你不想继续留在学生会。

Not know the exact reason what happened inside. So this example you said, what was the one that you said like no investor, no future for the single family homes exactly. So once you when you started the project, you might have seen there's a potential like you know we're gonna finish these houses in like 2 years at that time you're expecting you know the, you know the market will be good.

不知道里面发生了什么的确切原因。所以你说的这个例子，你说的那个人，就像没有投资者，没有单户住宅的未来一样。因此，一旦你开始这个项目，你可能已经看到了一种潜力，就像你知道我们将在2年内完成这些房子一样，那时你期望你知道，你知道，你知道市场会很好。

And there will be buyers for the house.

房子会有买家。

Houses, but market has changed halfway through the construction. You are realizing that could be different factors. That could be a recession. Something like Covic happened and people are not willing to make.

房屋，但市场在施工中途发生了变化。您意识到这可能是不同的因素。这可能是一场经济衰退。像科维奇这样的事情发生了，人们不愿意做。

Large financial investments at this point people are not ready to buy new houses, they prefer to just rent out houses at this point. So nothing went wrong with that specific project. The construction was going well, you know everyone was working so well. You were achieving all the specific deadlines of that construction. But on a strategic level, on a

portfolio level that you know you are financial team has given you a forecast and.

在这一点上，人们还没有准备好购买新房，他们更愿意在这一点上出租房屋。所以这个特定的项目没有出错。施工进展顺利，你知道每个人都工作得很好。您正在实现该建设的所有特定期限。但是在战略层面上，在投资组合层面上，你知道你是财务团队已经给了你一个预测和。

They have realized that you have spent this much on it. That's an investment that you already made. But if you continue working on it and invest more, ultimately you might end up in a loss because of all these projects. So thanks for that example. So I hope that you know the difference between making tactical decisions and at a project level and strategic level decision at a portfolio level is more.

他们已经意识到你花了这么多钱。这是您已经进行的投资。但是，如果你继续努力并投入更多，最终你可能会因为所有这些项目而亏损。所以谢谢你的例子。因此，我希望您知道在项目层面做出战术决策和在投资组合层面做出战略层面决策之间的区别更大。

Clear now.

现在清除。

Alright, so that covers the.

好了，就这样了。

Syllabus content.

教学大纲内容。

Will.

将。

Be handling today and we'll move on to.

今天就处理，我们继续。

A bit more elaborate details of the module's assessment. So I gave you the grade split up last week. I think it didn't have dates in there.

更详细地介绍该模块的评估细节。所以我上周给了你成绩。我认为它没有日期。

Actually participation. I know I've written week 3 here, but you already started it. This comes towards.

实际参与。我知道我在这里写了第 3 周，但你已经开始了。这是为了。

Your active participation grade, so this won't be the only.

您的积极参与成绩，所以这不会是唯一的。

Activity that comes towards it, you will have more throughout the semester. 15 percentage of total grades will starting from this week you will have until the final lecture or the final tutorial midterm.

朝着它来的活动，你将在整个学期中拥有更多。从本周开始，您将有总成绩的 15%，直到期中最后一讲或最终辅导。

Group projects and final exam. We will look at each of this in detail. So.

小组项目和期末考试。我们将详细研究其中的每一个。所以。

Active participation. You already saw you already participated in one of those, so you have an idea of how it works. Some of them could be individual work. You I might create a discussion forum on bright space and ask you to participate in it and it might count towards the active participation.

积极参与。你已经看到你已经参加了其中之一，所以你对它是如何运作

的有所了解。其中一些可能是个人工作。你可能会在明亮的空间上创建一个讨论论坛，并邀请你参与其中，它可能会计入积极参与。

We might have offices during the lectures and tutorials and it's not every week.

在讲座和辅导期间，我们可能有办公室，但不是每周都有。

Like, but I won't announce in a two and six what happens in this week or that week, but so if it actually comes towards that, I'll before we start, I'll let you know. OK. This is actually part of the active participation.

就像，但我不会在二和六中宣布本周或那周会发生什么，但如果它真的朝着那个方向发展，我会在我们开始之前，我会让你知道。还行。这实际上是积极参与的一部分。

So not just lectures we have we will have tutorials as well which will be pre announced. So just making that clear. So we have laughs and tutorials in our timetable but.

因此，我们不仅有讲座，我们还将有教程，这些教程将预先宣布。所以只是把这一点说清楚。所以我们的时间表上有笑声和教程，但是。

We'll still maintain the contact hours we have in the timetable. So you will have two hours of lecture every week and the labs and tutorials are one hour each. So those two hours of contact hours we will still maintain, but may not be particularly for labs or tutorials in a conventional way. So you have a group project coming up and you have presentations for that. So we will be using the.

我们仍将保持时间表中的联系时间。因此，您每周将有两个小时的讲座，实验和教程各为一小时。因此，我们仍然会保留这两个小时的接触时间，但可能不是特别适用于常规方式的实验室或教程。所以你有一个小组项目即将到来，你有关于它的演示。因此，我们将使用。

Tutorial hours for your presentations as well, because we have so many groups and conducting them during the lectures is not feasible.

您的演讲的辅导时间也是如此，因为我们有这么多小组，在讲座期间进行这些小组是不可行的。

So moving on to group projects.

因此，继续进行小组项目。

So that's sort of your do as we learn kind of a project. So when I give you the spec initially some of the concepts in there might not be something that you learned already, but we learn it on the way and we will apply it so that you will be able to submit the final report on week 13. But the report is not just the.

所以这就是我们学习项目时所做的。因此，当我最初给你规范时，其中的一些概念可能还没有你学到的东西，但我们在途中学习了它，我们将应用它，以便你能够在第 13 周提交最终报告。但报告不仅仅是。

Components of the Globe project.

Globe 项目的组件。

It has a business case which will be due on week five or six and there will be a group presentation as well.

它有一个商业案例，将在第五周或第六周到期，并且还将有一个小组演示。

Which I think will span multiple weeks because we have a last class and.

我认为这将持续数周，因为我们还有最后一节课。

No matter how large a group we create, we are going to need at least

some ten groups or so.

无论我们创建多大的组，我们至少需要十个左右的组。

So yeah, presentations are going to happen in weeks seven and eight. Hopefully during the tutorial hours I'll.

所以，是的，演讲将在第七周和第八周进行。希望在教程期间我会。

Split slots and publish it online in a way that you can book the slots that your group wants to present your project fix on.

拆分插槽并在线发布，以便您可以预订您的团队想要展示您的项目修复的插槽。

So the basic idea would be.

所以基本的想法是。

You can pick any projects as a group.

您可以将任何项目作为一个组进行选择。

Could be something as small as running at Saturday football match to something as complex as.

可以是像在周六的足球比赛中跑步一样小的事情，也可以是像这样复杂的事情。

A spacecraft for space tourists. So sky is the limit because you're not actually implementing the project, but we will be applying the project management concepts that we learn towards the module in Edge to create a business case.

太空游客的航天器。所以天空是极限，因为你并没有真正实现项目，但我们会将我们学到的项目管理概念应用于 Edge 中的模块，以创建一个业务案例。

To do a project fix presentation and ultimately.

做一个项目修复演示，并最终。

Do a detailed report on the project.

对项目做一份详细的报告。

So it's gonna be a group project.

所以这将是一个小组项目。

And.

和。

So when I get the module, so the groups where.

所以当我拿到模块时，所以组在哪里。

Assigned randomly like with the groups where assigned by the lecturer themselves. So it definitely has its advantages. So it's.

随机分配，就像讲师自己分配的小组一样。所以它肯定有它的优势。原来如此。

Very straightforward process, but other than that these are many of you are here for like 4 year courses. Some of you are for two or one year courses, but at least for most of you at least this will be your second semester. So the people you are with.

非常简单的过程，但除此之外，你们中的许多人都在这里学习了 4 年的课程。你们中的一些人正在学习两年或一年的课程，但至少对你们中的大多数人来说，这将是你们的第二个学期。所以和你在一起的人。

But working with different people gives you a different exposure to people from.

但是与不同的人一起工作会让你接触到不同的人。

Different forces, and especially when it comes to something as.

不同的力量，尤其是当涉及到某事时。

Not domain specific as project management might help you get perspective from people from different domains.

不是特定于领域的，因为项目管理可以帮助您从来自不同领域的人那里获得观点。

Yes. How about if you've done a project with someone and you're very much aware the person cannot do the work even when.

是的。如果你和某人一起做过一个项目，并且你非常清楚这个人即使无法完成工作，那又如何呢？

That is indeed a possibility, and the answer that.

这确实是一种可能性，答案就是这样。

I give, it's my lecturers ask.

我给，这是我的讲师问的。

This is real life when you are in a company and you might end up with having AI mean nobody is.

当你在一家公司工作时，这就是现实生活，你最终可能会让人工智能意味着没有人。

Ask fear of competency like you are in the higher education institution and you are either masters or a bachelors course. So if you manage the projects properly if you have a good project manager.

问对能力的恐惧，就像你在高等教育机构里一样，你要么是硕士，要么

是学士课程。因此，如果您管理得当，如果您有一个好的项目经理。

I can see people already that is killing me expression. But we will decide. We will decide this in a very democratic way. I am just giving you.

我可以看到已经有人在杀死我的表情。但我们会决定的。我们将以非常民主的方式决定这一点。我只是给你。

You know the Atlanta's of both sides, so and also you will have a reflection in the end of the project where you quantify your contribution to the project. So if you think that you know in a group of 10 people but you had to manage most of the work by yourself if you feel that.

你知道双方的亚特兰大，所以你也会在项目结束时进行反思，量化你对项目的贡献。因此，如果你认为你知道在一个 10 人的小组中，但如果你觉得的话，你必须自己管理大部分工作。

You did 30% of the work. You can put in the reflection that you would.

你完成了 30% 的工作。你可以把你想要的反思放进去。

Get 30% of the work and you can actually so if you had to intervene and other people's work like know that section had some errors so I went in and collected that. So if you had such interventions in the group.

获得 30% 的工作，如果你不得不干预，你实际上可以这样做，而其他人的工作就像知道该部分有一些错误，所以我进去收集了它。因此，如果您在小组中进行了这样的干预。

Just quantify your work and if you worked on other sections that you didn't originally allocate for yourself, you can explain that as well. But like you said, if there is somebody who is doing 0 work, you don't have to wait till the final reflection or the final report, you can just.

只需量化您的工作，如果您从事了最初没有为自己分配的其他部分，您也可以解释一下。但就像你说的，如果有人在做 0 工作，你不必等到最后的反思或最终的报告，你可以。

Again, so we have the option of randomly assigning you to different groups, randomizer and do this and these are the advantages that you will have by doing that.

同样，我们可以选择将您随机分配到不同的组，随机化并执行此操作，这些是您这样做的优势。

But I am sure that the advantages of self assigned groups are going to outweigh those.

但我相信，自我分配的小组的优势将超过这些优势。

I couldn't have been. The Democratic just said that this is the project management way of doing this.

我不可能。民主党人只是说，这是这样做的项目管理方式。

Irrespective of who you get in your team, you should be able to manage it in a successful way because that's a learning outcome of project management this module, but.

无论你的团队中有谁，你都应该能够成功地管理它，因为这是本模块项目管理的学习成果，但是。

You guys coming from different courses?

你们来自不同的课程？

I realized that having people.

我意识到有人。

From different courses can create a lot of timetable clashes and.

从不同的课程可以产生很多时间表冲突和。

Drinking.

喝。

Especially finding that moment. Time for discussions and your.

尤其是找到那一刻。是时候讨论和你的了。

Especially the Project Fix presentation. Finding a time slot for that is going to be hard, I think by the words of voice itself, I think the answer is kind of clear, but you still gonna do it the democratic way. What was our website called?

尤其是 Project Fix 演示文稿。找到一个时间段会很困难，我认为从语音本身来看，我认为答案很清楚，但你仍然会以民主的方式去做。我们的网站叫什么名字？

Random means I'll randomly decide the group structures.

随机意味着我将随机决定组结构。

Student decided means you get to pick.

学生决定意味着你可以选择。

What did you do?

你做了什么？

Just.

只。

Why you want to do it randomly? I will give you the podium. So each week I'll announce if we have tutorials in the next week and next week, not this week. Week 3 will be having tutorials and we need to decide the time slot. We'll do that right now.

为什么要随机进行？我会给你讲台。因此，每周我都会宣布我们是否在下周和下周有教程，而不是本周。第 3 周将有教程，我们需要决定时间段。我们现在就这样做。

So I mean I have to listen to the majority. So what I'm going to do is so in prime space we have the option to so I think what was our class twice again I think 1.

所以我的意思是我必须听取大多数人的意见。所以我要做的是，在黄金空间，我们可以选择，所以我认为我们的班级又是两次，我想是 1.

Less than one thing, So we.

不到一件事，所以我们。

And decide that we you will always join that group. So have you had bright space groups in any of the other motors where you actually go in a number of years so.

并决定我们你将永远加入那个小组。那么，你有没有在几年内实际去过的任何其他电机中都有明亮的空间群。

I grade the ropes. The ropes will be empty. I want randomly assign anyone. Yet you will be given the option to discuss among yourself and join a specific group. So eight of you are deciding OK will be one group and you see a group in bright space which is empty, so you can just.

我给绳索分级。绳索将是空的。我想随机分配任何人。然而，您可以选择自己讨论并加入特定小组。所以你们八个人决定 OK 将是一个小组，你看到一个小组在明亮的空间里是空的，所以你可以。

All of you can just join that group so those who voted for random so you have the option to.

你们所有人都可以加入那个小组，所以那些随机投票的人，所以你可以选择。

Not to join any group, just remain unjoined and what happens is that once all these students.

不要加入任何团体，只是保持不加入，一旦所有这些学生。

Decided groups have been formed. I have the option to set the deadline for the group joining. So one that once that deadline is matched, everyone who having joined the group till then will be randomly assigned.

已经成立了决定的小组。我可以选择设置加入小组的截止日期。因此，一旦截止日期匹配，在此之前加入该小组的每个人都将被随机分配。

One of the other groups. So that's always a possibility that if six of you decided you will make a group, but the group capacity is 8, there's a chance that.

其他组之一。所以这总是有可能的，如果你们六个人决定组成一个小组，但小组容量是 8 人，就有可能。

Too hard to manage, but.

太难管理了，但是。

With this last size we need at least.

对于最后一个尺寸，我们至少需要。

The minimum has to be 8.

最小值必须为 8。

Till then, we'll have more than 12.

在那之前，我们将有超过 12 个。

So is that clear? The grouping thing clear. So I will create the groups on right space and make an announcement. The deadline will be short, so you want.

那么清楚吗？分组的事情很清楚。因此，我将在正确的空间创建群组并发布公告。截止日期会很短，所以你想要。

A group of people who that you have will have a good team. You start discussing and finalize that team or Delhi. So I might publish this today or tomorrow.

你拥有的一群人将拥有一支优秀的团队。你开始讨论并最终确定那个团队或德里。所以我可能会在今天或明天发表这篇文章。

So that's it about the.

就是这样。

Group, Project. The exact specifics.

组、项目。确切的细节。

I will give it to you on the way. So like I said, it's gonna be a do as we learn type of performance and it's not just one company that is gonna be a presentation as well.

我会在路上给你。所以就像我说的，这将是一个在我们学习绩效类型时做的事，而不仅仅是一家公司也会成为一个演示。

Along with the report, the return report and the return business case.

除了报告外，还有退货报告和退货业务案例。

So moving on to the other SO, any questions regarding how the grouping works 'cause the exact specifics. The spec I'm gonna be giving to you on a later date, probably week 4, but you know what we have discussed so far. Any questions on that? All good.

因此，继续讨论另一个 SO，任何关于分组如何工作的问题都会导致确切的细节。我将在晚些时候（可能是第 4 周）向您提供规范，但您知道我们到目前为止已经讨论过的内容。对此有疑问吗？都很好。

Midterms will be during last hours, probably week six or seven.

期中考试将在最后几个小时进行，可能是第六周或第七周。

Since tutorial hours are scattered and it's hard to find a specific tutor is slow, that would suit the entire class. We'll probably take half an hour of one of the lectures for that. It's gonna be multiple choice questions and some short answer questions.

由于辅导时间分散，很难找到特定的导师很慢，因此适合整个班级。为此，我们可能会花半个小时的讲座。这将是多项选择题和一些简答题。

I will share by week four. Also I will share one of the question papers from previous years as a sample.

我将在第四周分享。此外，我将分享前几年的一份试卷作为样本。

Final exam is going to be structured similarly with MCQS and short answer questions.

期末考试的结构将与 MCQS 和简答题类似。

But the only difference is it won't be in class. So I hope you have already, like all of you, had at least one exam done by the Academy registry. It would be during the exam weeks of.

但唯一的区别是它不会在课堂上。所以我希望你们和你们所有人一样，

已经至少参加了一次学院注册处的考试。这将是在考试期间。

Not week 13 but week 14 and 15. Am I right?

不是第 13 周，而是第 14 周和第 15 周。我说得对吗？

So structurally similar.

所以结构相似。

Just start. The final exam will be conducted by the Academy registry.

刚刚开始。期末考试将由学院注册处进行。

That's it about assessments and.

这就是关于评估和。

We have tutorials next week time slots. I will come to that. So as a preparation for that, do you remember the Chaos report that we talked about in the first lecture where they analyzed the success of IP projects in the United States and realized that software projects are in chaos?

我们下周有教程的时间段。我会来的。因此，作为准备，您还记得我们在第一讲中谈到的混沌报告吗，他们分析了美国知识产权项目的成功，并意识到软件项目处于混乱之中？

So it's gonna be a discussion based on that and the.

因此，这将是一个基于此的讨论。

Output would count towards your active participation rate. So it's gonna take place during week 3 tutorials, not this week, but week 3. And again, it doesn't mean that we will have tutorials.

输出将计入您的积极参与率。因此，它将在第 3 周的教程中进行，不是本周，而是第 3 周。再说一遍，这并不意味着我们会有教程。

From week 3 onwards, I am gonna announce it is like every prior week we have something but may not be tutorial per SE. Like I said it could be one of your group presentation, so some group project work.

从第 3 周开始，我将宣布，就像前一周我们都有一些东西，但可能不是每个 SE 的教程。就像我说的，这可能是你的小组演讲之一，所以一些小组项目工作。

No, the final thing to decide on the.

不，最后要决定的事情。

Tutorial Slots.

教程插槽。

This was the promotional list that I was given. But yeah, the total class size is probably somewhere close to one classroom.

这是我得到的促销名单。但是，是的，班级总规模可能接近一个教室。

So I went through all of your timetables, and.

所以我看了你所有的时间表，然后。

March.

三月。

3:00 to 4:00.

3：00至4：00。

Any of you who are sitting here, you have some other land, like your course has some other lab of one specific slot of that. But anyone who is here are you in that specific slot?

坐在这里的任何人，你都有其他的土地，就像你的课程有一个特定插槽的其他实验室一样。但是在座的任何人都在那个特定的插槽中吗？

Can you check your timetable now?

您现在可以查看您的时间表吗？

All of you are not going for that slot and if this is free for you, that would definitely.

你们所有人都不会去那个位置，如果这对你来说是免费的，那肯定会。

Makes life is easier to choose.

让生活更轻松选择。

Definitely. I think I just bring up your own table.

绝对。我想我只是提出你自己的桌子。

Alright, so anyone who's attending this module.

好了，所有参加这个模块的人。

All right.

好吧。

So this will be tutorials will be online Yeah so before you answer so if that's you're worried about.

所以这将是教程将在线，是的，所以在你回答之前，所以如果这是你担心的。

Tutorials by default will be online, but the presentations if you are doing the amount tutorial hours, of course they will be in person, but the tutorial that I am talking about including the one starting and happening

next week will be online so.

默认情况下，教程将是在线的，但是如果您正在进行大量的教程小时数，那么演示当然会亲自进行，但是我正在谈论的教程，包括下周开始和发生的教程，将是在线的。

Don't like that you have a timetable class just because you don't want to come to the campus package?

不喜欢你因为不想来校园套餐而有时间表课程吗？

They will be.

他们会的。

So I guess.

所以我猜。

None of you from computer systems don't you know, don't have a clash on this specific.

你们都不知道计算机系统，不要在这个细节上发生冲突。

You don't have a size constraint of the classrooms. You're still open to attending the other slot as well, so we're gonna do it.

您没有教室的大小限制。您仍然愿意参加其他时段，所以我们会这样做。

Thing is, we might be doing like it's gonna be mostly.

问题是，我们可能大部分时间都会这样做。

Would it be possible for you to do it on the?

你有可能做到吗？

So that's what I said. I'm not saying that know you're in computer system, you're supposed to attend the Friday one week, so.

这就是我说的。我不是说知道你在计算机系统中，你应该参加一个星期的星期五，所以。

I'll give you the option to switch on slot you want to go for. Since they're going to be online, classroom size is not an issue at all.

我会给你一个选项来打开你想去的插槽。由于他们将在线，因此教室大小根本不是问题。

So the other classes.

所以其他类。

I think there is nobody has an overlap that would.

我认为没有人会有重叠。

Limit you from attending either of the slots, so how it's gonna be structured as they're gonna be?

限制您参加任何一个时段，那么它将如何按照它们的方式构建呢？

Two of us, Lord. So one will be Tuesday 2:00 to 4:00 and the other will be, which was the class that we just checked was 122, right. So yeah, these will be the two tutorial slots and most of the time they may not take up the entire two hours. We might, based on what we are discussing, what we are doing that week.

主啊，我们两个人。所以一个是星期二 2：00 到 4：00，另一个是，我们刚刚检查的班级是 122，对吧。所以是的，这将是两个教程插槽，大多数时候它们可能不会占用整个两个小时。根据我们正在讨论的内容，我们可能会根据我们那一周在做什么。

Finish the whole thing.

完成整个过程。

Under one hour.

不到一小时。

You get the idea.

你明白了。

Finalize these types and make an announcement on flight space. But.

最终确定这些类型并发布有关飞行空间的公告。但。

So these are the slots.

所以这些是插槽。

Anyone who won't be able to attend either of these.

任何无法参加其中任何一个的人。

At least the first hour, if you have some glass on the second hour, we can manage something that's but a whole.

至少在第一个小时，如果你在第二个小时有一些玻璃杯，我们可以管理一些只是一个整体的东西。

All of you sitting here has a that, this or this feet. Yeah, perfectly so.

在座的各位都有一只那只脚，这只脚或这只脚。是的，完全如此。

Big. With that we can wrap up for today any questions

大。有了这个，我们可以总结今天的任何问题