[2024-01-29 10:03:55]:
Here to the other maybe when you come from.
这里到另一个，也许当你来自时。

[2024-01-29 10:04:30]:
What? France. OK. And you are a natural master student.
什么？法国。还行。而你是一个天生的硕士生。

[2024-01-29 10:04:36]:
Master in what?
掌握什么？

[2024-01-29 10:04:38]:
OK, great. OK. So I was not sure because we have had a number of courses granted diplomas, higher diplomas, etcetera, etcetera every now and then there are a couple of these people as well. So very welcome.
好的，太好了。还行。所以我不确定，因为我们有很多课程被授予文凭、高级文凭等，等等，时不时地也会有一些这样的人。非常欢迎。

[2024-01-29 10:04:53]:
So the challenge that we have is that.
因此，我们面临的挑战就是这样。

[2024-01-29 10:04:57]:
This is how could I say.
我怎么能这么说。

[2024-01-29 10:05:01]:
A group that should do very different things in reality. OK, so there is one program for the Bachelor of Students and a different one for the master students. Only the classes are only the lectures are put together. The Bachelor of Students. They also have laboratories. OK, so I looked online a couple of days ago and there was still three times on Tuesday when Thursday and Friday. OK, now I looked yesterday. The Friday has disappeared.
一个在现实中应该做非常不同的事情的团体。好的，所以有一个针对本科生的课程和一个针对硕士生的不同课程。只有课程，只有讲座放在一起。本科生。他们也有实验室。好的，所以我几天前在网上看了一下，周二周四和周五还有三次。好了，现在我昨天看了。星期五消失了。

[2024-01-29 10:05:32]:
So I don't know what that means, whether we have less students or whether just they found the bigger classes. OK, so.
所以我不知道这意味着什么，是我们的学生少了，还是他们找到了更大的班级。好的，所以。

[2024-01-29 10:05:44]:
And the master students, actually they only have these two hours and then for the rest of because they are big okay grown-ups, they should actually manage by themselves. OK, my experience. I thought everything so from.
而硕士生，其实他们只有这两个小时，剩下的时间，因为他们是大人，他们应该自己管理。好的，我的经验。我以为一切都是这样。

[2024-01-29 10:05:58]:
At university, first year, OK, a lot of first years, a lot of fourth years, a lot of masters. And I'm also teaching a couple of models through the PhD students. OK, my experience is that it is always good if there is somebody that you can talk to, even if you are a grown up master student, so to say, OK, So what we are going to have is actually that.

在大学里，第一年，好吧，很多第一年，很多第四年，很多硕士。我还通过博士生教授几个模型。好吧，我的经验是，如果有人可以和你交谈总是好的，即使你是一个成年的硕士生，所以可以说，好吧，所以我们将拥有的实际上是这样。

[2024-01-29 10:06:22]:
For the bachelor students, we are going to try to keep the times that are located OK and we have two very capable Tasmania that are that are associated with our course. You see their MacBook Rai and Sebastian toilet. OK, so starting in week 3, labs start. In reality there are not going to be labs because we are organizing the module a little bit differently and I'm going to explain you today what we are going to do and why.

对于本科生，我们将尽量保持时间正常，我们有两个非常有能力的塔斯马尼亚州，它们与我们的课程有关。你看到他们的MacBook Rai和Sebastian厕所。好的，从第 3 周开始，实验开始。实际上，不会有实验室，因为我们对模块的组织方式有点不同，我今天将向您解释我们将要做什么以及为什么。

[2024-01-29 10:06:52]:
So and we have basically they are also available to be conducted by the master students. And in reality you're going to see when you're going to go through the rules of the game that you actually have to conduct them. OK. This is out of experience. As I said, I've taught a number of years both in this master and in others etcetera, etcetera.

因此，我们基本上也可以由硕士生进行。在现实中，你会看到当你要通过游戏规则时，你实际上必须执行它们。还行。这是出于经验。正如我所说，我已经在这个大师和其他人等教过很多年了。

[2024-01-29 10:07:13]:
Could I say students attend to just postpone procrastinate, OK, what they have to do? And so if they have actually to meet somebody and basically there are a little bit of points connected with that.

我能不能说学生只是推迟拖延，好吧，他们必须做什么？因此，如果他们真的必须见到某人，基本上有一点与此相关的要点。

[2024-01-29 10:07:26]:
That's a good motivator, OK, In order to keep people not forgetting about this particular module of many particular modules, OK, until it is a very late time in the semester. And then they end up, you know, getting rates that are actually not corresponding to the three activities, right. So it's actually, in a certain sense of protection for you. OK. So what I wanted to do today is actually two things. First, explain to you a little bit who I am, what I do and what my life is to say here in UL. It's always good if you know who is the person that is standing in front of you and maybe a little bit how they think, OK.

这是一个很好的激励因素，好吧，为了让人们不会忘记许多特定模块中的这个特定模块，好吧，直到学期的很晚。然后他们最终得到的，你知道的，实际上与这三项活动不对应的费率，对吧。所以实际上，在某种意义上，这是对你的保护。还行。所以我今天想做的其实是两件事。首先，向你解释一下我是谁，我做什么，以及我在UL的生活要说什么。如果你知道站在你面前的人是谁，也许知道他们的想法，那总是好的，好吧。

[2024-01-29 10:08:04]:
The second point is basically to explain to you how we are organizing our work. OK, so.
第二点基本上是向你解释我们如何组织我们的工作。好的，所以。

[2024-01-29 10:08:11]:
Concerning cost management and boring things, OK.
关于成本管理和无聊的事情，好吧。

[2024-01-29 10:08:15]:
I'm seeing that the numbers are going up and down, etcetera, etcetera, all the time in the class list, OK. So please make sure that you register in the class for this course, OK. Whether it is CS, what is that 4227 for the bachelor students or CS5722, there's always the two, two and the seven, but they are the other way around, OK. It's very, very tricky.
我看到数字一直在上升和下降，等等，等等，一直在类列表中，好吧。因此，请确保您在课堂上注册了本课程，OK。无论是 CS，本科生的 4227 是什么，还是 CS5722，总是有二、二和七，但它们是相反的，好吧。这是非常非常棘手的。

[2024-01-29 10:08:40]:
You have to register, OK. Otherwise the people that I don't see at the end of the semester and they are closing it in a couple of days, right? The people that I don't see there, they don't exist for me. I cannot register a grade. OK. So because you are all in reality graduating students, it's not that you have many repair strategies or whatever. OK. So that's very important. Please register in the module. OK.
你必须注册，好吧，否则我在学期末看不到的人，他们会在几天内关闭它，对吧？我在那里看不到的人，他们对我来说不存在。我无法注册成绩。还行。所以因为你们实际上都是即将毕业的学生，所以并不是说你们有很多修复策略或其他什么。还行。所以这非常重要。请在模块中注册。还行。

[2024-01-29 10:09:09]:
Try also to do it now if you have access or whatever, as long as we pay attention to what I'm doing and not watching tick tock or whatever other interesting things that happen.
如果您有访问权限或其他什么，现在也尝试这样做，只要我们注意我在做什么，而不是看滴答声或发生的任何其他有趣的事情。

[2024-01-29 10:09:21]:
OK. So this is the first important thing. And then the other things we're going to say. Then later I will just start a little bit with the public with the presentation.
还行。所以这是第一件重要的事情。然后是我们要说的其他事情。然后稍后，我将从公众的演讲中开始一点点。

[2024-01-29 10:09:34]:
Just to tell you who I am and what we are doing. OK, so and this one.
只是为了告诉你我是谁，我们在做什么。好的，所以和这个。

[2024-01-29 10:09:41]:
As you probably have recognized by pattern matching, very important in machine learning and AI.
正如您可能已经通过模式匹配所认识到的那样，这在机器学习和人工智能中非常重要。

[2024-01-29 10:09:48]:
And I'm the proud mummy or project leader, so to say, probably the largest project that has ever been associated with a single investigator, single principal investigator in Ireland in software engineering, it is called Raise. It was originally called the research at ISE because you may have heard that there is this immersive software engineering program that is completely different.
我是骄傲的木乃伊或项目负责人，可以这么说，可能是有史以来最大的项目 与爱尔兰软件工程领域的单一研究者、单一首席研究者相关的项目，它被称为 Raise。它最初被称为ISE的研究，因为您可能听说过这种完全不同的沉浸式软件工程程序。

[2024-01-29 10:10:12]:
And blah, blah, blah. And it is Co founded by the collizons and animal devices and all these kind of people, right. OK, so I'm the mummy of that program as well. OK. So I spent the last four years in my life basically setting it up. I was the first cons, director, etcetera, etcetera.
等等，等等，等等。它是由 collizons 和动物装置以及所有这些人共同创立的，对吧。好吧，所以我也是那个程序的木乃伊。还行。所以我花了我生命中的最后四年 基本上是在设置它。我是第一个缺点，导演，等等，等等。

[2024-01-29 10:10:29]:
I gave up the course directorship to the guy that was having actually this module last year, so he has that hot potato. OK, so he swapped off the potatoes in the second sentence right here, juggling the two, the two groups of you, OK?
我把课程主任的职位让给了去年真正有这个模块的人，所以他有那个烫手山芋。好吧，所以他把第二句话中的土豆换掉了，把你们两组人玩弄得一团糟，好吗？

[2024-01-29 10:10:43]:
And the project basically is.
这个项目基本上是。

[2024-01-29 10:10:48]:
It is connected with IAC because of the funding companies you, I mean, so we've got about 2 million in cash so to say from Stripe, which the colleagues on Sierra are like top stars, it's worse than to say other devices. That is a happened development company that has been around for 40 years or more. They were my heroes when I was an electrical engineer. That's how I started in Italy. OK.
它与IAC有联系，因为你的资助公司，我的意思是，所以我们从Stripe那里得到了大约200万现金，Sierra的同事就像顶级明星一样，这比说其他设备更糟糕。这是一家已经存在了 40 年或更长时间的开发公司。当我还是一名电气工程师时，他们是我的英雄。我就是这样开始在意大利的。还行。

[2024-01-29 10:11:12]:
And now, OK, having them here and having a partnership with them is really great. OK. Johnson and Johnson them probably because they do a lot of shampoos and all these other nice things. They are also the producers of 90.8% of the contact lenses in the world right around here around the corner. They have a number of companies that are doing serious pharma. So you may have heard of it, Johnson and Johnson COVID vaccine or something like that, but that's not the first thing that they do that is.
现在，好吧，有他们在这里并与他们建立伙伴关系真的很棒。强生，可能是因为他们做了很多洗发水和所有其他好东西。他们也是世界上90.8%的隐形眼镜的生产商。他们有许多公司正在做严肃的制药公司。所以你可能听说过，强生 COVID 疫苗或类似的东西，但这不是他们做的第一件事。

[2024-01-29 10:11:42]:
Pretty in the news, OK.
新闻中很漂亮，好吧。

[2024-01-29 10:11:43]:
Have a huge pharmaceutical hub in Cork, the Queen and other other different brand names. OK. So for example, the lenses are called the Vista Com, the company is called Vista Contact. It belongs to the Johnson and Johnson group. OK. So they do in reality a lot of high precision manufacturing, a lot of high precision chemistry with pharmaceuticals and these kind of things. And so whenever you hear high precision and something, you can basically imagine immediately regulated industry, OK.
在科克（Cork），皇后（Queen）和其他不同品牌拥有巨大的制药中心。还行。例如，镜头被称为 Vista Com，该公司被称为Vista Contact。它属于强生集团。还行。所以他们在现实中做了很多高精度的制造，很多高精度的化学与制药和类似的事情。所以每当你听到高精度之类的东西时，你基本上可以想象立即受到监管的行业，好吧。

[2024-01-29 10:12:14]:
So everything that they do needs to be checked.
因此，他们所做的一切都需要检查。

[2024-01-29 10:12:17]:
According to standards, worldwide standards, et cetera, et cetera. Even if they produce in Ireland, obviously they are selling everywhere And so they have to be approved under regulations to say everywhere, OK. So for them, anything that has to do with the products, including the air that is in the rooms, OK, needs to be monitored and needs to be at really high quality, OK.
根据标准，世界标准等，等等。即使他们在爱尔兰生产，显然他们也到处销售，所以他们必须根据法规获得批准才能到处说，好吧。所以对他们来说，任何与产品有关的东西，包括房间里的空气，好吧，都需要监控，需要非常高质量，好吧。

[2024-01-29 10:12:42]:
These guys, they do sensors.
这些家伙，他们做传感器。

[2024-01-29 10:12:46]:
OK. They are the ones that have sent sensors on Mars. So the sensors that are on the robot that is sitting on Mars and going around and making pictures or whatever, that's other devices stuff, OK. The people that are doing software for that kind of stuff, are the people in JPL OK, in Pasadena, best friends, OK, we've been working together for 30 years. OK, so my background in reality is system design, system development, hardware, software, putting them together.
还行。他们是那些在火星上发送传感器的人。所以坐在火星上的机器人上的传感器，四处走动，拍照片什么的，这是其他设备的东西，好吧。那些为这类东西做软件的人，是JPL的人，好吧，在帕萨迪纳，最好的朋友，好吧，我们已经一起工作了30年。好的，所以我在现实中的背景是系统设计、系统开发、硬件、软件，把它们放在一起。

[2024-01-29 10:13:16]:
Cooking a little bit of salt, some teriyaki or something like that, and then voila, OK for the regulator. That's the kind of work that I've been doing for 35 years plus, OK, I'm approaching the 60, I started with 24. Do the maths. OK, so the cool thing is that the rules of the game.

煮一点盐，一些照烧或类似的东西，然后瞧，对监管机构来说没问题。这就是我35年来一直在做的工作，好吧，我快60岁了，我从24岁开始。算一算。好吧，所以很酷的事情是游戏规则。

[2024-01-29 10:13:38]:
Have not changed very much over that time. It is always delivering complex products that are becoming more and more complex connected products. They are going to talk to each other much more, OK, with the Internet, Internet of Things, industrial Internet of Things etcetera, etcetera. Guess what we are doing with these guys and with those guys and with more guys etcetera.
在那段时间里没有太大变化。它总是提供复杂的产品，这些产品变得越来越复杂的互联产品。他们将更多地相互交谈，好吧，互联网，物联网，工业物联网等。猜猜我们对这些家伙、那些家伙和更多的家伙在做什么等等。

[2024-01-29 10:14:01]:
There is always money going around.
总是有钱在流。

[2024-01-29 10:14:03]:
Here it is. OK. Financial sector, that's also very, very important. You don't want to send money to somebody and then it goes to the pockets of somebody else and they tell you, oh, the AI was a 65% correct. You are in the other 35.
在这里。金融部门，这也非常非常重要。你不想把钱寄给别人，然后钱就到了别人的口袋里，他们告诉你，哦，人工智能是65%正确的。你在另外 35 个。

[2024-01-29 10:14:18]:
Good luck. OK. You don't want to have that. OK. So we are again in another regulator industry and whenever there is something that is shipped around, OK.
祝你好运。还行。你不想拥有它。还行。因此，我们再次处于另一个监管机构行业，每当有东西被运走时，好吧。

[2024-01-29 10:14:29]:
That's called logistics. It is transportation. That's also a regulated industry for two reasons. One, first of all, it is something that is rolling on.
这就是所谓的物流。这是交通工具。这也是一个受监管的行业，原因有两个。第一，首先，这是正在滚动的东西。

[2024-01-29 10:14:38]:
Cars with cars or with trucks, so to say, it's rolling on the roads or in the skies or in the sea. OK. So there is all the transportation regulation and safety for the passengers and for the cargo, for the environment that applies there. OK. And the second thing, they may actually be transporting things that have certain characteristics.
汽车与汽车或卡车，可以说，它在道路上、天空或大海中滚动。还行。因此，对于乘客和货物，以及适用于那里的环境，都有所有的运输法规和安全。还行。第二件事，他们实际上可能正在运输具有某些特征的东西。

[2024-01-29 10:14:59]:
First of all, they cannot be tampered with, OK. You don't want to have substitution. You don't want to have couriers that are smuggling drugs and looking at Gomorrah right now. So that's

what they're what they're doing at the moment, OK. In the movie, in Netflix. OK, So you don't want to have that. You don't want to have the conditions of transportation to be improper. OK. The funny thing is that I was working with one of the biggest blood banks in Germany when I was in Germany, OK? I've been here for 10 years. Before I was 25 years in Germany.

首先，它们不能被篡改，好吧。你不想被替换。你不想让快递员走私毒品，现在看着蛾摩拉。所以这就是他们现在正在做的事情，好吧。在电影中，在Netflix中。好吧，所以你不想拥有它。您不希望运输条件不合适。还行。有趣的是，当我在德国时，我正在与德国最大的血库之一合作，好吗？我在这里已经10年了。在我25岁之前，我在德国生活了。

[2024-01-29 10:15:31]:
And they had the problem of refrigeration.
他们有制冷问题。

[2024-01-29 10:15:34]:
Not interrupting the chain of cold. Right. Which was in common with another reproducer of Italian ice cream. They had the same problem. In one case the ice cream goes, goes bad, OK, it is a crystal crystallizes in a certain sense. In the other case you are bringing actually things that have to be called and it was both blood and also transportation of organs for transplant. OK, that was another one. Guess what, a couple of years ago it came with the problem that the international fridge.

不打断寒冷的链条。右。这与意大利冰淇淋的另一个复制品相同。他们有同样的问题。在一种情况下，冰淇淋变质了，好吧，它在某种意义上是晶体结晶。在另一种情况下，你带来的实际上是必须调用的东西，它既是血液，也是移植器官的运输。好吧，那是另一个。你猜怎么着，几年前它出现了国际冰箱的问题。

[2024-01-29 10:16:07]:
Categories or so to say.
类别可以这么说。

[2024-01-29 10:16:09]:
Upgraded to -70° because the first generation of the COVID vaccine neither the cold, a level of cold, it was cold, the coldest cold that they actually had in place. Right. So all these kind of things you would say, OK, so that's a bridge, that's a, that's a truck, it's an injection something. It is another kind of machine or whatever, right. Or it is a bureaucracy. Yeah. And guess what it runs on.

升级到-70°，因为第一代COVID疫苗既没有感冒，也没有感冒，而是感冒，是他们实际拥有的最冷的感冒。右。所以所有这些事情你都会说，好吧，这是一座桥，那是一辆卡车，这是一件注入的东西。它是另一种机器或其他什么，对吧。或者它是一个官僚机构。是的。猜猜它在什么上运行。

[2024-01-29 10:16:39]:
Software. So the problem that you have in all these cases is that you have a gazillion of different actors. Each one is responsible for the little part and they are all connected, OK, through the fact that they are a chain or a lamp, a ring so to say, in a chain of responsibilities. It's called the supply chain. And it exists also for information. There is also information logistics. There is not just track logistics, so to say.

软件。因此，在所有这些情况下，你遇到的问题是你有无数不同的参与者。每个人都对小部分负责，它们都是相互联系的，好吧，因为它们是一条链子或一盏灯，可以说是一环，在责任链中。这就是所谓的供应链。它的存在也是为了提供信息。还有信息物流。可以这么说，不仅仅是轨道物流。

[2024-01-29 10:17:08]:
So that basically whatever somebody programs here.
所以基本上，无论有人在这里编程什么。

[2024-01-29 10:17:12]:
Including their mistakes. Including their assumptions. The hidden assumptions that they don't know that they made the assumption. OK, oh, but nobody writes that. Do you know that your parameter that is coming in is not going to be below 0? OK.
包括他们的错误。包括他们的假设。隐藏的假设，他们不知道他们做出了假设。好吧，哦，但没有人写。您知道传入的参数不会低于 0 吗？还行。

[2024-01-29 10:17:27]:
Zero. Exactly. Let me divide by that. And then you get just enough through an X, an error and it is not caught anywhere. And you say Are you sure that you are talking about the same units, One of the biggest problems that happened in the first.
零。完全。让我按此划分。然后你通过一个 X 得到足够多的东西，一个错误，它不会在任何地方被发现。你说你确定你说的是相同的单位吗，这是第一个发生的最大问题之一。

[2024-01-29 10:17:43]:
Rockets, so to say the percent out is that they were codesigned by British people and American people and some had feet per second and the other had kilometers per second or whatever it was so to say. So that the measurements they were not fitting or other good thing, always Fahrenheit and Celsius. That's another classic. So to say, OK Oh yeah, you have to put it 100 sixty 565 it's going to boil. No, it is not that hot. OK.
火箭，可以这么说，它们是英国人和美国人共同设计的，有些是每秒英尺，有些是每秒公里，或者其他什么。因此，测量值不合适或其他好东西，总是华氏度和摄氏度。这是另一个经典。所以说，好吧，哦，是的，你必须把它放在 100 60 565 它会沸腾。不，它不是那么热。还行。

[2024-01-29 10:18:12]:
So that's basically the kind of stuff that basically goes down into the software and managing larger software, large collaborative software projects from people that are independent of each other, that may be by regulation. They cannot tell each other how they're doing things. They can only tell this is what they get. This is what you get, OK, I get the ingredients, so to say, I cook them and you get the cooked ingredients back, OK.
所以这基本上是那种基本上进入软件并管理更大的软件的东西，大型协作软件项目，这些项目来自彼此独立的人，这可能是受监管的。他们无法告诉对方他们是如何做事的。他们只能说这就是他们得到的。这就是你得到的，好吧，我得到了食材，可以这么说，我煮了它们，你把煮熟的食材拿回来了，好吧。

[2024-01-29 10:18:44]:
And you need to have levels of description, levels of information, OK, that preserve this kind of transparency of what you get at the interface. OK And opaqueness of what is happening inside. But with such a level of characteristics, such a level of checkability, OK, that if you change a little bit of this thing that is happening inside OK, you can still guarantee that what you, what you see at the interface is going to be exactly the same that you had before.
你需要有描述的层次，信息的层次，好吧，保持你在界面上得到的这种透明度。好的，里面发生的事情不透明。但是有了这样程度的特征，这样程度的可检查性，好吧，如果你稍微改变一下里面发生的事情，你仍然可以保证你，你在界面上看到的将与你以前看到的完全相同。

[2024-01-29 10:19:15]:
OK.
还行。

[2024-01-29 10:19:17]:
So in order to cut it short, OK, there are a number of methods that have been developed for system development like layers, architecture, et cetera, et cetera, for the languages and the characteristics of the languages that you use in order to program something.
因此，为了缩短时间，好吧，已经为系统开发开发了许多方法，例如层，体系结构等，等等，用于语言和语言的特征，以便进行编程。

[2024-01-29 10:19:35]:
Languages and mechanisms for expressing properties OK, Like it never goes below, above, so to say -70 Celsius, OK Or if I have paid, I want to be sure that they also get the goods, not that I paid and then I don't get the goods.
表达属性的语言和机制 好的，就像它永远不会低于，高于，所以说 -70 摄氏度，好吧 或者如果我付了钱，我想确保他们也拿到了货，而不是我付了钱，然后我就没拿到货了。

[2024-01-29 10:19:56]:
OK. Or these kind of things. So contracts in other words and properties that are at the core of regulation, at the core of good business, at the core of any kind of specification that you imagine, OK, that are written in such languages. So that we with algorithms you can actually check them automatically on models that you either produce of the system or of the code or you extract from the system and of the code. Unfortunately, we are very much in the second version people hack, OK And then we find out what is in there. OK.
还行。或者诸如此类的事情。因此，换句话说，合同和财产是监管的核心，是良好商业的核心，是你想象的任何一种规范的核心，好吧，这些都是用这种语言编写的。因此，我们通过算法，实际上可以在系统或代码生成的模型上自动检查它们，或者从系统和代码中提取模型。不幸的是，我们非常在第二个版本中人们破解，好吧，然后我们发现那里有什么。还行。

[2024-01-29 10:20:30]:
Very nice. It's almost like a party game, only that it is called the Professional software development OK, and you find it out by doing testing. Testing OK and testing can never be exhaustive, so you will never have a proof for certain levels, so to say, of Software Assurance.
很好。它几乎就像一个派对游戏，只是它被称为专业软件开发OK，你通过测试来发现它。测试正常和测试永远不可能是详尽无遗的，因此你永远不会有某些级别的证明，可以说是软件保障。

[2024-01-29 10:20:49]:
It's a high assurance system, so to say. That's American lingo, the Department of Defence. So to say. That's not enough. Oh, I tested. Yeah. Who tells me that you didn't forget one case? That is important. OK. How can you guarantee that it is exhausted? You can't. OK, so the kind of technologies that have been developed.
可以这么说，这是一个高度保证的系统。这是美国的行话，国防部。可以这么说。这还不够。哦，我测试了。是的。谁告诉我你没有忘记一个案例？这很重要。还行。你怎么能保证它已经用完了？你不能。好的，所以已经开发的技术类型。

[2024-01-29 10:21:07]:
Number of years, so to say, had to do with a combination of kind of specific kind of software architecture, a specific way of describing components, a specific way of implementing the

components so that they implement a certain interface that you can describe and each description of the interfaces so that you have more information than just. This is an integer. Yeah, this is an integer and it happens to be 3 per second or it happens to be KMH. OK, this is an age. It's very different from.

可以说，年数与某种特定类型的软件架构、描述组件的特定方式、实现组件的特定方式（以便它们实现您可以描述的特定接口）以及接口的每个描述的组合有关，以便您拥有更多信息，而不仅仅是。这是一个整数。是的，这是一个整数，它恰好是每秒 3 个，或者它恰好是 KMH。 好吧，这是一个年龄。这与此大不相同。

[2024-01-29 10:21:37]:
A score of some game somewhere else, right? Yeah. Integers. Yes, of course.
在其他地方的某个游戏的分数，对吧？是的。整数。是的，当然。

[2024-01-29 10:21:42]:
But there is integer an integer there is a different meaning, right? So going to the semantic level as we call it, OK and having.
但是有整数，整数有不同的含义，对吧？因此，进入我们所说的语义层面，OK 和 haveing。

[2024-01-29 10:21:51]:
Methods, so to say, for given a set of properties, check it on a given system or a given set of systems. And when you change something here you have to recheck and these systems that are checking, so to say if you're really lucky, are going to spit out information that it also tells you what is wrong with. Which part of the formula is not satisfied. Where is the problem? Where is the location OK.
方法可以说，对于给定的一组属性，在给定系统或给定系统集上检查它。当你在这里改变一些东西时，你必须重新检查，这些正在检查的系统，可以这么说，如果你真的很幸运，会吐出信息，它也会告诉你哪里出了问题。公式的哪一部分不满足。问题出在哪里？位置在哪里OK。

[2024-01-29 10:22:16]:
So that's basically the background. OK, what happened? Is that with ISE OK.
所以这基本上就是背景。好吧，发生了什么？ISE可以吗？

[2024-01-29 10:22:23]:
We convinced a couple of companies OK to give us money for doing a big research project, which is the one that started officially last year but it is kicking off in reality now. OK, which of the project leader it is about? The local no code software development and not just the software development, but the development of a platform.
我们说服了几家公司，同意给我们钱做一个大型研究项目，这个项目是去年正式开始的，但现在它正在现实中启动。好的，这是关于哪个项目负责人的？本地无代码软件开发，而不仅仅是软件开发，而是一个平台的开发。

[2024-01-29 10:22:45]:
For software development, So if you know Eclipse, have you ever used Eclipse? That's an IDE, Integrated development environment. OK, so we are developing integrated modeling environments where we create models for which we know that they are model checkable. OK, so that this game with the algorithms work OK, from which we generate the code. OK, so the code is not anymore something that you write by hand, like you're not flowing by hand anymore. You normally use a machine unless it is a very tiny little orchard and you call it a hobby.

对于软件开发，如果你了解 Eclipse，你用过 Eclipse 吗？这是一个 IDE，集成开发环境。好的，我们正在开发集成建模环境，在其中我们创建我们知道它们是模型可检查的模型。好的，这样这个带有算法的游戏就可以正常工作，我们从中生成代码。好的，所以代码不再是你手写的东西，就像你不再手写一样。你通常使用一台机器，除非它是一个非常小的小果园，你称之为爱好。

[2024-01-29 10:23:19]:
OK, normally you have a tractor that is doing the heavy work. Tractor is called for us model to code compile. OK. The model to code compiler is also code. Guess how it is developed, it is modeled and then there is a compiler that is compiling that code. OK, so that you also have the compiler that is actually checked and checkable. OK, so in that way we want to actually create a local no code because models are easier to understand than programs.

好吧，通常你有一台拖拉机在做繁重的工作。拖拉机被调用为我们建模进行代码编译。还行。模型到代码编译器也是代码。猜猜它是如何开发的，它是建模的，然后有一个编译器正在编译该代码。好的，这样你也就拥有了实际检查和可检查的编译器。好吧，这样我们就想创建一个本地的无代码，因为模型比程序更容易理解。

[2024-01-29 10:23:49]:
If you don't know the programming language, you are basically in the situation of having somebody that is speaking Chinese to you. And unless it is a few of you who have learned it, and in this room it is a relatively few, then everybody else has a problem. OK, so if you have something in Haskell and you have never seen Husker and you are adjusting like Python Hacker or something like that, you are going to have a problem. If you are a medical doctor, you are going to have a bigger problem. If you are, you know, a teacher that is not teaching that historian. I have a fantastic project with historians for example.

如果你不懂编程语言，你基本上处于有人对你说中文的情况。除非你们中的少数人学会了它，而且在这个房间里是相对较少的，否则其他人都有问题。好吧，如果你在 Haskell 中有一些东西，但你从未见过 Husker，并且你正在像 Python Hacker 或类似的东西一样进行调整，你就会遇到问题。如果你是一名医生，你会遇到更大的问题。如果你是一个老师，你知道，不是在教那个历史学家。例如，我与历史学家有一个很棒的项目。

[2024-01-29 10:24:20]:
What I have designed OK that's going to be wasn't laughing to you OK?
我设计的东西，好吧，那不是笑给你的，好吗？

[2024-01-29 10:24:26]:
So the idea is basically to use models so that the low code means you're programming the body, so to say, of certain function and components. That's of course programmed, but it is so small that you can basically check it, OK. And then the combination is going to be a Lego game, OK, at the model level and the structures that are there are small enough that you can do the same game with the properties and with the checking that I mentioned before. So it's sort of a dividing company. You're still programming. That's the local part, OK.

因此，这个想法基本上是使用模型，以便低代码意味着您正在对某些功能和组件的主体进行编程。这当然是编程的，但它太小了，你基本上可以检查它，好吧。然后这个组合将是一个乐高游戏，好吧，在模型级别，那里的结构足够小，你可以用我之前提到的属性和检查来做同样的游戏。所以它有点像一个分裂的公司。你还在编程。这是本地部分，好吧。

[2024-01-29 10:24:59]:
But in very well defined small chunks.
但是在非常明确的小块中。

[2024-01-29 10:25:03]:
OK. And then these are very well described so that you basically can give them in the hands of users that may not even be able to code, but they know what they're talking about. OK. And so they know that for example, for this kind of cell biology problem, they need to have Atma representation of the teeth and not another representation of the thief, but what is inside. OK. So that's all the kind of stuff. So this raise problem, so to say. This range project basically is doing that. We are creating a new.

还行。然后这些被很好地描述，这样你基本上就可以把它们交给那些甚至可能不会编码的用户，但他们知道他们在说什么。还行。所以他们知道，例如，对于这种细胞生物学问题，他们需要用阿特玛表示牙齿，而不是小偷的另一个表示，而是里面的东西。还行。所以这就是所有的东西。所以这引发了问题，可以这么说。这个范围项目基本上就是这样做的。我们正在创建一个新的。

[2024-01-29 10:25:35]:
Development environment Cloud based OK for this local development.

开发环境 基于云的 OK 用于此本地开发。

[2024-01-29 10:25:40]:
That assumes a certain kind of architecture which is a combination of microservices.

这假设了某种架构，即微服务的组合。

[2024-01-29 10:25:46]:
And other, let's say nice characteristics and that a model, service oriented architecture, blah blah blah. OK, so that we can do formal verification at all the stages so to say of these artifacts which is not normal today. OK, so.

而其他的，让我们说一个很好的特性，一个模型，面向服务的架构，等等等等。好的，这样我们就可以在所有阶段进行形式验证，可以说这些工件在今天是不正常的。好的，所以。

[2024-01-29 10:26:04]:
The kings and Queens of this is basically myself mostly. The 2nd gentleman is Mike Inchi, he's a professor.

这其中的国王和王后基本上主要是我自己。第二位绅士是Mike Inchi，他是一名教授。

[2024-01-29 10:26:12]:
The most of the students who know him, OK, so that guy.

大多数认识他的学生，好吧，所以那个家伙。

[2024-01-29 10:26:15]:
He may have told you that he was a big guru at NASA, etcetera, etcetera. OK. So from that time, we got to know each other because my friends in JTL were working with him. OK, Then there is another professor that has been added. Now it is the Dean of the KBS, Murphy, because he's a king of analytics and we need to also do some analytics in there. OK. So he's fresh.

他可能告诉过你，他是美国宇航局的一位大大师，等等。还行。所以从那时起，我们就认识了，因为我在JTL的朋友和他一起工作。好的，然后又增加了一位教授。现在是KBS的院长墨菲，因为他是分析之王，我们也需要在那里做一些分析。还行。所以他很新鲜。

[2024-01-29 10:26:39]:

So inside is now in associate professor. It used to be a lecturer so to say in ISC. He worked with me when he was a post doc and then he was away from by the people in a clone. They wanted to have him OK and then Limerick got him back.

所以里面现在是副教授。可以这么说，它曾经是 ISC 的讲师。当他还是博士后时，他和我一起工作，然后他离开了克隆人。他们想让他没事，然后利默里克把他找回来了。

[2024-01-29 10:26:54]:
So we recovered him and so now he's teaching in ISC. But the next time that we are going to see each other, we are not going to see each other because he's going actually to give a lecture on the NBC pattern, OK, architectural pattern. This is my experience of the architectures. So he often actually to participate and then these two nice ladies are Lady Kerry Crowley that does.

所以我们找回了他，所以现在他在国际学习中心任教。但是下次我们见面时，我们不会再见面了，因为他实际上要讲NBC模式，好吧，架构模式。这是我对架构的体验。所以他经常参加，然后这两位漂亮的女士是克里·克劳利夫人。

[2024-01-29 10:27:17]:
So user interfaces, et cetera. Especially if you're working with graphical systems, graphical modeling with users that are not programmers, you need to have a very.

所以用户界面等。特别是如果你正在使用图形系统，与非程序员的用户进行图形建模，你需要有一个非常。

[2024-01-29 10:27:28]:
Tight intuition in the sense that what people think that an icon or a symbol so to say signifies is also what it really does. OK, so they don't just make nonsense just because they don't understand the presentation. And Machine Lions is sourcing the KBS. She is more for the education and the EP part.

从某种意义上说，人们认为一个图标或符号所表示的意义也是它真正起作用的。好吧，所以他们不会仅仅因为他们不理解演示文稿而胡说八道。Machine Lions 正在采购 KBS。她更倾向于教育和EP部分。

[2024-01-29 10:27:52]:
Because we are going to create courses about this and this is going to be an open source.

因为我们将创建有关此的课程，这将是一个开源的。

[2024-01-29 10:27:58]:
System. OK. And we are going to have an education platform, OK. So this is basically.

系统。还行。我们将有一个教育平台，好吧。所以这基本上是。

[2024-01-29 10:28:05]:
What I'm going to do in the next years, and because there is a lot of architecture there, I got the joy, OK, of getting out at this point. So I wanted to tell you a little bit how this is organized so that you get an idea what that means. Right. So.

我接下来要做什么，因为那里有很多建筑，我很高兴能在这一点上走出去。所以我想告诉你们一些组织方式，以便你们了解这意味着什么。右。所以。

[2024-01-29 10:28:21]:
What happens is that typically people have.

发生的事情是，人们通常会这样做。

[2024-01-29 10:28:27]:
The equivalent of Eclipse or similar similar IDs OK, in order to write code, what we are using instead is this kind of tools like, etc etc. They are themselves model driven OK, so you have a graphical way of putting together things OK, like a components based and connecting things OK.
相当于 Eclipse 或类似的类似 ID OK，为了编写代码，我们使用的是这种工具，例如等等。它们本身是模型驱动的OK，所以你有一种图形化的方式来把事情组合在一起，就像基于组件和连接OK的东西一样。

[2024-01-29 10:28:53]:
They are themselves, however, not hand program.
然而，它们本身不是手工程序。

[2024-01-29 10:28:57]:
We are formal Methodists and we know very well about programming languages. And some of you are learning now about programming languages. I think the students after me, they have Jim Buckley that is going to teach you programming languages. OK. So what he's doing is basically the Kingdom of my husband, OK, who is a professor for programming languages and so he's the king of dialysis, right. So all these Ides that we are using, they are not programmed by hand.
我们是正式的卫理公会教徒，我们非常了解编程语言。你们中的一些人现在正在学习编程语言。我想在我之后的学生，他们有Jim Buckley，他会教你编程语言。还行。所以他所做的基本上是我丈夫的王国，好吧，他是编程语言的教授，所以他是透析之王，对吧。因此，我们正在使用的所有这些Ides，它们都不是手动编程的。

[2024-01-29 10:29:27]:
But they are generated.
但它们是生成的。

[2024-01-29 10:29:29]:
From higher level specifications that are basically just saying, OK, what kind of models do you want to have, what are their mathematical properties and how do they look like?
从更高层次的规范来看，基本上只是说，好吧，你想要什么样的模型，它们的数学性质是什么，它们是什么样子的？

[2024-01-29 10:29:40]:
Model view control, by the way, okay. So there is a system that is a higher level system called Cinco because it is the fifth generation in our life of doing these kind of things.
顺便说一句，模型视图控制，好吧。所以有一个系统，是一个更高层次的系统，叫做Cinco，因为它是我们生命中做这些事情的第五代。

[2024-01-29 10:29:52]:
From which we when we write the description of the ideas that we want to have OK and then they are combined out. So you get the code of League which is for CICD pipelines for continuous integration, continuous development for example Opyros which is an environment for that analytics.
当我们写下我们想要的想法的描述时，我们从中可以，然后将它们组合出来。因此，您可以获得 League 的代码，该代码用于 CICD 管道，用于持续集成、持续开发，例如 Opyros，它是该分析的环境。

[2024-01-29 10:30:12]:
Database data flow orientation or DIME, which is the old version that we had of our integrated domain specific integrated modeling environment. OK, they're called is generated. If you find a mistake, so to say, we can go to the rules and change the rules so to say regenerate the code and now all the instances of the rigor whatever it is are going to have the new version. OK, So what we use for modeling this.

面向数据库数据流或 DIME，这是我们的集成域特定集成建模环境的旧版本。好的，它们被称为生成。如果你发现一个错误，可以这么说，我们可以去规则并改变规则，比如重新生成代码，现在所有的严格实例，无论它是什么，都会有新版本。好的，那么我们用它来建模。

[2024-01-29 10:30:42]:
Is domain specific languages.
是特定于域的语言。

[2024-01-29 10:30:45]:
So the drawings that we drive, that we draw, OK are a full-fledged programming language, OK, only that it is graphical instead of having wild etcetera, etcetera. It is organized in a different way. So it is a programming language level, domain specific language, OK. And what we are having next to it is that we are going to use and not only we OK as programming language experts.

因此，我们驾驶的图纸，我们绘制的图纸，OK 是一种成熟的编程语言，OK，只是它是图形化的，而不是有野生的等等。它以不同的方式组织。所以它是一个编程语言级别，领域特定语言，OK。接下来，我们将使用，而不仅仅是作为编程语言专家。

[2024-01-29 10:31:14]:
Or software developers, but also people that are far away from having the knowledge that you have. OK people who cannot program they are going to use these tools in order to just use components that already exist and plug them together. OK, put push a button and get some checks so to say OK and basically push another button, generate the point OK using.

或者软件开发人员，但也包括那些远离您所拥有的知识的人。好的，那些不会编程的人，他们将使用这些工具，以便使用已经存在的组件并将它们组合在一起。好的，按下一个按钮并进行一些检查，以便说"确定"，基本上按下另一个按钮，使用生成点 OK。

[2024-01-29 10:31:38]:
So we have done it in a number of areas. This was mostly from the confirmed Research Center, which was about the Smart Advance manufacturing.

因此，我们已经在许多领域做到了这一点。这主要来自已确认的研究中心，该中心是关于Smart Advance制造的。

[2024-01-29 10:31:47]:
So after six very successful years, it wrapped up in October. OK, September actually. I'm now invited to be API principal investigator to another core, another centre called iform that is located in Dublin, again about advanced manufacturing with 3D printing. OK, and so they called me an invite, invited me to join it after having already got the money, which is very rare. OK, because they heard about this and they want to help.

因此，在六年非常成功之后，它于 10 月结束。好吧，实际上是九月。我现在被邀请担任另一个核心的API首席研究员，另一个位于都柏林的名为iform的中心，同样是关于3D打印的先进制造。好吧，所以他们给我发了邀请，邀请我在拿到钱后加入，这是非常罕见的。好吧，因为他们听说了这件事，他们想帮忙。

[2024-01-29 10:32:17]:
OK. So it's very relevant from the point of view. And the game here is actually that we have a second level of domain specific languages, which is the languages of the operations that make sense in that domain. OK. So if you look at the architecture and make it a little bit bigger, it looks like this. OK, So you saw picture, you saw colors, right? So in no, you don't see them. Yeah, you see. OK, so the oranges have to say these.

还行。所以从这个角度来看，这是非常相关的。这里的游戏实际上是我们有第二层领域特定语言，即在该领域中有意义的操作语言。还行。所以如果你看一下架构，让它变大一点，它看起来像这样。好的，所以你看到了图片，你看到了颜色，对吧？所以不，你看不到它们。是的，你看。好吧，所以橙子必须说这些。

[2024-01-29 10:32:48]:
Is that?
那是？

[2024-01-29 10:32:50]:
And the blue.
还有蓝色。

[2024-01-29 10:32:53]:
That you see around this, is this OK And then application level DSLS are down here. So we have a sort of a layer of architecture just to cast it in the paradigm, OK, which has internally a number of models and controllers which uses micro services, OK, but with common models.

你看到的，这是可以的吗，然后应用程序级DSLS就在这里。因此，我们有一个架构层，只是为了将其投射到范式中，OK，它内部有许多模型和控制器，它们使用微服务，好吧，但使用通用模型。

[2024-01-29 10:33:17]:
So I'm going to give you some resources about patterns for architectures. You're going to see that we are mixing 3 or 4 and complex system, that's life so to say. OK. And so the point is that we are going to have, we have actually at the moment in time three programming languages so to say that are graphical one in order to define the data model. It's a little bit like UML class diagram such as simpler, OK.

因此，我将为您提供一些有关体系结构模式的资源。你会看到我们正在混合 3 或 4 个复杂的系统，可以这么说，这就是生活。还行。所以关键是，我们目前实际上有三种编程语言，可以说是图形语言，用于定义数据模型。它有点像 UML 类图，比如更简单，OK。

[2024-01-29 10:33:42]:
One for processes, which is a little bit like activity diagrams, just better.
一个用于流程，有点像活动图，只是更好。

[2024-01-29 10:33:49]:
OK. And then there is another one, which is for interface models, because that's what some people found always very difficult and they said, OK, why don't you give me a bunch of things like I want to put a text on a web page. This is for web applications, OK. I want to have a button, I want to have a header. I want to have this and that, right? And so we prepare those already. And so people can basically design actually the web page that comes with the application, so to say. In that way, the web page knows about the data model.

还行。然后还有另一个，是针对界面模型的，因为有些人发现这总是非常困难的，他们说，好吧，你为什么不给我一堆东西，比如我想在网页上放一个文本。这是针对 Web 应用程序的，OK。我想要一个按钮，我想要一个标题。我想拥有这个和那个，对吧？所以我们已经准备好了。因此，人们可以简单地设计应用程序附带的网页，可以这么说。这样，网页就知道了数据模型。

[2024-01-29 10:34:25]:
OK. And the web page is connected with what things do through the process models. OK. The process models are hierarchical. You can have a very simple high level, so to say clauses at the top. OK. And then each phase is itself a process and each big chunk in there is itself a project, blah blah blah, OK, process solving a project. So that basically with the same architecture, with the same metaphor, OK, for what it is and how you represent it, etcetera.
还行。网页通过流程模型与事物所做的事情相关联。还行。流程模型是分层的。你可以有一个非常简单的高层次，可以说是顶部的子句。还行。然后每个阶段本身就是一个过程，其中的每一大块本身就是一个项目，等等等等，好吧，解决一个项目的过程。所以基本上使用相同的架构，使用相同的隐喻，好吧，它是什么以及你如何表示它，等等。

[2024-01-29 10:34:55]:
You can actually implement very, very complex systems.
你实际上可以实现非常非常复杂的系统。

[2024-01-29 10:34:58]:
And the large part, the largest part for all the business logic and ideally also some layers of the application is all models. So you can in principle put them on the table, so to say, with a doctor, OK, or with a biologist or with a mechanical engineer, so to say. And they can basically follow with the finger, Oh yeah, it does this. Then it does this. In this case, there, in this case, there. In this case, it gives actually this output. In that case, no, it doesn't give this output, blah, blah, blah and so on. And then we loop and then we go into something else, etcetera.
大部分，所有业务逻辑的最大部分，理想情况下也是应用程序的某些层，是所有模型。所以原则上你可以把它们放在桌子上，可以说，和医生一起，好吧，或者生物学家或机械工程师，可以这么说。他们基本上可以用手指跟着，哦，是的，它做到了。然后它这样做。在这种情况下，在那里，在这种情况下，在那里。在这种情况下，它实际上给出了这个输出。在这种情况下，不，它不会给出这个输出，等等，等等。然后我们循环，然后我们进入其他东西，等等。

[2024-01-29 10:35:31]:
So this is a control flow orientation programming language.
所以这是一种控制流方向编程语言。

[2024-01-29 10:35:38]:
OK. So when you have that, that's the programming language level, you really use it, that's the new part. OK. So that you have a set of DSLS, set of processes, etcetera, etcetera for different things. And OK, so that would only support the fact when we are writing something completely from scratch, right. Well, life is different. You already are there and there is already database or there is already software or there is already you know something, a machine that is right that is functioning.
还行。所以当你有了这个，这就是编程语言的水平，你真的使用它，这就是新的部分。这样你就有了一套DSLS，一套流程，等等，等等，等等。好的，所以只有当我们完全从头开始写东西时，这才会支持这个事实，对吧。好吧，生活是不同的。你已经在那里，已经有数据库，或者已经有软件，或者你已经知道一些东西，一台正确的机器正在运行。

[2024-01-29 10:36:06]:
You have to send commands, a robot or a cobot, for example, collaborative robots we've done a lot with, for example, right. So the point is that you don't only have a design top down process, but you have an ability to bottom up integrate stuff that already exists. OK. So that's really important. And that's actually what we've done with the number of different applications. OK. And I will give you a couple of pointers to papers that you just written recently so that you can, you know, have any idea of how it works. OK.
你必须发送命令，机器人或协作机器人，例如，我们已经做了很多工作的协作机器人，例如，对吧。所以关键是你不仅有一个自上而下的设计过程，而且你有能力自下而上整合已经存在的东西。还行。所以这真的很重要。这实际上就是我们对不同应用程序的数量所做的。还行。我会给你一些关于你最近写的论文的提示，这样你就可以知道它是如何工作的。还行。

[2024-01-29 10:36:37]:
So that basically you take code that exists, wrap it like a bomb bomb. OK, really?
所以基本上你把现有的代码，像炸弹炸弹一样包装起来。好吧，真的吗？

[2024-01-29 10:36:46]:
Some kind of container around that, OK, that contains, well, the interface of course, according to the behavior that is implemented and deployed somewhere else. OK And then all these additional information that are necessary like a label on food ingredients, OK, like there is no salt inside, there are no nuts, OK Or this is equivalent to two, you know, the full daily.
围绕它的某种容器，好吧，它包含，当然，根据在其他地方实现和部署的行为，接口。好的，然后所有这些必要的附加信息，比如食品成分上的标签，好吧，就像里面没有盐，没有坚果，好吧，或者这相当于两个，你知道，每天吃饱。

[2024-01-29 10:37:14]:
Rate of proteins or something like that, right. So you have these kind of ingredients which are actually the semantic description like for example, yeah, this is an integer, yes. But this is an age, OK. This is a text, yeah. But it is the name of that, you know, etcetera, etcetera. So that you have basically at the level of these wrappers, very rich information about what is inside. You don't have to open, you know, and analyze with chemistry, OK, what is inside in order to believe it. OK.
蛋白质的速率或类似的东西，对吧。所以你有这些成分，它们实际上是语义描述，例如，是的，这是一个整数，是的。但这是一个时代，好吧。这是一段文字，是的。但这就是它的名字，你知道，等等，等等。因此，您基本上可以在这些包装器的级别上获得有关内部内容的非常丰富的信息。你知道，你不必打开，用化学分析，好吧，里面有什么才能相信它。还行。

[2024-01-29 10:37:45]:
I hope that nobody is going to rap wrongly okay. There should be a process for that. It's called governance okay. But once you have these descriptions, then people can basically trust them and combine them in a very easy way, so to say, through the programming language that we have for processes.
我希望没有人会说唱错误，好吧。应该有一个过程。这叫做治理。但是一旦你有了这些描述，那么人们基本上可以信任它们，并以一种非常简单的方式将它们组合起来，可以说，通过我们为流程提供的编程语言。

[2024-01-29 10:38:02]:
OK, so people love it because it is full of.
好吧，所以人们喜欢它，因为它充满了。

[2024-01-29 10:38:08]:
Needs for software development, for high quality software development. And there are too few programmers. OK, and now I can say yeah, but there is AIAI is going to solve all the problems really.
需要软件开发，需要高质量的软件开发。而且程序员太少了。好的，现在我可以说是的，但是AIAI真的可以解决所有问题。

[2024-01-29 10:38:23]:
OK, maybe you are going to be able to generate the code for some of the small systems, maybe in the future for larger systems, OK.
好吧，也许您将能够为一些小型系统生成代码，也许将来会为大型系统生成代码，好吧。

[2024-01-29 10:38:32]:
But the likelihood that in these regulated industries, OK, people are just going to say, OK, ask.
但是，在这些受监管的行业中，人们可能会说，好吧，问问。

[2024-01-29 10:38:40]:
Whatever it is to say, to do the work for me and I'm going to put my legal responsibility stamp as a person. OK, for this. Yeah, fine. Yeah. 85 percent, 50% of the cases if people die or.
不管怎么说，为我做这项工作，我都会把我的法律责任盖上个人的印章。好的，为了这个。是的，很好。是的。85%，50%的病例如果人死亡或。

[2024-01-29 10:38:57]:
There are impurities. They are. They get sick or the cat crashes or whatever. Yeah, that's fine.
有杂质。他们是。他们生病了，或者猫撞车了，或者其他什么。是的，没关系。

[2024-01-29 10:39:07]:
So personally, I think that AI is a fantastic thing. OK, we are not there yet. OK. So the combination of these kind of techniques with well organized, well harnessed, well controlled, so to say, new methods that may be of the generative AI kind, OK, This is generative methods with logics in the background instead of AI. OK. You said that we've done generative software development for forever, OK.
所以就我个人而言，我认为人工智能是一件了不起的事情。好吧，我们还没有到那一步。还行。因此，这些技术与组织良好、利用良好、控制良好的新方法相结合，可以说是生成式 AI 类型的新方法，好吧，这是在后台使用逻辑而不是 AI 的生成方法。还行。你说我们一直在做生成式软件开发，好吧。

[2024-01-29 10:39:37]:
So I think that that's probably the winning combination, OK, But the fact is we are doing this kind of stuff.
所以我认为这可能是成功的组合，好吧，但事实是我们正在做这种事情。

[2024-01-29 10:39:44]:
OK so just to give you an example. OK so this is.
好吧，举个例子。好的，就是这样。

[2024-01-29 10:39:48]:

One of the people in the Catalyst that are working on this mobile, which is a mobile robot, OK. And so this is one of the case studies that we are going to work on in phrase with ADI in order to take the kind of stuff that they've already done. And it is basically a big salad of three or four programming languages because they have this small platform with all the sensors that you could imagine, OK. And it can move, it can go around etcetera, etcetera. It has communication.

催化剂中正在研究这个手机的人之一，这是一个移动机器人，好的。因此，这是我们将与ADI公司合作的案例研究之一，以便采用他们已经完成的那种东西。它基本上是三到四种编程语言的大沙拉，因为他们有一个小平台，里面有你能想象到的所有传感器，好吧。它可以移动，它可以四处走动等等。它有沟通。

[2024-01-29 10:40:22]:
Networks. So there is a problem of also dealing with the different.
网络。因此，还存在处理不同的问题。

[2024-01-29 10:40:27]:
Technologies, OK, for communication and so on. So it is really know Porcupine one would say so to sell your interfaces everywhere, OK. And that's the kind of stuff that they want to actually transform into a case study with our technology, OK. So that's going to basically give rise.
技术，OK，用于通信等等。所以它真的知道豪猪，有人会这么说，到处卖你的接口，好吧。这就是他们想要用我们的技术实际转化为案例研究的东西，好吧。所以这基本上会产生。

[2024-01-29 10:40:48]:
To a handful of this kind of.
对少数这种人。

[2024-01-29 10:40:52]:
Interfaces and they are going to become little libraries of components, OK? And then we are going to reconstruct actually what they are doing.
接口，它们将成为组件的小库，好吗？然后我们将重建他们正在做的事情。

[2024-01-29 10:40:59]:
In terms of that, of that technology, OK.
就此而言，在这项技术中，好吧。

[2024-01-29 10:41:06]:
OK. So we have a lot of international partners, national and international partners. So that's also nice. And what is nice is actually that what I showed you actually is the two word packages. So in Word package one, we are going to develop the development environment, OK. So that's going to be a new development environment.
还行。因此，我们有很多国际合作伙伴，包括国内和国际合作伙伴。所以这也很好。令人高兴的是，我向你们展示的实际上是两个单词的包。所以在Word包一中，我们要开发开发环境，OK。因此，这将是一个新的开发环境。

[2024-01-29 10:41:27]:
This work package two is going to be using it in order to do case studies and demonstrate, OK, and then there is a little bit of dissemination and public engagement and then going to be research week, OK, We show it as a week, we show it to a couple of schools, we go to open days, blah blah, blah, OK.

这个工作包二将使用它来做案例研究和演示，好吧，然后是一点点传播和公众参与，然后是研究周，好吧，我们把它展示为一周，我们把它展示给几所学校，我们去开放日，等等，等等，好吧。

[2024-01-29 10:41:45]:
The idea is actually that we want to bring them much more together, OK, And have the people that are developing the new platform talk to the people that are going to use, use it the in the companies etcetera, etcetera and to have a much larger dissemination part, OK, so that basically this is all integrated. So my job actually in the next couple of months is to hire 22 PhD students and I'm going to be the mummy of the of those. So we six are going to be the mummies or puppies of those, but it is going to be largely.
这个想法实际上是我们想把它们更多地结合在一起，好吧，让开发新平台的人与将要使用的人交谈，在公司等中使用它，等等，并有一个更大的传播部分，好吧，所以基本上这一切都是整合的。因此，在接下来的几个月里，我的工作实际上是雇用22名博士生，而我将成为其中的木乃伊。所以我们六个人将成为这些木乃伊或小狗，但它将在很大程度上。

[2024-01-29 10:42:19]:
Connected and all these people actually whatever other characteristics their competences, they will actually have to work with each other and Co produce, so to say this new thing over the next four years. OK, so for those that are in the master or excellent bachelor, there are PhD opportunities. OK, so if you are interested.
所有这些人实际上无论他们的能力如何，他们实际上都必须相互合作并共同生产，可以说，在未来四年内，这个新事物。好的，所以对于那些硕士或优秀的本科生来说，有博士的机会。好的，如果你有兴趣的话。

[2024-01-29 10:42:42]:
OK. One more thing, So we had actually a conference raise, spring conference last year.
还行。还有一件事，所以我们实际上有一个会议，去年的春季会议。

[2024-01-29 10:42:49]:
In April, OK, where a lot of these international partners participated and then we had a big launch event, so to say with the minister and all these kind of things, it's in the news and then we had.
在四月份，好吧，很多国际合作伙伴都参加了，然后我们举行了一个大型的发布会，可以说与部长和所有这些事情，这是新闻，然后我们就有了。

[2024-01-29 10:43:05]:
The industrial partners and other project partners that are using the same technologies with us come and talk about that and the panel at the end, OK. And whether you like a doctor so to say, we are going to have it probably again this week, this year, it is very likely that it is going to be in April.
与我们一起使用相同技术的工业合作伙伴和其他项目合作伙伴来讨论这个问题，最后的小组讨论，好的。不管你是否喜欢医生，我们可以这么说，我们可能会在本周再次拥有它，今年，很可能在四月。

[2024-01-29 10:43:24]:
If it is going to be in April, it is likely that it is going to be while we have classes and so good and bad. You could probably skip one of the lectures because if I have to run the conference, I will be at the conference, but you also have to go to the conference, OK. So it is going to be mandatory that you attend the one or two sessions, OK. Obviously in compatibility with the other things that

you have to do of course, etcetera, etcetera. But we are going to organize it in such a way that you have the opportunity of participating, but it is also a requirement, OK.

如果它将在四月，那很可能是在我们上课的时候，所以好坏。你可能会跳过其中一场讲座，因为如果我必须主持会议，我会参加会议，但你也必须去参加会议，好吧。所以你必须参加一两次会议，好吧。 显然与你必须做的其他事情兼容，等等，等等。但是我们将以这样一种方式组织它，以便您有机会参与，但这也是一个要求，好吧。

[2024-01-29 10:43:59]:
Same happens for ML week. OK, so we have a center of research training in AI, which is basically a big national.

ML周也是如此。好吧，我们有一个人工智能研究培训中心，基本上是一个大国家。

[2024-01-29 10:44:07]:
Distributed Graduate School, so lots of PhD students, OK, five universities. I'm the director of that thing for UL in AI. OK, so the guys that are going to support you are actually first year PhD students in the CRP and AI, OK And they happen to be, because they did already the bachelor and master in Germany working with this kind of programmes, OK. With this kind of system, they know already Cinco Diamond, all this kind of stuff. OK. So they're already in that in that environment mentally, OK.

分散的研究生院，那么多博士生，还行，五所大学。我是 UL 在 AI 领域的主管。好的，所以支持你的人实际上是CRP和AI的一年级博士生，好吧，他们恰好是，因为他们已经在德国完成了学士和硕士，从事这种项目，好吧。有了这种系统，他们已经知道Cinco Diamond，所有这些东西。还行。所以他们已经在精神上处于那种环境中，好吧。

[2024-01-29 10:44:43]:
OK, just to tell you, but what happens for the CRT AI is that the first year students, and they are first year students, they have to take a module which is distributed over 5 different weeks each week in one of the five universities. So we are responsible or I'm responsible for a week which is actually CS eighty of two one. OK, so it is an official module and so we are going to have one week, March 4th to 8 with all these guys.

好吧，只是告诉你，但是 CRT AI 发生的事情是，一年级学生，他们是一年级学生，他们必须参加一个模块，该模块每周在五所大学之一的 5 个不同星期内分发。所以我们负责，或者我负责一个星期，这实际上是 CS 八十二一。好的，所以这是一个官方模块，所以我们将有一个星期，3月4日到8日与所有这些人在一起。

[2024-01-29 10:45:10]:
From also the other at the universities in UL and I will be busy with that, OK. So I don't know exactly what happens on March 1st, March 4th, OK, at 11:50. If you're lucky, we start later so I can have the class etcetera, etcetera. And then you're not, you're not impaired, but because the two people that are supporting you will also have to sit there and they have a grade to get at the end of that week. OK. It's possible that the schedule is going to be different. OK. We are going to work it out as soon as we know better. OK. We are not going to let you hang or something like that.

从UL的另一所大学，我会忙于此，好吧。所以我不知道 3 月 1 日、3 月 4 日、11：50 会发生什么。如果幸运的话，我们会晚点开始，这样我就可以上课等等。然后你不是，你没有受损，而是因为支持你的两个人也必须坐在那里，他们在那个星期结束时要得到一个成绩。还行。时间表可能会有所不同。还行。一旦我们了解得更好，我们就会尽快解决。还行。我们不会让你挂死或类似的东西。

[2024-01-29 10:45:47]:

But we also want to have in that week an industry event in collaboration with the Irish Computer Society. I have the most to be the vice President of the Irish Computer Society. So when I do something, I have to connect it with them, right. So it is possible that we are going to have an industry event, so half a day with a lot of companies coming on campus, OK, in order to participate into that particular segment of the CRITI. So are you interested in?

但我们也希望在那一周与爱尔兰计算机协会合作举办一场行业活动。我最想成为爱尔兰计算机协会的副主席。所以当我做某事时，我必须把它和他们联系起来，对吧。因此，我们有可能举办一场行业活动，所以半天时间里有很多公司来到校园，好吧，为了参与CRITI的那个特定部分。那么你感兴趣吗？

[2024-01-29 10:46:16]:
Jobs after graduation.
毕业后的工作。

[2024-01-29 10:46:21]:
Raise your hand if you are interested in jobs after the graduation.
如果您对毕业后的工作感兴趣，请举手。

[2024-01-29 10:46:28]:
OK, the others are undecided or they want to take a PhD. OK, fine. So that's an occasion, for example.
好吧，其他人还没有决定，或者他们想读博士。例如，这是一个场合。

[2024-01-29 10:46:37]:
For approaching people. OK. And then maybe get to get them, get to know them. Doesn't mean that you go there with the CV because that's a little bit pushy, OK. Unless you organize it really that way with a sort of a speed dating event or something like this. OK, let me do. OK.
为了接近人。还行。然后也许会得到他们，了解他们。这并不意味着你带着简历去那里，因为那有点咄咄逼人，好吧。除非你真的以这种方式组织它，比如一个快速约会活动或类似的东西。好了，让我来做吧，好了。

[2024-01-29 10:46:55]:
But on the 6th and 7th for example, there are 180 students or three CRPS that are meeting actually 40 companies in. They go down to Cork, OK. They did it last year in Dublin. This year it is in Cork and it is really an organized speed rating. OK. So they distributed the cities before and the company say I want to talk to them to this and this and this and the company, the students say I want to talk to them, then them, OK, then matchmaking. OK.
但例如，在 6 日和 7 日，有 180 名学生或三个 CRPS 与实际上 40 家公司会面。他们下到科克，好吧。他们去年在都柏林做到了。今年它在科克，它确实是一个有组织的速度等级。还行。所以他们之前分发了城市，公司说我想和他们谈谈这个，这个，这个和公司，学生们说我想和他们谈谈，然后他们，好吧，然后是牵线搭桥。还行。

[2024-01-29 10:47:23]:
So that's stuff that we do, but this is an opportunity for you maybe also to get to know people, OK, So that would be nice.
这就是我们所做的，但这是一个机会，也许你也可以了解人们，好吧，那就太好了。

[2024-01-29 10:47:31]:

OK, so there is a second part I tell you afterwards. OK, I would go back now. Does it work? OK, I would go back now to.
好的，我稍后会告诉你第二部分。好吧，我现在就回去。它有效吗？好吧，我现在回去。

[2024-01-29 10:47:43]:
The cost management system.
成本管理系统。

[2024-01-29 10:47:46]:
OK.
还行。

[2024-01-29 10:47:49]:
Do a little bit of bureaucracy, OK? And then we have 10 minutes pause in which you're going to have a job.
做一点官僚主义，好吗？然后我们有 10 分钟的停顿时间，你将有一份工作。

[2024-01-29 10:47:56]:
The job of putting yourself in groups. OK, so.
把自己分成小组的工作。好的，所以。

[2024-01-29 10:48:01]:
Here is the situation.
情况是这样的。

[2024-01-29 10:48:04]:
Last year.
去年。

[2024-01-29 10:48:06]:
This module was organized in such a way that the bachelor students, they had to do a lot of implementing, OK. They had some presentations of whatever in the project and then there was a final assessment, etcetera, etcetera. It was very stressy, OK. And because it is a large group, also their PhD students that were supporting, they were also OK for the Bachelor of students. You also have your FYP with the FYP deadlines, right? Coming up. So I already talked with Abaya, so she told me OK, when you have whatever.
这个模块的组织方式是这样的，本科生，他们必须做很多实施，好吧。他们对项目中的任何内容进行了一些介绍，然后是最终评估，等等。压力很大，好吧。而且因为这是一个很大的群体，还有他们的博士生在支持，所以他们也对本科生没问题。你也有你的 FYP 和 FYP 截止日期，对吧？即将到来。所以我已经和阿巴亚谈过了，所以她告诉我好吧，当你拥有任何东西时。

[2024-01-29 10:48:36]:
OK, I don't have myself FYP students. I'm always typically the one that comes as second leader at the end or is emergency, so to say evaluator okay. So I got that OK. And I think that the deadlines that I've set up now are friendly in respect to the FYP needs. OK, for the master students, you don't have the FIP needs, but you also have to take up soon in this week, so to say a topic for your thesis and then you have to work on the thesis. OK, so I tried actually to do things for the bachelors in such a way that it is.

好吧，我没有自己的 FYP 学生。我总是通常是最后或紧急情况下的第二领导者，可以说是评估者。所以我明白了。我认为，我现在设定的最后期限对五年计划的需求是友好的。好吧，对于硕士生来说，你没有FIP的需求，但你也必须在本周尽快开始，所以说你的论文的主题，然后你必须在论文上工作。好吧，所以我试着以这样的方式为单身汉做事。

[2024-01-29 10:49:12]:
Semi useful and not so stressful for your deadlines.
半有用，对你的截止日期来说压力不大。

[2024-01-29 10:49:15]:
A little bit the supportive of the Masters and in the sense, right. So you're going to do things that are similar but different. OK. So that's the way it is.
有点支持大师赛，从某种意义上说，是对的。所以你要做的事情是相似但不同的。还行。事情就是这样。

[2024-01-29 10:49:28]:
OK.
还行。

[2024-01-29 10:49:32]:
I hope that you have access to the module OK if you saw I actually asked for the creation of a combined bright space.
我希望您可以访问该模块，如果您看到我实际上要求创建一个组合的明亮空间，那么可以。

[2024-01-29 10:49:42]:
Course. OK, which is called? What is that the CS44? Yeah, this one. OK CS 444227 under score.
课程。好了，叫哪个？CS44是什么？是的，这个。OK CS 444227得分不足。

[2024-01-29 10:49:53]:
Is that here now? So it is a combined one. OK, so you should actually all see it. I published it I think. OK, so my first attempt with bright spaces, so if there are problems please let me know and OK so.
现在在这里吗？所以它是一个组合的。好的，所以你们实际上都应该看到它。我想我发表了它。好的，所以我第一次尝试明亮的空间，所以如果有问题，请告诉我，好。

[2024-01-29 10:50:09]:
These are the rules of the game. OK, so BSc year four, you're going to have to do 2 things. One thing semi simple, OK, where are the 25% of the grade? OK in pairs.
这些是游戏规则。好的，所以在第四年的理学士中，你将不得不做两件事。有一件事很简单，好吧，25％的成绩在哪里？成对OK。

[2024-01-29 10:50:26]:
So that you can talk to each other and discuss a little bit etcetera, etcetera, you're not left alone, OK. And it is basically a reflection on architecture patterns or design patterns, OK, in your FIP and or in your code placement depending on the kind of work that you did in the copper, maybe there was something.

这样你们就可以互相交谈，讨论一点点等等，等等，你不会孤单，好吧。它基本上是对架构模式或设计模式的反映，好吧，在你的FIP和/或你的代码放置中，取决于你在铜中所做的工作类型，也许有一些东西。

[2024-01-29 10:50:48]:
You are developing little things, testing little things, et cetera, and they were organized and designed in a certain way. So describe it a little bit, compare it with the traditional concept, so to say, of this or that pattern of this, of that architecture, OK. And because it is the two of you, OK, you have always at least two different things that you have to compare that you can compare, OK.
你正在开发一些小东西，测试一些小东西，等等，它们都是以某种方式组织和设计的。所以稍微描述一下，将它与传统概念进行比较，可以说，这个或那个模式，那个架构，好。因为是你们两个人，好吧，你们总是至少有两件不同的事情需要比较，你可以比较，好吧。

[2024-01-29 10:51:13]:
This is a text OK view on March 15.
这是 3 月 15 日的文本 OK 视图。

[2024-01-29 10:51:19]:
So just before the Saint Patrick's Day long weekend, OK?
所以就在圣帕特里克节长周末之前，好吗?

[2024-01-29 10:51:25]:
On purpose. I didn't do it afterwards so that I don't ruin to you the holidays. OK, so out of it sounds really, how could I say harsh, but out of experience, OK, so sometimes people miss the deadline. OK, so for the next 24 hours, anytime, whether it is a midnight plus 5 minutes or midnight next midnight -5 minutes, OK, it is a penalty of 10 percent 2.5 points, OK.
故意。事后我没有这样做，以免毁了你的假期。好吧，听起来真的，我怎么能说苛刻，但出于经验，好吧，所以有时人们会错过最后期限。好的，所以在接下来的 24 小时内，任何时候，无论是午夜加 5 分钟还是午夜下午夜 -5 分钟，好吧，这是 10% 的 2.5 分的惩罚，好吧。

[2024-01-29 10:51:56]:
And it is like this, so if you are, if you had 18 points it is 18 -, 2.5, so we are at 15.5.
就像这样，如果你是，如果你有18分，那就是18分，2.5分，所以我们是15.5分。

[2024-01-29 10:52:04]:
It is not 2.5% of the grade that you get, so the lowest the grade, the lowest that the percentages so to say that is deducted no. And then another 2.5 points if you are one day one more day late. OK, so try to do something decent, put it on time OK so that you can have your well deserved so to say.
它不是你得到的成绩的 2.5%，所以成绩越低，百分比越低，可以说不。如果你晚了一天，再加 2.5 分。好吧，所以试着做一些体面的事情，准时做好，这样你就可以拥有你当之无愧的。

[2024-01-29 10:52:27]:
Holiday OK. Short holiday or long weekend, OK. And very likely what you would have done in that in those last couple of hours would not be worth 2.5 or five points, OK?
假期OK。 短假或长周末，OK。而且很可能你在最后几个小时里所做的事情不值 2.5 或 5 分，好吗?

[2024-01-29 10:52:39]:
So typically in the middle ranges, so to say, the distance between one grade and the next one is around 4 points. OK, so it is pretty heavy and it is a deterrent on purpose. Or if people are sick, if the cat dies or something like that, tell me. OK, so if I know that things are difficult, I can try to accommodate being still fair with everybody else. OK. The problem here is really people that just come a week later. Oh, I forgot, can I do it now?
因此，通常在中间范围内，可以说，一个年级和下一个年级之间的距离约为 4 分。好吧，所以它很重，故意是一种威慑。或者，如果人们生病了，如果猫死了或类似的事情，告诉我。好吧，所以如果我知道事情很困难，我可以试着对其他人保持公平。还行。这里的问题实际上是一周后才来的人。哦，我忘了，我现在可以做吗？

[2024-01-29 10:53:10]:
No. OK. So after that it's dropped with the 25% are gone. OK. The 75% that are obligatory OK are in groups, in larger groups, groups of 5-6, a lot of you have had a project management class, I think at least the computer systems, right?
不。还行。所以在那之后，它被丢弃了，25%消失了。还行。75% 的强制性 OK 是分组的，更大的小组，5-6 人的小组，你们中的很多人都上过项目管理课，我认为至少是计算机系统，对吧？

[2024-01-29 10:53:30]:
The games, Did you still have project management?
游戏，你还有项目管理吗？

[2024-01-29 10:53:34]:
No, OK. You're already the generation where it has been killed. I was head of department and I would have strangled that. Sorry.
不，好的。你们已经是被杀死的一代人了。我是部门主管，我会扼杀它。不好意思。

[2024-01-29 10:53:42]:
Sorry.
不好意思。

[2024-01-29 10:53:45]:
Anyway, so the challenge there is actually to organize yourself in reasonably sized groups. Okay. So when you go and work in development somewhere, so to say, let's more or less the size of groups that you find 4 to 8. OK, so now let's say 5-6. That's fine. OK. It is an essay following a template that we are going to provide you. OK, so you know which points you have to address. OK, by and large.
无论如何，那里的挑战实际上是将自己组织成合理规模的小组。好。因此，当你去某个地方从事开发工作时，可以这么说，让我们或多或少地找到 4 到 8 个小组的规模。好的，现在让我们说 5-6。没关系。还行。这是一篇遵循我们将为您提供的模板的文章。好的，所以你知道你必须解决哪些问题。好的，总的来说。

[2024-01-29 10:54:14]:
1011 pages plus bibliography and they are not written like this, OK, And they are also not written like that. And you cannot put only pictures and screenshots that are coming from the web. OK, I've gone through everything. Come on. Yeah, we know each other. OK with the students. So that should be pictures and diagrams, but in a reasonable way, so to say. And the grading is like this on this one. OK, so the 25%, you do it on your own, OK, The other one is you have to meet the Tasmania.

1011 页加上参考书目，它们不是这样写的，好吧，它们也不是那样写的。而且您不能只放置来自网络的图片和屏幕截图。好吧，我已经经历了一切。加油。是的，我们彼此认识。对学生很好。所以这应该是图片和图表，但可以这么说，以合理的方式。这个的评分是这样的。好吧，所以25%，你自己做，好吧，另一个是你必须见到塔斯马尼亚。

[2024-01-29 10:54:47]:
Prepared at least twice and meeting them and being prepared brings you 10%. OK, 5% for each meeting. Two meetings, OK. All the team members are expected to attend. Everybody talks. We don't want to have shadow individuals, OK? They just disappear and zombie in so to say for the great that doesn't work and then everybody else covers them. No professional level, OK. In the profession you could not do that, OK.
至少准备两次，与他们会面并做好准备会给你带来 10%。好的，每次会议 5%。两次会议，OK。预计所有团队成员都将参加。每个人都在谈论。我们不想有影子，好吗？他们只是消失了，僵尸进入了，可以说是行不通的伟大，然后其他人都覆盖了他们。没有专业水平，OK。在这个行业里，你不能那样做，好吧。

[2024-01-29 10:55:14]:
Plus a 6 to 8 minutes video.
加上一个 6 到 8 分钟的视频。

[2024-01-29 10:55:16]:
Which is worth 25% of the grade, strict 6 to 8 if you come with four, penalty if you come with 12.
这相当于成绩的 25%，如果你来 4 个，严格来说 6 到 8，如果你来 12 个，则受到惩罚。

[2024-01-29 10:55:24]:
You could not make yourself, so to say, concise, so you're punished. OK on both ends of 2.5 points for each minute. Too long or too short. OK, so same, same story.
你不能让自己，可以说，简洁，所以你会受到惩罚。两端每分钟2.5分。太长或太短。好吧，原来如此，同样的故事。

[2024-01-29 10:55:36]:
The report or paper for this 1011 pages is also 40% with the same length, so 10:50. That's accepted OK.
这 1011 页的报告或论文也是 40%，长度相同，所以 10：50。这是可以接受的。

[2024-01-29 10:55:46]:
If it is shorter, if it is longer, bang. Four points for each page to include, OK, the point being all the time we have actually to fit into 500 words, 600 words, 2 pages, etcetera, etcetera. You have to learn to actually select information.
如果它更短，如果它更长，砰。每页要包括四个点，好吧，重点是我们实际上必须适应 500 个单词、600 个单词、2 个页面等。你必须学会实际选择信息。

[2024-01-29 10:56:06]:
Manage the language in such a way that you are using the space not to just to say fantastic things. Yeah, and we met on that funny Sunday day and it was in this fantastic context.
以这样一种方式管理语言，即您使用空间而不仅仅是说奇妙的事情。是的，我们在那个有趣的星期天相遇，就是在这种奇妙的背景下。

[2024-01-29 10:56:17]:
And we had also cheeseburger afterwards or whatever it was doesn't belong there, OK?
之后我们还吃了芝士汉堡，或者其他不属于那里的东西，好吗？

[2024-01-29 10:56:25]:
Stick with the things that are important and relevant, OK? Learn to do that.
坚持重要和相关的事情，好吗？学会这样做。

[2024-01-29 10:56:30]:
This is due on May 6th. OK, just a second. This is due on May 6th. OK, so the idea is that it is at the end of the reading week.
这将于 5 月 6 日到期。好的，等一下。这将于 5 月 6 日到期。好的，所以这个想法是在阅读周结束时。

[2024-01-29 10:56:41]:
You are not going to have final exams. This is all you have to do. OK, so the good thing is that if somebody else is going to torture you during the exam time, you are going to be older this already OK and not a favor in favor of this kind of late last minute or so to say.
你不会有期末考试。这就是你所要做的。好吧，所以好消息是，如果别人在考试期间折磨你，你会长大的，这已经没问题了，而不是支持这种迟到的最后一分钟左右。

[2024-01-29 10:57:02]:
Binge learning, etcetera, etcetera, distribute it properly if you do things well. OK, meeting the student, meeting that he ate twice and having prepared that meeting basically forces you to have all your things in place, Okay.
狂欢学习，等等，等等，如果你把事情做好，就适当地分配它。好吧，见到学生，见到他吃了两次，并准备好了那次会议，基本上迫使你把所有的东西都准备好，好吧。

[2024-01-29 10:57:17]:
Again, it may not be of 25 points if it is May 7th except on May 8. After that it is not accepted anymore. We don't want to eat into your other.
同样，如果是 5 月 7 日，除了 5 月 8 日之外，它可能不会是 25 分。在那之后，它不再被接受。我们不想蚕食你的对方。

[2024-01-29 10:57:27]:
Exam time? OK, there was a hand. I was just wondering would it be great individually on the board?
考试时间？好吧，有一只手。我只是想知道在董事会上单独会很棒吗？

[2024-01-29 10:57:37]:
But there is a third side, a third page. OK.
但是还有第三面，第三页。还行。

[2024-01-29 10:57:42]:
So this is the rules, so to say, for the bachelor, this is the rules, for the these are the rules for the master students. OK.

所以这就是规则，可以说，对于本科生来说，这是规则，对于这些是硕士生的规则。还行。

[2024-01-29 10:57:51]:
For you, we are going to have only the essay in groups of five or six. Same situation. OK template will be provided. It is a little bit longer, OK and it will have the 14 to 15 pages required.
对你来说，我们将只以五到六人为一组来写这篇文章。同样的情况。将提供 OK 模板。它有点长，好吧，它将有所需的 14 到 15 页。

[2024-01-29 10:58:05]:
Can you discuss a little bit later?
您稍后可以讨论一下吗？

[2024-01-29 10:58:08]:
Is it outside? OK. Thank you.
在外面吗？好的，谢谢。

[2024-01-29 10:58:13]:
The same rules, so to say on the picture, diagrams, etcetera. OK.
同样的规则，可以说是在图片、图表等上。还行。

[2024-01-29 10:58:18]:
From you I want to have two pages of project management.
我想从你那里得到两页的项目管理。

[2024-01-29 10:58:22]:
OK. And they are described in the next in the next picture. OK.
还行。它们在下一张图片中描述。还行。

[2024-01-29 10:58:28]:
This should actually be a content that connects with two of the topics that have been presented here or the material that has been provided for guest lectures. So we're going to go through the content afterwards. You're going to see, I'm going to tell you to suggest you to look at, you know, to watch some lectures that are online or some funny stuff that is online or read certain things.
这实际上应该是一个与此处介绍的两个主题或为客座讲座提供的材料相关的内容。因此，我们将在之后浏览内容。你会看到，我会告诉你，建议你看看，你知道，看一些网上的讲座，或者一些网上的有趣的东西，或者阅读某些东西。

[2024-01-29 10:58:52]:
You are going to have guest lectures. I'm trying to work now on having two or three people from industry so that they can come and tell you how things are done in reality. OK, I've decided to try to have the least possible face to face lecture. OK, Just you know that retelling you what is already in textbooks and where there are already nice lectures online, OK, because first of all it would be only here, OK? And then when it is heard you take notes so to say. But then if you have to go back and rehear it, you can't, OK.
您将有客座讲座。我现在正试图让两三个来自工业界的人来告诉你现实中的事情是如何完成的。好吧，我决定尽量少地进行面对面的讲座。好吧，只是你知道复述教科书中已经存在的内容以及网上

已经有精彩讲座的地方，好吧，因为首先它只会在这里，好吗？然后，当它被听到时，你会做笔记，可以这么说。但是，如果你必须回去重听它，你不能，好吧。

[2024-01-29 10:59:25]:
Recording them is really awkward.
录制它们真的很尴尬。

[2024-01-29 10:59:27]:
OK. And so I prefer actually to have good material that is out there, so that you can go back to them and rewatch etcetera. If you have questions. Of course we can always talk, OK or also with the Tasmania, but it is more convenient so to say for you. OK.
还行。因此，我更喜欢有好的材料，这样你就可以回到它们那里重新观看等等。如果您有任何疑问。当然，我们总是可以交谈，好吧，也可以与塔斯马尼亚交谈，但这样说对你来说更方便。还行。

[2024-01-29 10:59:46]:
OK. So the idea is basically it should be an essay on a topic that we agree upon. OK. It connects with at least the two things, two of the things that have been presented or given, etcetera, etcetera.
还行。所以这个想法基本上是，它应该是一篇关于我们同意的主题的文章。还行。它至少与两件事有关，两件已经呈现或给予的东西，等等，等等。

[2024-01-29 10:59:59]:
Plus something that you find out, found out yourself. A little bit of research should also be there OK.
加上你自己发现的东西。一点点研究也应该在那里。

[2024-01-29 11:00:07]:
It is due on April 30th.
截止日期为 4 月 30 日。

[2024-01-29 11:00:09]:
So it's a bit earlier. OK. So it's basically at the end of the reading week, I think.
所以它有点早。还行。所以我认为基本上是在阅读周结束时。

[2024-01-29 11:00:15]:
Or is it the beginning of the reading week? I don't remember so to say. But the idea is basically that you finish this and then you can concentrate on other things. The grading is similar, so to say, meeting the TA prepared is again 10% up to two meetings, 5% per meeting schedule. The meetings with the Tasmania, OK, they're going to make themselves available if they will tell you, OK, which times are they available? And I think that OK, every meeting should be around 20 minutes. OK with the loop, 20 minutes, half an hour maximum, OK. And so if it is well prepared.
还是阅读周的开始？我不记得这么说了。但这个想法基本上是你完成这个，然后你可以专注于其他事情。评分是相似的，可以这么说，满足TA准备的又是10%，最多两次会议，每次会议安排5%。与塔斯马尼亚的会议，好吧，如果他们告诉你，好吧，他们什么时候有空？我认为好吧，每次会议应该在 20 分钟左右。循环正常，20分钟，最多半小时，OK。所以，如果它准备充分。

[2024-01-29 11:00:49]:
Like in scrums, OK, you can do quite a lot and go through quite a lot actually. In that time if there are problems, you don't discuss the entire problem. There is going to be another time, so to say, where when the problems are discussed OK or advice is given OK Also for you 10 minutes video.
就像在 Scrum 中一样，好吧，你可以做很多事情，实际上经历了很多事情。在那段时间里，如果有问题，你不会讨论整个问题。可以这么说，还会有另一次，当讨论问题或给出建议时，也可以为您提供 10 分钟的视频。

[2024-01-29 11:01:07]:
Which is worth 30% strict timing penalty of three points for each minute. So long and short, OK. The report paper and project management is 50% of the grade Okay. And so if you put it all together basically by doing the work distributed over the time and arriving in good shape so to say with good information etcetera etcetera earns you already 10% of the grade. Doing videos is something that people typically like, OK.
这相当于每分钟三分的 30% 严格计时惩罚。这么长这么短，好。成绩单和项目管理是50%的成绩 OK。因此，如果你把所有的东西放在一起，基本上是通过做工作，随着时间的推移，以良好的状态到达，可以说，有了良好的信息，等等，等等，你已经为你赢得了10%的成绩。做视频是人们通常喜欢的事情，好吧。

[2024-01-29 11:01:40]:
Students fare relatively well with the video stuff. You need to have nice resentations, so to say. You need to actually organize it. Well, OK, If you have that more or less assorted with the content, then writing it up OK is not much effort. OK, so that's the story and.
学生在视频方面表现相对较好。可以这么说，你需要有很好的怨恨。你需要实际组织它。好吧，好吧，如果你或多或少地与内容进行了分类，那么把它写好并不费力。好的，这就是故事和。

[2024-01-29 11:02:02]:
Obligations where the meeting the Tasmania and project management for that entails. OK, so when you meet the TA, you should actually bring your weekly group timesheets.
塔斯马尼亚会议和项目管理所需的义务。好的，所以当你见到助教时，你实际上应该带上你的每周小组时间表。

[2024-01-29 11:02:13]:
That we are going to give you, OK, with concrete activities and the time balance of the group.
我们将为您提供具体的活动和小组的时间平衡。

[2024-01-29 11:02:19]:
In a lot of context, whether it is projects or whether it is a consultancy for others, they think in terms of billable hours. How many hours did you work on this or that topic? So a lot of people in real life in the industry, definitely in consultancies, OK, because they are paid by hours, OK, They have actually to justify what they do when they do it.
在很多情况下，无论是项目还是为他人提供咨询，他们都会根据计费时间进行思考。你在这个或那个主题上工作了多少小时？所以在这个行业的现实生活中，很多人，肯定是在咨询公司，好吧，因为他们是按小时支付的，好吧，他们实际上必须证明他们这样做时所做的事情是合理的。

[2024-01-29 11:02:44]:
OK, so you're going to have timesheets and there is OK, two hours of going to the class, one hour of watching the video, 2 hours of discussion with the other colleagues for this, another hour for this and that. OK, so the minimum unit is half an hour.

好的，所以你会有时间表，而且有，两个小时去上课，一个小时看视频，两个小时与其他同事讨论这个，再一个小时做这个和那个。好的，所以最小单位是半小时。

[2024-01-29 11:03:00]:
This is a 6 credits module. I don't know if you're familiar with that, but basically there is a time.
这是一个 6 学分的模块。我不知道你是否熟悉，但基本上有一段时间。

[2024-01-29 11:03:09]:
Occupation so to say on a duration in time, so to say in student time for every credit.
职业可以说是时间的持续时间，可以说是每个学分的学生时间。

[2024-01-29 11:03:14]:
It is typically 25 to 30 hours. OK time 6 OK.
通常为 25 到 30 小时。OK 时间 6 OK。

[2024-01-29 11:03:23]:
6 * 30 is.
6 * 30 是。

[2024-01-29 11:03:27]:
Yeah, 6 * 25.
是的，6 * 25。

[2024-01-29 11:03:30]:
OK. Each one of you should spend between now and deliverables, OK.
还行。你们每个人都应该在现在和可交付成果之间花钱，好。

[2024-01-29 11:03:36]:
With in this range of time OK for this class.
在这个时间范围内，这个班级是OK的。

[2024-01-29 11:03:42]:
OK, so this is part of the check that we have about who did the work. I mean, of course you can lie, we know it all, OK. But if there is 180 hours and it's totally crappy output, either you were not should not be admitted to the master or to the OR to the bachelor, OK? Or there is a lie, OK, and vice versa, OK. It is unlikely that you are going to have super duper fantastic stuff and people spend zero time on that. They declare only the time that they set in the classroom.
好的，这是我们对谁做了这项工作的检查的一部分。我的意思是，你当然可以撒谎，我们都知道，好吧。但是，如果有 180 小时并且完全是蹩脚的输出，要么你不应该被录取为硕士，要么不应该被录取为单身汉，好吗？或者有一个谎言，好吧，反之亦然，好吧。你不太可能拥有超级骗子奇妙的东西，人们花在这上面的时间为零。他们只宣布他们在教室里设定的时间。

[2024-01-29 11:04:14]:
Is this time that you're spending so to stay on the class? OK. So if you go to the meeting and you have your weekly timesheet and there is a check actually. OK are you working too much? Are you working too little? OK, Can you maintain this pace or not? Right. What is going to come up later,

which is the progress report? OK. So it is the complete activities and the time balance. OK. So you use now 15%, for example of your allotted time, OK And now you have to do, you know.

这段时间你花在留在课堂上吗？还行。因此，如果你去参加会议，你有你的每周时间表，实际上有一个检查。好吧，你是不是工作太多了？你工作得太少了吗？好吧，你能不能保持这个速度？右。稍后会出现什么，即进度报告？还行。所以它是完整的活动和时间的平衡。还行。所以你现在使用15%，例如你分配的时间，好吧，现在你必须做，你知道的。

[2024-01-29 11:04:45]:
99% of the work, but you have only 85% of the time less. OK. So that's going to go in the path of danger. OK. So that's the point is basically to give you feedback about how you are or you see it yourself. OK. So how you're doing in terms of.

99% 的工作，但你只有 85% 的时间少。还行。所以这将走上危险的道路。还行。所以这就是重点，基本上是给你关于你如何或你自己看到的反馈。还行。那么你的表现如何。

[2024-01-29 11:05:00]:
Of effort, right?

努力，对吧？

[2024-01-29 11:05:01]:
There should be small progress report, so you should have milestones that you define. Okay and startups update Okay. By this time, we should have actually had the sources cleared Okay, we should have a draft of the bullet points that we want to have in this and that part of the presentation. Or at this point we should have the video finished and we are just working on the record or we should have the record given to somebody to read just in order to see OK and we are working now on the video as the last time.

应该有小的进度报告，所以你应该有你定义的里程碑。好的，启动更新好的。到这个时候，我们实际上应该已经清除了来源 好的，我们应该有一个我们想要在演示文稿的这一部分和那部分包含的要点的草稿。或者在这一点上，我们应该完成视频，我们只是在记录，或者我们应该将记录交给某人阅读，以便看到正常，我们现在正在处理视频，这是最后一次。

[2024-01-29 11:05:33]:
Right. So that you basically have a an indication also for yourself of where you're going, OK, the artifacts. So you're going to have a biography, you're going to have the video, you're going to have the slides, you're going to have the record, OK. And then any project issues so to say also in the group of dynamic.

右。这样你基本上也可以为自己指明你要去哪里，好吧，文物。所以你要有一本传记，你要有视频，你要有幻灯片，你要有记录，好。然后任何项目问题都可以这么说，在动态组中也是如此。

[2024-01-29 11:05:54]:
Journey becomes sick, so to say, and drops out. What can we do? OK or somebody for whatever reason it happened OK Erasmus students, so to say that it's end of the semester for them earlier, they have to go back earlier because there is something else that they have to do.

可以说，旅程生病了，然后辍学了。我们能做些什么？好吧，或者不管出于什么原因，伊拉斯谟的学生，所以说对他们来说早点结束了学期，他们必须早点回去，因为他们还有其他事情要做。

[2024-01-29 11:06:12]:
OK. Could you have foreseen it or does it just happen? OK, illness happens, other things are foreseeable. OK. So I want you to actually as a group, make sure that you take care of all these kind of things, right?

好吧，你能预见到它吗，或者它只是发生了吗？好吧，疾病发生了，其他事情是可以预见的。还行。所以我希望你作为一个团队，确保你照顾好所有这些事情，对吧？

[2024-01-29 11:06:27]:
So not in order to allow mitigation and collective actions, OK. So if people see OK did this person or two people so to say get COVID and they are not able to work anymore for a week, what is the impact, what can we do? OK, etcetera.
所以不是为了允许缓解和集体行动，好吧。因此，如果人们看到这个人或两个人感染了 COVID，他们一周内无法再工作，有什么影响，我们能做些什么？好的，等等。

[2024-01-29 11:06:44]:
OK. And for the project management, so to say it is As for the bachelor students, so this is discussed only the TA meetings, you don't have to deliver it. For the others it goes into the two-part pages summary. So to say what you did it is basically identify the work to be done. It is basically done chart, OK. So these are the pieces that we have to do one after the other and this is how long they are going to take etcetera.
还行。而对于项目管理，可以说是本科生，所以这只讨论TA会议，你不必交付它。对于其他人，它进入了由两部分组成的页面摘要。所以说你做了什么，基本上是确定要完成的工作。它基本上是完成的图表，OK。因此，这些是我们必须一个接一个地完成的部分，这就是它们需要多长时间等。

[2024-01-29 11:07:08]:
It's a forecaster and things always go differently, OK. So it's going to be updated overtime. The milestones that you had, you have to deliver the final timesheets of the group, OK, so one night per member. So every week there is going to be one line per person and then there is going to be OK what they did so to say in the in the week.
这是一个预报员，事情总是以不同的方式进行，好吧。所以它会随着时间的推移而更新。你所拥有的里程碑，你必须交付小组的最终时间表，好吧，所以每个成员一晚。因此，每周每人都会有一句话，然后他们会在一周内说些什么。

[2024-01-29 11:07:30]:
Summer, your forecast versus and corrections exactly what I was mentioning before. So we thought that we would be able to do these things in this order, but the following thing happened. And so we had to reorganize etcetera, etcetera. We had to redistribute responsibilities for example and so on declaration of individual contributions and this answers the question about the group. OK.
夏天，你的预测与修正正是我之前提到的。所以我们以为我们可以按照这个顺序做这些事情，但接下来的事情发生了。因此，我们不得不重组等等。例如，我们必须重新分配责任，例如个人贡献的声明等，这回答了有关团队的问题。还行。

[2024-01-29 11:07:54]:
There is in journal papers there is a long list of things OK that need to be done.
在期刊论文中，有一长串需要做的事情。

[2024-01-29 11:08:01]:
And where one declares who did what, I will never declare that I did the implementation of the papers that have an implementation on which I'm a co-author. That's something that my PhD students are doing. OK. But I was responsible or responsible for the writing, for the thinking, for the conception, for this and that and that. OK, So we're going to give, I'm going to give you examples of this, OK, so that you can basically adapt it to your case. OK And declaration of contribution shared by each group member, that's also important.

如果有人宣布谁做了什么，我永远不会宣布我完成了具有我是合著者的实现的论文的实现。这是我的博士生正在做的事情。还行。但我对写作、思考、构思、这个、那个和那个负责负责。好了，我们来举个例子，好了，这样你就可以根据自己的情况进行调整了。OK 和每个小组成员分享的贡献声明，这也很重要。

[2024-01-29 11:08:32]:
Because it is basically a sort of an signed declaration. If you tell me that each of the six people did exactly the same thing, I want to have in signature from everybody, OK, what is 100% / 6? It is a 17 point something. OK. It's a half of 33%. OK. So if you tell me that, I will believe that if there is a situation where somebody does nothing and the groups covers them.
因为它基本上是一种签名的声明。如果你告诉我，六个人中的每一个人都做了完全相同的事情，我想得到每个人的签名，好吧，什么是 100% / 6？这是一个 17 分的东西。还行。这是 33% 的一半。还行。所以如果你告诉我，我会相信，如果有人什么都不做，而团体掩盖了他们。

[2024-01-29 11:09:01]:
I believe the.
我相信。

[2024-01-29 11:09:03]:
But everybody, including that person, have to sign and sign something that is not right.
但每个人，包括那个人，都必须签署和签署一些不对的东西。

[2024-01-29 11:09:09]:
If you want to stomach that, and that's the ethic that you have, OK in your profession, I have no other ways of checking it, OK? But if something like this happens in real life, you can be sure these people, they will not be, how could I say, desirable partners in further projects.
如果你想忍受这一点，这就是你的职业道德，好吧，在你的职业中，我没有其他方法可以检查它，好吗？但是，如果这样的事情发生在现实生活中，你可以肯定这些人，他们不会，我怎么能说，在未来的项目中成为理想的合作伙伴。

[2024-01-29 11:09:34]:
So you lose your face through ethical things only once, and it is very, very difficult to recover.
所以你只因为道德的事情而丢了面子一次，而且要恢复是非常非常困难的。

[2024-01-29 11:09:44]:
OK. Second thought, you're here in one class, you know each other, etcetera, etcetera. The development world in Ireland is very tight. The likelihood that you're going to bump into each other in the future is very high. The likelihood that you're going to jump from one company to the next because your body that is there tells you that there is a position open and they would like to have you is very high.
还行。第二个想法，你在一个班级里，你们彼此认识，等等，等等。爱尔兰的发展世界非常紧张。你们将来碰到对方的可能性非常高。你从一家公司跳到另一家公司的可能性非常高，因为你的身体告诉你有一个职位空缺，他们希望拥有你。

[2024-01-29 11:10:14]:
OK. And even internationally, you have no idea which people come up with basically suddenly from my deep past, OK?
还行。甚至在国际上，你也不知道哪些人基本上是突然从我深厚的过去中想到的，好吗？

[2024-01-29 11:10:25]:
In areas of responsibility or in areas of non responsibility or something like that and on which actually, on which actions, on which slides? On which respectful of disrespectful, mindful or?
在责任领域或非责任领域或类似的事情上，实际上，在哪些行动上，在哪些幻灯片上？在哪个尊重不尊重，注意还是？

[2024-01-29 11:10:40]:
Whatever kind of dismissive so to.
不管是什么样的不屑一顾。

[2024-01-29 11:10:44]:
Little things.
小事。

[2024-01-29 11:10:46]:
Then consequences later, I speak of five, 1020 years later, so to say, come up.
然后后果，我说五年后，1020年后，可以这么说，出现了。

[2024-01-29 11:10:53]:
So think twice before you actually screw up somebody else. OK, it's a then connected word.
所以在你真正搞砸别人之前要三思而后行。好吧，这是一个然后连接的词。

[2024-01-29 11:11:01]:
So here, OK, I will believe what you say if you sign something that is not true. OK? I'm not the police. It's your problem, OK? But know that somebody noticed. Somebody knows.
所以在这里，好吧，如果你签署了一些不真实的东西，我会相信你说的话。还行？我不是警察。这是你的问题，好吗？但要知道有人注意到了。有人知道。

[2024-01-29 11:11:14]:
It may not be the end of it.
这可能不是它的结束。

[2024-01-29 11:11:16]:
OK, so this is what I wanted to tell you. Now it is 11100. OK, so we take 10 minutes break, but you have the job of actually coming here and putting your names in this spreadsheet. OK, so that just a second, here it is for the 25% exercise, the CS4227 in, you know, in pairs, OK.
好的，这就是我想告诉你的。现在是 11100。好了，我们休息 10 分钟，但你的工作是真正来到这里，把你的名字写在这个电子表格中。好了，等一下，这里是 25% 的练习，CS4227 成对，好。

[2024-01-29 11:11:46]:
Here in groups of five or six. Here in groups of five or six. For the Master yes.
这里是五六人一组。这里是五六人一组。对于师父来说，是的。

[2024-01-29 11:13:16]:
Or whatever. We are back at 25 and we have another another 20 minutes after that. Okay.

或者别的什么。我们回到了25点，在那之后我们还有20分钟。好。

[2024-01-29 11:36:22]:
To the right place. You're going to find it actually here under cost management. If there are announcements or something like that, that's going to happen there, OK. The lectures are basically the slides etcetera, the timeline of what is happening, OK. So if at some point we know that on a certain day, on certain dates there is going to be the conference for example, OK, for the event with the ICS, it's going to actually go into the calendar and it is going to go actually into the cost management and also here.
到正确的地方。实际上，您会在成本管理下找到它。如果有公告或类似的东西，那将在那里发生，好吧。讲座基本上是幻灯片等，正在发生的事情的时间表，好的。因此，如果在某个时候我们知道在某一天，在某些日期将举行会议，例如，好吧，对于ICS的活动，它实际上将进入日历，它将实际进入成本管理，也在这里。

[2024-01-29 11:36:55]:
Also here meant like no lectures, this is happening instead. OK, like in this case February 5th Bank holiday, no classes, so we know already on the on the 18th of March. OK, it is the day after sympathetic day. It's also bank holiday, so no classes and so on and so on. Right on the 12th we already know that the next time that we are going to meet I will be here. There is going to be some stuff from me so to say. But then Dr. Salinsai is going to talk about the MVC architecture pattern, OK.
这里也意味着没有讲座，而是发生了。好的，就像在这种情况下 2 月 5 日银行假期一样，没有课程，所以我们已经在 3 月 18 日知道了。好吧，这是同情日后的第二天。这也是银行假期，所以没有上课等等。就在12日，我们已经知道，下次我们见面时，我会在这里。可以这么说，我会有一些东西。但是，Salinsai 博士将讨论 MVC 架构模式，好吧。

[2024-01-29 11:37:26]:
And as long as when I know things and you just add them there, the slides are going to be linked. So what I presented today is already there as a PDF. OK. And then there are going to be the resources here. So this is what I gave you today, January 29th. There are two short videos, one on the top five most used architecture patterns and another 1-7 minutes so to say for the major software architecture patterns. OK. So if I find the things that these are quite short, 15 minutes each or something like that.
只要我知道一些事情，你只要把它们加在那里，幻灯片就会被链接起来。所以我今天介绍的内容已经是PDF格式了。还行。然后这里会有资源。这就是我今天（1月29日）给你们的。有两个简短的视频，一个是关于前五个最常用的架构模式，另一个是 1-7 分钟，可以说是主要的软件架构模式。还行。因此，如果我发现这些东西很短，每个 15 分钟或类似的东西。

[2024-01-29 11:38:01]:
Just an overview, I put it there. This one is a little bit longer because it's a combination of the lectures to say by a semi guru, OK in Silicon Valley at Silicon Valley Code Camp where it went through an example so to say a software design, software architecture. So this is a one hour lecture, OK, by somebody that is very well respected doing it really slowly etcetera, etcetera piece by piece. So for those in particular that have to do software design and software architectures and software for the natural students.
只是一个概述，我把它放在那里。这个有点长，因为它是一个半大师讲的结合，OK在硅谷的硅谷代码营，它通过一个例子，可以说是软件设计，软件架构。所以这是一个一个小时的演讲，好吧，由一个非常受人尊敬的人做，非常缓慢，等等，等等。因此，对于那些必须为自然学生进行软件设计和软件架构和软件的人来说。

[2024-01-29 11:38:36]:
I'm going to add more things that are interesting either because it is just the material that you have to learn, for example, main software patterns, etcetera, etcetera. There is a nice series of video. Each video is around the 2030 minutes, more or less of a guy that is really explaining it with the patients. That is way beyond my level of patience. OK. So.
我将添加更多有趣的东西，因为它只是您必须学习的材料，例如，主要软件模式等。有一系列不错的视频。每个视频都在 2030 分钟左右，或多或少是一个真正向患者解释的人。这远远超出了我的耐心水平。好的，所以。

[2024-01-29 11:39:00]:
I think it is well done. OK.
我认为它做得很好。还行。

[2024-01-29 11:39:03]:
There is one summary of the different.
有一个不同的总结。

[2024-01-29 11:39:08]:
Diagrams. You should know them. OK. So if you don't know them, it is time to get to know them. OK. So I'm going to actually add a lot of information here. Some of these are in a sense must because it is stuff that you need to know in order to do the essays like OK, so if you don't know the software patterns, the software design patterns, if you don't know the software architectures types, OK, then it is very difficult for you to write the essays. OK. But other things, they may just be catch up for people that maybe are not familiar with that or you know, whatever. OK.
图。你应该认识他们。还行。因此，如果您不了解他们，是时候了解他们了。还行。因此，我将在这里添加很多信息。从某种意义上说，其中一些是必须的，因为这是你需要知道的东西，以便像OK这样的论文，所以如果你不知道软件模式，软件设计模式，如果你不知道软件架构类型，好吧，那么你很难写论文。还行。但其他事情，它们可能只是赶上那些可能不熟悉它的人，或者你知道，无论如何。还行。

[2024-01-29 11:39:45]:
So I'm going to actually put there quite a lot of stuff. OK, and so that's important. So these resources are resources that you should consider okay. It is expected in particular for the master students that you are going to go. And when you have decided the topic, you go and do your own resource, your own sorry, source.
所以我实际上要放很多东西。好的，这很重要。因此，这些资源是您应该考虑好的资源。特别是对于你要去的硕士生来说。当你决定了这个话题时，你就去做你自己的资源，你自己的对不起，来源。

[2024-01-29 11:40:09]:
Search on top of what is given here. OK, so you should come with either a book or one or more so to say books articles.
在此处给出的内容之上进行搜索。好的，所以你应该带一本书或一本或多本，可以说是书籍文章。

[2024-01-29 11:40:20]:
Wikipedia pages that don't count. OK, so that's not resources to say something. If there are white papers of companies, for example, if you're interested in enterprise architectures or something

like that, there is a lot of white papers of companies that are describing in white papers and their own tools. That's fine.
不算数的维基百科页面。好吧，所以这不是说点什么的资源。例如，如果有公司的白皮书，如果您对企业架构或类似的东西感兴趣，那么有很多公司的白皮书都在白皮书和他们自己的工具中进行了描述。没关系。

[2024-01-29 11:40:40]:
There can be presentations and values, events or conferences by people from industrial developers, so to say. That's also fine.
可以这么说，工业开发人员可以进行演讲和价值观、活动或会议。那也没关系。

[2024-01-29 11:40:51]:
OK.
还行。

[2024-01-29 11:40:53]:
So that that's basically I have also things from government from this kind of research institutions, for example the Magic Quadrant for local no code, the Magic Quadrant for enterprise architecture tools or something like that, right. So those I will probably give you links, OK or just tell you how they are called because this costs quite a lot of money. OK, I cannot download it and put it there, OK, But there are lots of companies that just want to have your data in order to send you.
所以基本上我也有来自政府的东西，来自这类研究机构，例如本地无代码的魔力象限，企业架构工具的魔力象限或类似的东西，对吧。所以那些我可能会给你链接，好吧，或者只是告诉你它们是如何称呼的，因为这需要花很多钱。好吧，我不能下载它并把它放在那里，好吧，但是有很多公司只想拥有您的数据以便发送给您。

[2024-01-29 11:41:26]:
An interesting or less interesting material.
有趣或不太有趣的材料。

[2024-01-29 11:41:28]:
And so they pay for the downloads of people that get it for free from their website after they have registered. OK. And it is a registration without costs. OK. So of those ones, I'm just going to give you the names because I cannot download it and distribute it. It's against the. OK. So I'm going to try actually to give you quite a big variety of this kind of material. There is going to be also something that is connected.
因此，他们为注册后从他们的网站免费获得它的人的下载付费。还行。这是一项免费的注册。还行。所以在那些中，我只想给你名字，因为我无法下载和分发它。这是反对的。还行。所以我要试着给你们提供种类繁多的这种材料。还会有一些东西是相互联系的。

[2024-01-29 11:41:58]:
So that connects the styles of software design with the styles of project management.
因此，这将软件设计的风格与项目管理的风格联系起来。

[2024-01-29 11:42:04]:
If you have a totally top down project management, management, it is difficult to put a scrum on top, OK? And vice versa, OK. So that's quite interesting from the point of view of just you understanding what kind of organization, so to say, of the work piggybacks well or not so well, OK, with certain ways of doing things so that you can choose actually for your organization or I

mean, I hope that at some point you're all going to be gurus in various companies, either somebody else's or your own ones, OK, So that you're going to be in the C level.
如果你有一个完全自上而下的项目管理，管理，就很难把Scrum放在上面，好吗？反之亦然，好的。所以从你了解什么样的组织的角度来看，这是非常有趣的，可以说，工作是好的还是不太好的，好吧，用某些做事的方式，这样你就可以为你的组织做出实际的选择，或者我的意思是，我希望在某个时候你们都会成为各种公司的大师，要么是别人的，要么是你自己的，好吧，这样你就进入了C级。

[2024-01-29 11:42:39]:
Situation of having to decide. OK, so that you can be informed of the fact that when you decide that there needs to be a certain way of implementing things like the Rational Unified Process. OK. Or the model, because the German government accepts only the model, OK, then there is no choice. You have to do that. Doing that in a giant way is difficult. OK. And so just to understand what are the consequences. And the fact that, you know, writing software also means managing a community of people that are creating these artifacts.
必须决定的情况。好的，这样你就可以被告知这样一个事实，即当你决定需要某种方式来实现像 Rational Unified Process 这样的东西时。还行。或者模式，因为德国政府只接受模式，好吧，那么别无选择。你必须这样做。以一种巨大的方式做到这一点是很困难的。还行。所以只是为了了解后果是什么。事实上，你知道，编写软件也意味着管理一个创建这些工件的社区。

[2024-01-29 11:43:12]:
In a coherent way. OK, and that's why I'm putting this.
以连贯的方式。好的，这就是我放这个的原因。

[2024-01-29 11:43:17]:
Accent also to the project management part, because So when I was a professor in Germany, I had a second year as students that over one or two semesters of the engineering one and two, they were doing the specification of a system, so to say, in the design. And then they were doing implementation and the validation and testing, OK. And so in the second semester I had also the project management students, they were much less, much fewer, because they it was just an elective, OK.
还要强调项目管理部分，因为当我在德国担任教授时，我作为学生有二年级的学生，在工程一和二的一两个学期中，他们正在做一个系统的规范，可以说是在设计中。然后他们开始实施、验证和测试，好吧。所以在第二学期，我也有项目管理专业的学生，他们少得多，少得多，因为他们只是一门选修课，好吧。

[2024-01-29 11:43:48]:
And those ones, they were project managing the young ones.
而那些，他们正在管理年轻人的项目。

[2024-01-29 11:43:51]:
So each one of them has a job to basically be the project manager of two groups of the younger ones, OK. And then some of them graduated to being the project manager the following year etcetera, etcetera. That was really nice and it is amazing so to say what kind of insights came up because you know, sorry about the issues happen, people that don't deliver, people that disappear, somebody that again had to go away, somebody that, this and that.
所以他们每个人都有一份工作，基本上是两组年轻团队的项目经理，好吧。然后他们中的一些人在第二年毕业成为项目经理，等等。这真的很好，令人惊讶的是，说出什么样的见解，因为你知道，对问题发生的抱歉，没有交付的人，消失的人，再次不得不离开的人，有人，这个和那个。

[2024-01-29 11:44:20]:
And so on. And so they were now sitting there and trying to add somebody else or that reorganize themselves and produce a decent, decent artifact.
等等。所以他们现在坐在那里，试图增加其他人，或者重组自己，生产出一个体面的、体面的文物。

[2024-01-29 11:44:30]:
So here it is not possible. In this university things are organized in Ireland in general, so to say. Things are organized in a very different way. And so this is basically a sneaky way of forcing you a little bit to experiment OK with this kind of, with this kind of activities and by experience if you are not completely.
所以这里是不可能的。可以这么说，在这所大学里，事情一般都是在爱尔兰组织的。事物的组织方式非常不同。所以这基本上是一种偷偷摸摸的方式，强迫你尝试一下这种活动，如果你不完全的话，通过经验。

[2024-01-29 11:44:52]:
OK.
还行。

[2024-01-29 11:44:55]:
18 months to two years later, after you joined a company as a bottom level developer, you are project managing somebody. OK, be either that you have a cop student that you have to actually manage. OK, leave that. OK, So this is actually pretty early in the career baby bread of software development people. OK, so OK, so I think that this is as much as I had for today. I just decided not to do the remaining couple of slides.
18 个月到两年后，在你作为底层开发人员加入一家公司后，你正在管理某人的项目。好吧，要么你有一个你必须实际管理的警察学生。好吧，别管了。好吧，这实际上是软件开发人员职业生涯的早期婴儿面包。好了，好了，所以我认为这和我今天说的一样多。我只是决定不做剩下的几张幻灯片。