**Group 14 Focus Group Interview**

**Interviewer:**

Oh, let me start recording in the mean while okay, so the first question is, can you tell me about your academic background a bit, maybe, Eric and do you want to start?

**Interviewee 1:**

How detailed do you want to go? It's like I'm a fourth year student that is studying computer science

**Interviewer:**

Okay, yeah, that's good enough explanation. I don't need you to tell me everything you do in your career but just because some students might not be computer science, that's why I'm asking this question. So, you are computer science fourth year studying the database specialization, how about you, Edward?

**Interviewee 2:**

Same, fourth year, data technology student, but specializing in software systems, software architecture

**Interviewer:**

Okay, nice, well Olof, if you can write or speak...

**Interviewee 3:**

Yeah, I'll try to speak first but if you don't hear me clearly, just tell me to write instead.

**Interviewer:**

I hear you.

**Interviewee 3:**

My experience is not pretty much not anything except what have been done in courses and I'm not very proper student. So, I haven't followed those that well either. So, that's my expertise or pretty much none.

**Interviewer:**

What do you study, Olof?

**Interviewee 3:**

Computer Science

**Interviewer:**

What specialization, do you have any?

**Interviewee 3:**

The core programming systems, I don't know what it is called in English, Software engineering.

**Interviewer:**

Okay, great

**Interviewee 4:**

Yes, I'm a fourth year student doing software engineering as well, computer Science.

**Interviewer:**

So, can you tell me a bit what is the project about? Although I know, but in few words, what is the project that you are developing? You can unmute if you want to talk.

**Interviewee 2:**

A web application with various information’s about different universities for us in Norway

**Interviewer:**

And what technologies are you using?

**Interviewee 3:**

Sorry, not just as an intelligent model for proposing sports activities to students

**Interviewer:**

So, is this course obligatory for you guys or is it like you can choose?

**Interviewee 4:**

It's obligatory

**Interviewer:**

So, if I asked you, if you have any motivations for participating, you didn't say much, you just have to do it?

**Interviewee 4:**

No, actually, I'm motivated to do it. I'm only doing my year or half of my year, this year because I'm aiming to get an exchange here in Tokyo next year, so I'm voluntarily taking this course because I think I will learn a lot from it and it's a very real experience.

**Interviewer:**

How about the rest, do you feel like you have to do the course or...

**Interviewee 1:**

Even though it's mandatory, I'm still like motivated because it's quite relevant to the industry and yeah, just project management and how to work in team. Okay, well, I'm still very motivated to use this course and learn from it.

**Interviewee 2:**

Okay, I'm in the same position and before the course started I also heard a lot that this was the most relevant and interesting course in all layers so that motivated me like before the course started as well.

**Interviewer:**

That's so nice to hear so many good words about the course at least, Hi, Christopher.

**Interviewee 3:**

For my part, this is the first time I actually spend my time doing a class because I think it is fun. This is basically why I got to university is to have classes or have to do classes like this one. This is my motivation before applying to university at all. So, to me this is the paramount subject I have throughout my years and will maybe also surpass my masters or my master’s thesis.

**Interviewer:**

Christopher, do you want to get on board or do want to peace out? We are asking what are the motivations to be part of this course or are you forced to be part of it?

**Interviewee 5:**

Well, mainly, I think I'm forced to be part of it because it's part of my degree but of course, it is an interesting course because we are very free to work in a project but personally, I would probably have more specialized courses and stuff, if I could choose.

**Interviewer:**

I understand but **[Inaudible ]** brought up something interesting at the very beginning, it was about skills, right? You said that we learned about different skills in this course. What kind of skills because this is very interesting. For me, at least, if I say technical, soft skills, project management skills, which of these skills do you deem more relevant, which are more challenging and so on, too many questions, but let's keep one at a time. So, when it comes to skills, what skills do you think you are gaining from the course?

**Interviewee 5:**

From this course? I would say it's a mix of, of course, from programming, but maybe mostly project management.

**Interviewer:**

Okay, have you learned...?

**Interviewee 4:**

Working as a team on a software project, you don't have a lot of courses, which allows us to do this. So, that is a very good experience to have.

**Interviewer:**

Yeah but when it comes to skill, technical skills, do you learn anything new here?

**Interviewee 1:**

It depends on what project you have.

**Interviewer:**

Let's give it to this project that we are doing.

**Interviewee 1:**

Yeah, then I will say I have learned more about like, Django and Django rest framework, how to make a back end there.

**Interviewer:**

Okay, but this is learning about the framework, does it help with your technical skills, like coding skills, or some other type of implementation software engineering skills and system design skills?

**Interviewee 3:**

I would just say like, when it comes to learning technical skills, when you're with a group, then it comes to the group knowledge, basically and as long as there is, for me, I don't know so much. So, there are many people or everyone on this team basically knows a bit more than me. So, I have a lot to learn and I can learn a lot, which makes this very, gives me a very growth or gives me great growth during this course.

**Interviewer:**

Do you feel there are some challenges in regard to technical skills while you're doing the project? Like you, you don't know things? How to do them technically and then you have to overcome those challenges, do the customers help you in this?

**Interviewee 4:**

Yes, these are for me new technologies, I've never worked with Django and I don't have a lot of experience with back end programming in general. So, yes, there have been challenges and we have been required to learn a lot of new stuff but I feel like that's part of how you develop something, you have to learn.

**Interviewer:**

Yeah, you have to learn the programming language, the tools sometimes and the framework that you're using...

**Interviewee 4:**

The techniques and general techniques working with a rest API, I've done that once before.

**Interviewer:**

Okay, how about the customer? He's like a motivational or a person that can help you with technical skills or how do you see him? Okay, but you have this expectation that the customer should help you develop some technical skills during the course or maybe not.

**Interviewee 2:**

I mean, the customers sets the requirements so it sort of forces us to learn whatever tools they require. I mean, for me this would be react but on like the course as a whole, it's for me it's more of a practical that more than the theory, I've learned, for example, software architecture, but this is how I can apply that to a real project and how it works in practice.

**Interviewer:**

How about soft skills? You know, what soft skills are maybe the skills, communication, team dynamics, how do you talk to the customer? How do you gather requirements? How do you talk to each other? How do you settle issues? What is their collaboration level and so on? This is about mainly soft skills. So, it's teamwork, communication, presentation, negotiation, innovation, etc. all these kinds of things, do you feel this soft skills have been a challenge for you guys or is it...

**Interviewee 4:**

I don't feel like it's been a challenge and yes, we use soft skills. I feel like scrum methodology in general is an application of soft skills in a development environment and we use them. I don't know if I feel like I've gained a lot of soft skills through this course but I definitely have to use them.

**Interviewer:**

You have this concept of serving leader that might be sort of soft skill that you gain, one that comes to my mind because you are the scrum master.

**Interviewee 3:**

I forgot what I was about to say but I think was soft skills, I think we have been fairly lucky with the group that we are in, because most people know how to communicate and also either had some very good experience in it. I know, Erling has a lot of good experience, or has a lot of good knowledge and I know Christopher has a lot of experience with his projects or past projects. So, he knows a lot of the technical stuff, because soft skills, you need to have some technical knowledge to also, which will further enhance your soft skills because without knowing how to do something, you can't even start to think about how to communicate how to do it. So, I just feel like we are, I feel that I've been pretty lucky with the group and I feel it makes sense...

**Interviewer:**

But let's assume something goes wrong...

**Interviewee 3:**

Soft skills are pretty much happening in these things, are similar things as miscommunication, which could happen...

**Interviewer:**

Yeah, but let's assume something goes wrong, not with the team, the team seems stable, but let's say you don't communicate well with the customer and the customer insists on using a certain solution, a certain technology, insist on having things done in a certain way that the team doesn't fit with the team expectations; so then what do you do?

**Interviewee 3:**

Well, that would be my responsibility.

**Interviewer:**

Yeah but doesn't matter, everybody can speak up.

**Interviewee 4:**

No, I think that we wouldn't have to kind of argue for why this is not the best solution either because we don't have the experience needed to use certain technologies or because we feel like the technologies they propose are not adequate for the task they want us to complete. So, I'd say you'd have to reason with them and if that proves impossible, this is a course and they are the product owners. So, I suppose you'd have to some degree comply with what they want.

**Interviewee 2:**

I think you have to compromise and at least clearly communicate why or how it affects the results. The consequences of the requirements, they say something that's basically impossible or at least to finish and we just say, well, we can finish it, we can do as much as we can, in the time that we have but we can't do more than that their requirements may affect the end results.

**Interviewee 4:**

I really liked the way you put it when you said we can do anything but not everything, you said in an earlier meeting.

**Interviewer:**

I learned this from a guy in the US. He was running a big company of I think 60 employees, 60 developers with project management, it was similar to extreme programming development, but they did everything on paper, nothing online. So, they had pure programming all the time and he said, yeah, that's a mindset I also had from before, but it's nice when you hear it from other people as well and he said, okay, when we can't do everything for people, we can do anything for them but you can't expect to do everything because the time slot is limited. There are constraints and so on and I've had my own part of challenges with projects, not so many but those projects where the customers were very skilled about technology. Those are the most difficult projects. That's my opinion because they are very piggish with what they want. When you have a customer who doesn't know much about technology, it's easier for the team to be independent and to make choices. You'll figure this out eventually in your career. How about project management? Have you learned about project management during the course? Well, what was the situation? Did you knew everything from before? Or was it like, did you improve some skills from the project management side? Do you have some challenges in that context?

**Interviewee 2:**

We had a course quite similar to this is called software development and that was basically the same course just with a fake customer, the TAs customers and it basically taught mostly scrum and project management and I feel this course is sort of the same, except a bit more professional, I guess and the thing with scrum is, it sort of varies from team to team and you learn new ways to do things, maybe better things and so it's just more training in scrum basically, for me at least.

**Interviewer:**

Unfortunately, scrum has a guide and I say, unfortunately, because, like you say, Edward it's teams adapt scrum to their context but it also has a guide and the guide needs to be followed a bit. So, that guide also provides some frame within you can work and modify scrum because then it becomes I wouldn't say, yeah it becomes like random application of methodologies and that's good that you have something from before so you think it was not a challenge to do this scrum, apply the scrum, attitude or agile practices to the project?

**Interviewee 5:**

I think it's a challenge because we are great people and we're still studying. So, you could say that our technical knowledge is quite limited and also, the timeframe of the project is quite short. So, these challenges sort of forced us into dividing us into a front and back end team. While, ideally, we would just have everyone working on everything in one larger team and not split us up.

**Interviewer:**

Thank you for bringing this up. Christopher. Quick question is everybody happy if he does only front end and only back end or would you be considering yourself as full stack developers in the future?

**Interviewee 4:**

I would consider myself or I want to become a full stack developer. I think for this project as Christopher mentioned, we don't really have the time to fully immerse ourselves in all of these technologies at the same time. So, learning all of them well enough to develop this application would be quite challenging and very time consuming and since this is also, as you mentioned, a bit differences for students and we don't work on this necessarily every day and we have quite different schedules and only a certain time slots dedicated, specifically to this project every week, I think that makes it a bit more challenging.

**Interviewer:**

More challenging in terms of project management or in terms of the other things?

**Interviewee 4:**

Well, both I think it's more challenging or I would like to work full stack and I have some experience with react but I feel like the kind of frames or boundaries of this project make that impossible or make it very difficult at least.

**Interviewer:**

Can I make a comment? When I studied engineering many years ago, not so many, but we didn't talk about full stack developers or front end developers or back end developers so much, we just talked about engineers, I am a computer engineer, myself, not software engineer. But maybe for you, it's the same. What I'm trying to say terms, such as full stack developer, front end developer, back end developer, are put into an industry to split tasks and to divide and conquer the programmers. However, I would strongly recommend that you never consider yourself just front end or back end. Just consider yourself, you're an engineer and the engineer knows everything about the system either these being back end, front end, physical part, whatever, other components, software component, hardware components, he should know everything and, of course, you will have a sort of mindset that you prefer backend programming versus front end programming. But this doesn't mean that you don't know how to do both. This is a recommendation because it you should know how to do Python coding PHP, if you like it more and you should know JavaScript and you should know react, as well otherwise, you are not an engineer, you cannot call yourself an engineer, if you don't know both, back end, front end. Otherwise, doesn't work, it is just an advice. I don't like the term myself full stack developer is just an invention of people saying you are a real engineer because if you do have you're not a real engineer but yeah, it's terms. So, you can use the terms but I encourage you to go through the system that you have developed when the course is finished and read through it and try it out, implementing new functionality, both back end and front end. This will help you understand a lot instead of just saying, Edward was in charge only for front end and Christopher dealt with the back end, you're dealing front, dealt with back end and then you are okay, now you I don't understand what he did.

**Interviewee 2:**

This is also part of reason why I wanted to be on the back end team because I already knew front end.

**Interviewer:**

Yeah, good.

**Interviewee 1:**

I knew a lot of back ends have worked with Django before but I didn't know react and that's why I wanted to be front end.

**Interviewer:**

Of course, you are smarter than me so I don't have to tell anything here. Now the question is about startup formation mindset because this is very important, to me, at least what I do in another course, just to put context why I'm asking these questions and why I'm in this course now doing the same investigation and let me say is also very interested, is the fact that in the experts in team course, I present students with stakeholders like you have here, they have to develop software systems. Not all the team members are engineers but this doesn't matter because engineers can develop the other ones can contribute differently but then I run also some activities such as boot camp, to help the stakeholders collaborate fast, get requirements fast and also tackle the challenges that the teams have and then at the end of the course, I got the last two years very positive results with the outcome of prototyping and with the students desire to make a startup out of it. Now, this puts context to the next question. You as a team or individuals here are motivated after doing this kind of project that you are doing here to create a startup in the future based on this project or other projects because but first, let's answer the question based on this project.

**Interviewee 3:**

Can I just ask for context? Is it the startup that does the thing with the poles or with checking the rot how rotten the telephone poles are?

**Interviewer:**

I didn't quite get it Olof...

**Interviewee 3:**

The startup, I just wondered for context, the startup you're asking about or you mentioned is that the one that is measuring how rotten telephone poles are throughout the country?

**Interviewer:**

No, startups are created from students in the context that I put it in, it's called experts in teamwork course. Have you done the eight day course? No, you do next semester, I'm pretty sure and you choose a village theme, whatever you like but this doesn't matter, what I'm trying to say is, you as a team having this project in front of you, brought from the customers, do you plan to make a startup out of this, you develop an MVP, right? A minimum viable product, a prototype? It is function able, it is tested, it can be put to use to the market? If you improve it a bit more or even as it is, then are you planning to just deliver this to the customers and say, goodbye after the course is finished or does the project bring some startup context for you like, oh, I want to develop this, I want to make a startup out of this project?

**Interviewee 4:**

Not this project in particular for me, well, I don't know, I feel like the essence of it is that it is a free service for students so I think it would be very difficult to profit from. So, also I don't feel like if I were to profit from it, that would be enough for me to want to put in the work to make this a startup but I like you're working with us and I could see myself starting a startup with a different idea.

**Interviewer:**

Did the course contribute to this mindset like, I want to make a startup now I know how to build a system so I want to make a startup was it like this, or it was a differently?

**Interviewee 4:**

I'll be honest and say I had or I already have a lot of motivation for starting new startup, I'm quite involved in the innovation environment at NTNU and so I think that has made a bigger contribution than this course but this course might help to build my confidence in for example, scrum methodology and technologies that I might make a start up from.

**Interviewer:**

So, it goes back to the skills aspect?

**Interviewee 4:**

Yes, I feel like this is mostly for skills.

**Interviewer:**

How about the rest of you? I want to hear the voice of everyone about this.

**Interviewee 1:**

I wouldn't say the course has motivated me more to be innovative startup, but it kind of like taught me or how you could go about starting.

**Interviewee 2:**

Yeah, for me, it gave me more like, technical competence rather than motivation, this specific project isn't something I would try to go for at least I think. I don't think it's interesting or there's not a lot of money-making possibilities as well.

**Interviewee 5:**

I will say that the skills I've learned in project management and also the coordination within the team has given me more confidence. So, I think the motivation for a startup has increased, but not by that much. But that again, is because I am more of a low risk person and then the startup is not so motivating for me.

**Interviewee 3:**

I think just this project, not the startup, not a startup value or project except learning how the way it's coded and learning how the way it's governed or structured all the tasks, all the responsibilities, etc. that is more of a learning or a basis of learning for doing something or for starting a startup but the project we have gotten, it's not so very much expandable I would say and it also with experience I have so far, I feel that I am lacking more and more of the skills I need in order to develop the product I want to develop in the certain way I want to develop it, but if you end also to choose to say something more, I usually, I like to spend a lot of time to think about startups, started back days, different ways to implement them and so forth.

**Interviewer:**

Okay, but would you have preferred to have some degree of freedom when you choose the project because you were randomly assigned to itm right? So there would have preferred that you choose your own project, maybe that would have helped in this?

**Interviewee 4:**

Yes, absolutely.

**Interviewee 3:**

The only thing I see is wrong with that is that if you're one customer, then what probably one customer would get, like 20 groups that would try to answer but if that's not a problem, then I think that should be the case.

**Interviewer:**

But you can consider customers being busy, like this project is pick this, you were first in first out or you find an algorithm for that right to choose?

**Interviewee 4:**

Maybe you could name three of the projects you want to work with and perhaps why and then you could maybe go through the applications and choose people who seem most excited about the project.

**Interviewer:**

So you owned some participation part on this, you would have preferred the participation part in choosing the project?

**Interviewee 4:**

Yes

**Interviewee 3:**

For me, myself, I actually liked a bit just being assigned to the group because of my lack of knowledge, but if I had more knowledge than for sure, I would like to pick my own topic.

**Interviewee 2:**

If you're going to pick your own project as well, then you don't have the random, like group members or dynamics because then you can plan with people you already know from beforehand.

**Interviewer:**

Okay and that is positive or negative?

**Interviewee 2:**

I would say it's more negative because you already know those people and you maybe work together on other projects with them. Now, it's more you just get around the group around the project and you have to figure it out.

**Interviewee 4:**

Perhaps you could get the group and then the group together could apply for projects.

**Interviewer:**

Any other ideas how this should be done?

**Interviewee 3:**

How to apply or how for groups to apply to a project they want or how to...

**Interviewer:**

How to have more democracy in picking up the project that you prefer to work on during the semester?

**Interviewee 3:**

Well, you could say, it's the University and is very fond of looking at grades, so you could have a grading system for it.

**Interviewer:**

Now, I'm not making decisions, but I'm just trying to explore opportunities and so I'm not saying what system works, I don't know what I can complain about this, I got one recent paper accepted about this course here and it's the first time I'm doing it but what I observed was that there was no iteration with the projects and the customers, which means that the customers proposed projects, those projects are being selected but then there is no iteration saying, Okay, can you make it a bit better? Can you present the project ahead, so we can have a better overview, what we can improve for students and so on? It is just, for instance, most of the project don't address don't really address any UN goals for instance, that's an example and that could be relevant because you do a system for like you say, sports and then use sports, whatever, but who cares about this? What is the impact in the society? We engineers usually like to make impact, right? Most of their systems today, whatever you call them, Facebook, Instagram, whatever other software solutions you have, those solutions have made bigger impact in the society and these are software systems.

**Interviewee 4:**

I'm actually quite unhappy with the project. It's just not something I would make a startup from. So, I think this might have What did they say 40,000 users from a school project, that's not too bad. I feel like that's interesting and it's something that it hits close to home since I'm engaged in student sports and I also tried a random sport when I just got here. So, I think this would be actually a cool platform.

**Interviewer:**

Yeah, I'm not saying that this is bad, but I am saying that, in general, there should be more iteration and more opinions from students and a bit more freedom to make the course better.

**Interviewee 3:**

If I could just add, if you wanted to ask or if you want to divide people among projects, groups, you could also ask for their motivation, like, is the motivation to develop more within a certain technology? Is it to learn a new certain technology or is it to just learn a new technology? That's like three options I just thought of but something like that could help diversify or split groups or I mean make groups.

**Interviewer:**

Yeah, but in like every big organization, or every big family, not everybody can be happy. So, even with many solutions proposed, I think there will be still people that will complain, I wanted this differently or this and like that, I guess there are solutions there, but and improvements, but nothing is going to be perfect anyways and almost last question. You have a very good team dynamics, right? And do you like each other now in the context of doing this project and so on, you understand how to collaborate and so on and so forth and some of you say we want to build startups because we have our own initiative and motivation part and so like Erling says, I am a lot into innovation from before and so on. Now, if you plan to build a startup would you evolve team members that are exist, I know it's a bit uncomfortable question, but only evolve each other in making a startup in the future, like you see, all Erling sees that, for instance, Eric or Christopher have very good skills in front end and then Edward has very good skills in backend, I'm just saying things now and then Olof is very good product owner and then say, okay, I want to build this startup about this new project so would you involve, not you in particular ending, but everybody, would you involve the other team members?

**Interviewee 2:**

I mean, this sort of networking, if I needed people, I would use anyone I've been working with, from the whole university, the whole education really? So yeah, if I needed people, I would ask around.

**Interviewee 1:**

I would probably first and foremost, like, go to my closest friend first and I feel like this group might be second or something and I would be open to involve...

**Interviewer:**

Sorry for the uncomfortable question

**Interviewee 3:**

For me, I think about this all the time, like every course, I take everything I do here and to new, I know I'm one of the best universities, I know, I have so much knowledge around me that I will never acquire in my whole life. So, I consciously process whatever everyone else does at all time, if I ever were to have an interesting idea and I could pitch them for them or pitch it for them but I always felt like this. I always consider these things.

**Interviewee 4:**

I agree, I could definitely see myself involving people from this team.

**Interviewer:**

Any reasons…?

**Interviewee 4:**

This project allows me to see how people work and see if I can work with them. So, yes, I think I liked what Edward said about that is true for most of the projects we do in teams, but this is probably the largest group project we've had. So, it's also the group where I've gotten the most insight into other members, motivations and skills.

**Interviewee 1:**

I also like that the group members are putting a lot of work and when are motivated even though it's just a course. It's just a school project, but people still put in a lot of time and work for it.

**Interviewer:**

But this is out of curiosity more than my research question, but let's say what do you think is going to differ when you go to work setting? If you start working on the project, what is going to be different of course money...

**Interviewee 2:**

Like I will work with people from different backgrounds more now everybody has the same background...

**Interviewer:**

Oh, yeah why not?

**Interviewee 5:**

You mean like full time? Then a big difference is that our schedules would be somewhat more similar.

**Interviewee 3:**

Good point.

**Interviewer:**

The schedules could be similar or what did you say, Christopher, I don't get it.

**Interviewee 5:**

I think that our schedules would be easier to coordinate because now we have lectures at different times and some of us do some extra work at grocery store one day a week.

**Interviewer:**

Let's say I am a bad project manager and they make these questions to you. Not questions, but demands, we have three projects this month and then you start working on the first project and then I tell you all stop this now because we need to take care of this other project and then stop this other thing now because we are going to do something else and event for the company and then stop this now you continue programming and then stop this now because you have to take a trip and meet these people to get some requirements in Oslo and, if you have this kind of situations, do they differ from the context that you have now?

**Interviewee 5:**

Yes because now we have sort of like very important, what's it called, happenings, like the exams and they have different exams and we will always give those very high priorities.

**Interviewer:**

If you have a very important customer to get on board, then that's also a high priority, it's like an exam.

**Interviewee 5:**

Yeah, but all the work you do for the company will be for the company but now it's like 50% of the time I put in this for this project, while the other 50 is for something else.

**Interviewer:**

I'm trying to get you in a different context, today a lot of developers work remotely, you know that. Let's say you work for three different companies now remote the one something and the other one wants something else and you want to be rich, because you make a lot of money. They pay very well for remote work, I work from home. So, it goes back to what changes again. What do you think really changes from work? This is your opinion, it's not mine but what changes from work and what changes while doing this course?

**Interviewee 4:**

Well, you might not be as close to the people you're working with us, we are here, it will be quite a different situation, so more focus on just delivering instead of working together.

**Interviewee 3:**

I wouldn't say everything is the same until Erling said actually exactly what he said now because we're all open to new, we're all doing this, and we’re all doing something. So, we have some form of coherence or we have some form of tied knots or I don't know how to say it, but I don't know how that would be in the actual working environment but that might be the difference.

**Interviewer:**

How about accountability if the project fails because the game is not good, whatever, then what happens, then? I think, is that pressure for you on your shoulders? Do you feel like oh, if it fails, of course you don't, if it fails, it means something different in context of work, it means that it doesn't run and it doesn't work and it means it has a lot of bugs and then you ship it out and the company loses a lot of money while here you don't have the pressure. Do you feel that pressure on your shoulders? Of course, there is a pressure I don't get the good grade, but nobody's asking you to make a good enough system that works in every context, right? So you're being asked to make a good system, but eventually, who is going to test your code and wondering who is going to use your code for real? The external assessor, what do you think?

**Interviewee 4:**

I suppose our NSI owners?

**Interviewer:**

Yeah, but I mean, when they evaluate the project, they read your report or they run your code?

**Interviewee 4:**

I hope both

**Interviewer:**

Both okay, maybe...

**Interviewee 2:**

Evaluation of the project, I think the report is more important but for the customer, we also want to deliver a working project and with good code because they want to keep working on this even after the project or somebody else is gonna take over. Like, we still have some pressure to actually deliver something good, they want to have a working project after we're finished with this course.

**Interviewer:**

Well, what would increase the pressure? What could make the pressure that makes you feel like, oh, this is the real work is not like a joke, people need to use this system.

**Interviewee 3:**

To me, I feel that pressure from the beginning, it's like, as I said, this course is a big is like my favorite course so far, and all that. So, I think for me, it's a bit difficult to answer but my motivation is because this is the real, it's like a summer job but with a team made up of just students and the supervisor, who is a professor. So, it's very interesting to learn or to hear everyone's aspect of the course and what is happening. So, my motivation is not necessarily the product. It is, but my motivation is just gathering information and learning how people deal with this type of situation and that would be like the paramount for me or my learning curve goes way more because of that.

**Interviewee 4:**

I think that maybe if you were offered a summer internship working with this, if it runs or if it works well enough, that could definitely be an incentive.

**Interviewer:**

And if, if the customers tell you, oh, this is a side project for us, but we want to build a start up with it, if you do good job, then you can be part of the startup, would this be a motivational factor or?

**Interviewee 1:**

That's a lot more motivational...

**Interviewee 2:**

For me, it's the same really

**Interviewer:**

Yes, doesn't change much. So, I hear employment opportunity or internship opportunity and startup, maybe opportunity, startup creation opportunity and maybe there is no opportunity and even if you have those opportunities, nothing changes. Edward, can you elaborate a bit more, why?

**Interviewee 2:**

I mean, if there was an opportunity for work, of course, I would still, even if it wasn't, I would still work to the best of my ability because I sort of make a lot of pride in things I do, I think, I want to be professional and sort of do a good job and if I get to, you know, work from it or not, doesn't really matter. To me, it's just produce a good product and learn skills from it basically, as my goals for this course.

**Interviewer:**

Erling, are you gonna say something or...

**Interviewee 4:**

Just that when I say a startup motivates me, it's kind of the same as with employment, I think I would look at it as a form of employment and maybe a way to get some points out of it, like stocks.

**Interviewer:**

Okay, but you know what big important universities say like Harvard or this very famous MIT or whatever; they incentivize students to create their own jobs instead of looking for a job. You might have heard this around, it's important to look at those role examples, role models because those role models employ you guys today, that's the point. It's all these guys that 20 years ago, were making Facebook or whatever, APL or whatever companies they have built today, they are employing a lot of engineers and honestly speaking, everybody should feel free to try and to see what could be the opportunity out there. I don't have more questions. I would like to thank you for coming here today and then I'd like to hear about pizza preferences and what is the preferred date for everyone. Even for those that didn't come, it doesn't matter, we share food and I hope Erik you turned out to be fine with this test about Corona and you can join everybody. So, just write me a note on Slack, what's your preferences and I will do my best. I might be joining I don't know but let's see what what you decide either. Yeah do you have any question yourselves? But for the ones that came late, I'm recording this but I will not use your video here, I will just use the audio like it is stated in the NSD forms and I hope you've signed them and I agree with that.

**Interviewee 3:**

Do you need those forms back?

**Interviewer:**

Yes, but I can collect them anyway some time I can't do and meet with you guys for supervision so it's fine.

**Interviewee 3:**

I was just wondering what are like the major failures or faults of the course now, as you see it, flaws.

**Interviewer:**

One flaw is that students need to work very closely with customers, more closely than they are doing now and they need to, at the very beginning of the course, everybody is confused usually it's like, oh, what is the project about, what are requirements about, what are we going to do and so on and so forth and some people lack skills and it's obvious because even if you have a random project, of course, you don't have like some skills, technical skills, especially. So, I think the course is lacking this kind of, we call it boot camps. Every company today when they hire you, even though you are a an excellent developer, in Django Python, whatever and even in C Sharp or you go to Microsoft, they give you two months or two weeks of training, at least two weeks of training, called boot camp training, where you code and you learn things, right? They give you this opportunity, even though you are very good and this is because they want to help you understand about their technologies, not programming in general, understand my point. So, I think activities like three days activities, even if you make an hackathon, even if you can make something like similar, like a boot camp that could help the teams get on board fast or what's Django what's this? What's the rest API? How can we implement this fast? Yeah, this is the flow I see and this is one aspect that I would have loved to introduce in the course next year, like have the customers, work very tightly with the students three days in a row, learn everything about the product, the project cetera, even writing those user stories, very good, even writing those, backlog, excellent and working very closely in the iterating a lot at the beginning. That's very important and of course, things will go, like normal with fragile preferences and so on. One of the major projects I've had the challenges was with two, wouldn't say Norwegians because I've worked with Norwegians all the time but with two guys who were very keen on the technology and they were talking technology, the first two weeks, I was almost fed up listening only technology. You have to listen about harder technology, softer technology, but it was good because you couldn't do the project if you don't understand those things. So, nobody knows everything even in work settings but you can do anything. Not everything anyway, so you can try, nothing is impossible. Yeah, so yes, Olof I can't say a lot of things but this is the flow of the major flow I see. I don't know what you guys think, would you have preferred something like...

**Interviewee 3:**

I think that was a awesome suggestion.

**Interviewer:**

Would you have preferred to have learned quick about front end, back end whatever and then do the project smoothly, relaxed?

**Interviewee 3:**

You can have a full stack, like a full tutorial basically and then just everyone does something and yeah that would be awesome.

**Interviewer:**

So they explain everything that they are expecting from you, if they are capable because some customers might not be capable but still you can build good requirements become a very good product owner etc. because these are things going on in industry anyways, we know that but time has run up I think I got more than 30 minutes that I planned. I thank you very much. I'll please appreciate if you send whatever preferences you have for food and I'll do that. Okay, this week or next week, whenever you prefer. It's not mandatory to say this week, but at least before the course ends and any other question or suggestion? Okay, I need to eat food as well. So, we meet on Friday, online or in person, I don't know but we meet on Friday, I would love to discuss how the project is going now and if you have more challenges or anything that you need to do, I will just end the call now because then the recording goes to the cloud and I can get back. Thank you so much, guys. Thank you, everybody, for joining today.