# Project theme #3: Course marketplace

IDATA2301 Web technologies

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# Introduction

This document describes a project specification that you should follow in the project. The idea is to emulate a real-life situation where you get a specification from a customer. As it typically is in real life, not everything is specified in detail. You have the freedom to improvise a bit (for example, if you find better images, or better product descriptions), but you should stay within the general theme. I.e., the website must be a web aggregator portal for the provided company, the provided products.

Remember to include the following disclaimer somewhere in your website (on the bottom?):

> This website is a result of a university group project, performed in the course IDATA2301 Web technologies, at NTNU. All the information provided here is a result of imagination. Any resemblance with real companies or products is a coincidence.

All the provided material is free to use for non-commercial purposes.

# About the portal

The general purpose of the portal is a price overview for visitors. The visitors should be able to find the best supplier for the product of their interest. In addition to that, the website should show information about our company (we are a company summarizing online course offers), but that is secondary – the focus should be on product search.

The absolute "must functionality" is a search field, where the user can enter any word or combination of words, and the application should find the best product matches. We are open to suggestions on how the search could work (what values are searched, advanced-search options, etc).

# About the products

We provide an overview of online courses. Each product is sold by a third-party online course provider. We don't host any courses ourselves. We have agreements with the course providers, they pay us a fee for advertising their courses on our site. However, we don't have any exclusive partnerships with any of the providers. All the courses are treated equally. We may have some sales offers now and then, which are managed solely by us (not the course provider). The course providers have signed an agreement allowing us to make discounts of their courses up to 3 times a year.

# Company name

Company name: Learniverse Connect

# About us and about our products

Welcome to Learniverse Connect, your premier destination for unlocking a world of knowledge and skills through our dynamic online course marketplace. At Learniverse, we believe that learning knows no bounds, and our platform is designed to empower individuals like you to embark on a journey of lifelong learning. As a marketplace, we bring together a diverse array of courses from passionate and expert third-party providers, ensuring that you have access to a comprehensive range of subjects and skills to fuel your personal and professional growth.

Our commitment to quality is unwavering, and we meticulously curate our course offerings to guarantee a premium learning experience. Whether you're a budding entrepreneur looking to master the intricacies of business strategy or someone seeking to delve into the realms of creative arts, Learniverse Connect is your trusted companion on the path to success. Join our vibrant community of learners, connect with top-notch instructors, and explore a rich tapestry of knowledge that awaits you. At Learniverse, we envision a world where learning is not just a destination but a continuous, enriching journey, and we invite you to be a part of this transformative experience. Embrace the future of education with Learniverse Connect - where knowledge meets opportunity.

At Learniverse Connect, we pride ourselves on offering courses that not only equip you with valuable knowledge and skills but also pave the way for tangible recognition through certifications. Upon successfully completing any course on our platform, you gain the opportunity to take the corresponding certification exam, validating your newfound expertise. We understand the importance of certifications in today's competitive landscape, and that's why we stand behind our courses with a robust money-back guarantee. If, for any reason, you don't pass the certification exam after diligently completing the course, we ensure a hassle-free refund, underscoring our commitment to your success and confidence in the quality of our educational offerings. Your journey with Learniverse is not just about learning; it's about achieving and celebrating your milestones with the assurance that your investment in education is backed by our unwavering support.

While our courses predominantly take place in the virtual realm, we take pride in providing a unique blend of online learning and real-time engagement. Each course is facilitated by a dedicated physical instructor who not only guides you through the material but also ensures an interactive and dynamic learning experience. To further enrich your educational journey, we offer workshop sessions, adding a hands-on dimension to the online courses. While these courses are organized at specific dates to accommodate the workshop sessions, we understand the importance of flexibility. Rest assured, our commitment to your convenience is paramount, and the courses are strategically repeated several times a year, offering ample opportunities for you to participate and thrive in your learning pursuits.

## Design

We want to give an impression of a serious learning portal, which is meant for professionals. At the same time, there is some room for playfulness. The portal does not need to be boring.

## Competitors

Our main competitors are Udemy, TutorialsPoint, and AWS Skill Builder.

*(Note: skip the details on content competitiveness, focus more on the platforms. Also: don't fear the vast functionality the competitors have; you don't need to create all of that!)*

## Products

See the list of products provided below. Note: in real life there would be an administrative interface for product management. In your project it is fine if you create static products.

If you feel that you need more products for the site to look *natural,* feel free to add other products, following the general theme.

## Categories

Currently the provided courses fit into one of the following four categories:

- Information Technologies
- Digital Marketing
- Business and Entrepreneurship
- Data Science and Analytics

See list of courses in each category below.

## Information Technology Courses

We provide the following courses within this category:

- Real-Time Programming in Java
- SQL Essentials
- Creating Web Application with .Net
- Azure Fundamentals
- Azure Administration
- AWS Cloud Practitioner

### Real-Time Programming in Java

Product ID: 1

Title: Real-Time Programming in Java

Covered topics / keywords: Java, real-time programming, multi-threading, programming

Level: (Expert)

Closest course session: June 3$^{rd}$ – June 28$^{th}$

Course size (ECTS credits): 7.5

Hours per week: 40

Related certifications: Java SE 17 Programmer Professional

Course Providers:

- NTNU: 29'999 NOK
- Oracle: 32'000 NOK

Description: Embark on a transformative learning experience with our expert-level online course, "Real-Time Programming in Java." Designed for seasoned developers and Java enthusiasts seeking mastery in real-time applications, this advanced course delves deep into the intricacies of leveraging Java for mission-critical systems. Explore cutting-edge concepts such as multithreading, synchronization, and low-latency programming, equipping you with the skills needed to build responsive and robust real-time solutions. Led by industry experts with extensive hands-on experience, this course combines theoretical insights with practical application, ensuring you not only grasp the theoretical underpinnings but also gain the proficiency to implement real-time solutions confidently. Elevate your Java programming

expertise to new heights and stay ahead in the ever-evolving landscape of real-time systems with our comprehensive and immersive course.

## SQL

Product ID: 2

Title: Introduction to SQL Essentials

Covered topics / keywords: SQL, relational databases, MySQL

Level: Beginner

Closest course session: June $10^{th}$ – June $28^{th}$

Course size (ECTS credits): 2

Hours per week: 20

Related certifications: SQL Fundamentals

Course Providers:

- Apache Software Foundation: 800 USD (Note: you can choose to either convert this to NOK, or support multiple currencies)
- NTNU, 10'000 NOK
- Pearson: 899 USD

Description: Dive into the fundamentals of database management with our beginner-level online course, "Introduction to SQL Essentials." Geared towards those new to the world of databases and SQL, this course provides a comprehensive foundation for understanding and utilizing SQL for effective data management. While MySQL is touched upon to broaden your practical knowledge, the core focus is on SQL's universal principles applicable across various database systems. Led by seasoned instructors, the course covers database design, querying data, and basic data manipulation using SQL commands. With a hands-on approach, you'll engage in practical exercises to reinforce your learning, ensuring you gain the skills necessary to navigate and interact with databases confidently. Whether you're a budding developer, analyst, or anyone eager to harness the power of databases, this course offers an accessible entry point into the world of SQL, setting the stage for your future success in data-driven environments.

## Creating Web Application with .Net

Product ID: 3

Title: Creating Web Application with .Net

Covered topics / keywords: web, programming, .net, C#

Level: Beginner

Closest course session: Aug $5^{th}$ – Aug $16^{th}$

Course size (ECTS credits): 4

Hours per week: 40

Related certifications: .Net Developer Fundamentals

Course Providers:

- Microsoft: 2999 NOK
- Pearson: 3000 NOK
- Oracle: 200 USD

Description: Embark on your journey into web development with our beginner-level online course, "Creating Web Applications with .NET." Tailored for those stepping into the dynamic world of web development, this course provides a solid foundation in utilizing the versatile .NET framework to build powerful and interactive web applications. Guided by experienced instructors, you'll explore fundamental concepts such as web application architecture, user interface design, and server-side scripting using .NET technologies like ASP.NET. Throughout the course, you'll engage in hands-on projects that walk you through the entire development process, from designing responsive user interfaces to implementing server-side functionality. Gain practical skills in C# programming and discover how to leverage the robust features of .NET to bring your web applications to life. Whether you're a programming novice or transitioning from another language, this course offers a welcoming entry point into the exciting realm of web application development with .NET, setting you on a path to create dynamic and engaging online experiences.


## Azure Fundamentals
Product ID: 4

Title: Azure Cloud Fundamentals

Covered topics / keywords: Azure, cloud services

Level: Beginner

Closest course session: Aug 5$^{th}$ – Aug 30$^{th}$ (4 weeks)

Course size (ECTS credits): 2

Hours per week: 10

Related certifications: AZ-900 Azure Fundamentals

Course Providers:

- Microsoft, 200 USD
- NTNU, 1800 NOK
- Pearson, 200 USD

Description: Embark on your cloud computing journey with our beginner-level online course, "Azure Fundamentals," meticulously crafted to prepare you for the AZ-900 exam. Whether you're new to cloud

technologies or seeking to validate your foundational knowledge, this course provides a comprehensive introduction to Microsoft Azure, one of the industry's leading cloud platforms. Delve into the essentials of cloud concepts, Azure services, pricing, and compliance, all while guided by expert instructors who understand the importance of building a strong cloud foundation. Through a combination of engaging lectures, hands-on labs, and real-world scenarios, you'll gain practical insights into deploying solutions on Azure and mastering fundamental cloud principles. By the end of the course, you'll not only be well-prepared to ace the AZ-900 exam but will also have a solid understanding of Azure's capabilities, empowering you to confidently navigate the vast landscape of cloud computing. Join us on this educational journey and unlock the potential of cloud technology with Azure Fundamentals.

## Azure Administration

Product ID: 5

Title: Azure Administration (Intermediate)

Covered topics / keywords: Azure, cloud services, administration

Level: Intermediate

Closest course session: Sep 2$^{nd}$ – Dec 20$^{th}$

Course size (ECTS credits): 4

Hours per week: 5

Related certifications: AZ-104 Microsoft Certified Cloud Administrator

Course Providers:

- Microsoft, 400 USD
- NTNU, 3600 NOK
- Pearson, 400 USD

Description: Elevate your cloud expertise with our intermediate-level online course, "Azure Administrator," meticulously designed to prepare you for the AZ-104 exam – your gateway to becoming a Microsoft Certified Cloud Administrator. Tailored for individuals with a foundational understanding of Azure, this course takes a deep dive into advanced administration and management tasks, honing the skills required for efficient cloud operations. Led by seasoned Azure professionals, you'll explore intricate topics such as virtual networking, identity management, and governance strategies, gaining hands-on experience through practical exercises and real-world scenarios. The course's comprehensive coverage aligns seamlessly with the AZ-104 exam objectives, ensuring that you not only pass the certification but emerge as a proficient Azure Administrator capable of implementing robust cloud solutions. Whether you're looking to enhance your career or solidify your position as a cloud expert, this course is your key to mastering the intricacies of Azure administration and achieving Microsoft Certified Cloud Administrator status. Join us on this transformative journey towards advanced Azure proficiency.

## AWS Cloud Practitioner

Product ID: 6

Title: AWS Cloud Practitioner

Covered topics / keywords: AWS, cloud services

Level: Beginner

Closest course session: September 9$^{th}$ – September 20$^{th}$ (2 weeks)

Course size (ECTS credits): 2

Hours per week: 20

Related certifications: CLF-C02 AWS Certified Cloud Practitioner

Course Providers:

- Amazon: 100 USD
- Pearson: 120 USD
- NTNU: 1800 NOK

Description: Discover the fundamentals of cloud computing in our beginner-level online course, "AWS Cloud Practitioner," designed to prepare you for the CLF-C02 certification exam. Tailored for individuals with minimal prior experience in cloud technologies, this course provides a robust foundation in understanding the essential concepts of Amazon Web Services (AWS). Led by experienced AWS professionals, the course delves into core topics, including cloud architecture, AWS services, security, and pricing models. Through dynamic lectures and hands-on labs, you'll gain practical insights into navigating the AWS console, setting up basic infrastructure, and comprehending key cloud principles. By the course's end, you'll be well-equipped to excel in the CLF-C02 exam and possess a foundational understanding of AWS, empowering you to confidently explore and leverage cloud services. Join us in this educational journey, and initiate your AWS Cloud Practitioner certification with assurance and proficiency.

## Digital Marketing Courses

We provide the following courses within this category:

- Search Engine Optimization (Intermediate)
- Social Media Marketing (Intermediate)

### Search Engine Optimization

Product ID: 7

Title: Search Engine Optimization

Covered topics / keywords: keyword research and analysis, technical SEO optimization, off-page SEO strategies, advanced analytics and reporting

Level: Intermediate

Closest course session: Aug 5$^{th}$ – Auth 30$^{th}$

Course size (ECTS credits): 2

Hours per week: 4

Related certifications: SEO Wizard

Course Providers:

- Adobe: 66'000 NOK
- Apple: 80'000 NOK
- Google: 6000 USD
- Microsoft: 6000 USD
- Amazon: 6000 USD

Description: Deepen your expertise in the digital landscape with our intermediate-level online course, "Search Engine Optimization (SEO)." Tailored for marketers, business owners, and digital enthusiasts looking to refine their online presence, this course takes a comprehensive dive into the intricacies of SEO strategies and techniques. Led by seasoned SEO professionals, the course covers advanced topics such as keyword research, on-page and off-page optimization, technical SEO, and analytics. Through a blend of theoretical insights and practical exercises, you'll learn how to enhance website visibility, improve search engine rankings, and drive organic traffic effectively. Stay ahead in the ever-evolving digital landscape by mastering the art and science of SEO. Whether you're aiming to boost your business's online visibility or embark on a career in digital marketing, this course equips you with the skills and knowledge needed to navigate the complexities of SEO with confidence and success. Join us and elevate your digital presence with our intermediate-level SEO course.

## Social Media Marketing
Product ID: 8

Title: Social Media Marketing

Covered topics / keywords: strategic storytelling, targeted engagement techniques, data-driven optimization

Level: Intermediate

Closest course session: Aug 5$^{th}$ – Auth 30$^{th}$

Course size (ECTS credits): 2

Hours per week: 4

Related certifications: Certified Social Alchemist

Course Providers:

- Adobe: 66'000 NOK
- Apple: 80'000 NOK

- Google: 6000 USD
- Microsoft: 6000 USD
- Amazon: 6000 USD

Description: Elevate your digital marketing prowess with our intermediate-level online course, "Social Media Marketing." Tailored for marketers, business professionals, and enthusiasts seeking to harness the power of social platforms, this course provides an in-depth exploration of advanced social media marketing strategies. Led by industry experts, you'll delve into nuanced topics such as audience targeting, content optimization, social media advertising, and analytics. Through a blend of theoretical insights and hands-on exercises, you'll gain practical skills to create compelling social media campaigns, foster audience engagement, and measure the impact of your efforts. Stay at the forefront of digital marketing trends by mastering the art of crafting impactful narratives, building brand loyalty, and leveraging diverse social channels. Whether you aim to enhance your business's online presence or advance your career in digital marketing, this course equips you with the tools and knowledge to navigate the dynamic landscape of social media marketing with confidence and proficiency. Join us and amplify your social media marketing expertise with our intermediate-level course.

## Business and Entrepreneurship Courses

We provide the following courses within this category:

- Business strategy (Expert)

## Business Strategy

Product ID: 9

Title: Business Strategy

Covered topics / keywords:

Level:

Closest course session: June 3rd – November 29th

Course size (ECTS credits): 10

Hours per week: 10

Related certifications: Certified Strategic Business Architect (CSBA)

Course Providers:

- NTNU: 50'000 NOK
- Microsoft: 50'000 NOK
- Handelshøyskolen BI: 50'000 NOK

Description: Master the art of strategic thinking with our expert-level online course, "Business Strategy." Tailored for seasoned professionals, entrepreneurs, and strategic leaders, this course offers an immersive exploration of advanced business strategy concepts and applications. Led by industry thought

leaders, you'll delve into intricate topics such as competitive analysis, market positioning, disruptive innovation, and global strategic management. Through case studies, simulations, and real-world scenarios, you'll sharpen your ability to make informed strategic decisions that drive long-term success. This course goes beyond the basics, challenging you to synthesize diverse business elements into a cohesive and forward-thinking strategy. Whether you aspire to lead a multinational corporation or refine your entrepreneurial ventures, our expert-level Business Strategy course empowers you to navigate complex business landscapes with foresight and precision. Join us in this transformative learning journey and elevate your strategic acumen to new heights.

## Data Science and Analytics Course

We provide the following courses within this category:

- Machine Learning Basics with Python (Beginner)
- Image Recognition (Intermediate)
- Databricks fundamentals (Beginner)

## Machine Learning Basics with Python

Product ID: 10

Title: Machine Learning Basics with Python

Covered topics / keywords: Python, machine learning, programming, data science

Level: Beginner

Closest course session: Aug 19$^{th}$ – Augh 30$^{th}$

Course size (ECTS credits): 2

Hours per week: 10

Related certifications: Machine Learning Fundamentals

Course Providers:

- NTNU: 20'000 NOK
- University of Oslo: 20'000 NOK
- University of Bergen: 20'000 NOK

Description: Embark on your journey into the exciting realm of artificial intelligence with our beginner-level online course, "Machine Learning Basics with Python." Tailored for individuals new to the world of machine learning, this course provides a comprehensive introduction to the fundamental concepts and techniques using the versatile Python programming language. Led by experienced instructors, you'll explore the basics of supervised and unsupervised learning, delve into popular machine learning algorithms, and gain hands-on experience through practical exercises. No prior coding experience is required, making this course an ideal starting point for beginners eager to grasp the essentials of machine learning. By the end of the course, you'll have a solid foundation in using Python for machine learning applications, empowering you to unravel the mysteries of data and embark on a fascinating

journey into the world of intelligent algorithms. Join us and demystify the basics of machine learning with Python in this accessible and empowering course.

## Image Recognition

Product ID: 11

Title: Image Recognition

Covered topics / keywords:  Python, machine learning, programming, data science, neural networks, image processing

Level:  Intermediate

Closest course session: Sep 2$^{nd}$ – Sep 27$^{th}$ (4 weeks)

Course size (ECTS credits): 4

Hours per week: 20

Related certifications: Machine Vision Associate

Course Providers:

- NTNU: 30'000 NOK
- University of Oslo: 30'000 NOK
- University of Bergen: 30'000 NOK

Description: Deepen your expertise in the realm of artificial intelligence with our intermediate-level online course, "Image Recognition with Python." Tailored for those with a foundational understanding of machine learning, this course immerses you in the intricacies of image recognition techniques and technologies using the powerful Python programming language. Led by seasoned instructors, you'll explore advanced concepts such as convolutional neural networks (CNNs), image preprocessing, and transfer learning. Through hands-on projects and real-world applications, you'll sharpen your skills in training models to recognize and classify images with precision. This course is ideal for individuals looking to expand their knowledge in computer vision and image processing, and it serves as a stepping stone for professionals aspiring to integrate image recognition capabilities into their projects. Join us in this intermediate-level course, and unlock the potential of image recognition with Python, advancing your proficiency in the exciting field of artificial intelligence.

## Databricks fundamentals

Product ID: 12

Title: Databricks fundamentals

Covered topics / keywords: Python, machine learning, programming, data science, neural networks, Databricks

Level: Beginner

Closest course session: Aug 19th – Augh 30th

Course size (ECTS credits): 2

Hours per week: 10

Related certifications: Databricks Practitioner

Course Providers:

- NTNU: 20'000 NOK
- University of Oslo: 20'000 NOK
- University of Bergen: 20'000 NOK

Description: Embark on your data journey with our beginner-level online course, "Databricks Fundamentals." Designed for individuals new to the world of big data and analytics, this course offers a comprehensive introduction to the essential concepts of Databricks, a leading unified analytics platform. Led by experienced instructors, you'll navigate through the fundamentals of data exploration, data engineering, and collaborative data science using Databricks. No prior experience with big data technologies is required, making this course an ideal starting point for beginners eager to harness the power of Databricks for streamlined data processing and analysis. By the end of the course, you'll have a solid foundation in using Databricks to uncover insights from large datasets, setting you on a path towards mastering the intricacies of modern data analytics. Join us and demystify the fundamentals of Databricks in this accessible and empowering course.

## Product images
You can use the following images for the products (you may want to process those – resize, etc):

1. Java: https://en.wikipedia.org/wiki/Java_%28programming_language%29#/media/File:Java_programming_language_logo.svg
2. SQL: https://thumb.tildacdn.com/tild6238-3035-4335-a333-306335373139/-/format/webp/IMG_3349.jpg
3. .Net web: https://fiverr-res.cloudinary.com/images/q_auto,f_auto/gigs/223525883/original/75355314f2634045dbac0e3ba746934e4fa701eb/do-develop-in-asp-net-mvc-asp-net-core-asp-net-web-api.jpg
4. Azure (both courses): https://digitaltransformation.org.au/sites/default/files/2022-01/azure.png
5. Amazon Web Services (AWS): https://blog.adobe.com/en/publish/2021/08/31/media_1649ebc3fbbce0df508081913819d491fc3f7c7a9.png?width=750&format=png&optimize=medium
6. Search Engine Optimization: https://www.rgbwebtech.com/blogs/images/uploads/what-is-seo-search-engin-optimization.png
7. Social Media Marketing: https://hotdogmarketing.net/wp-content/uploads/2021/11/110321-HDM-Social-Media-Marketing-02-1024x576.png

8. Business Strategy: https://granthigginson.com/wp-content/uploads/2017/09/business-strategy.jpg
9. Machine Learning: https://miro.medium.com/v2/resize:fit:1358/1*cG6U1qstYDijh9bPL42e-Q.jpeg
10. Image Recognition: https://www.perficient.com/-/media/images/insights/hero-images/research_image-recognition-accuracy-study_hero.ashx?h=931&iar=0&w=1400&hash=E0AED7417F234D3C66F9037149BB7612
11. Databricks: https://upload.wikimedia.org/wikipedia/commons/6/63/Databricks_Logo.png

In case any of the links don't work, find a reasonable image on your own (or create it yourself).

## Contact information

Create this on your own – imagine an artificial address. Preferably a real place on this planet, a real address. But avoid addresses pointing to private houses. Better to use addresses of shopping centers, etc.