



MEC-E3020

METHODS IN EARLY PRODUCT DEVELOPMENT

A”

Aalto University
Design Factory

We start at 15.15 !

Sessions

Wednesday 23.10. 15-17

Introduction to product development processes and course practicalities

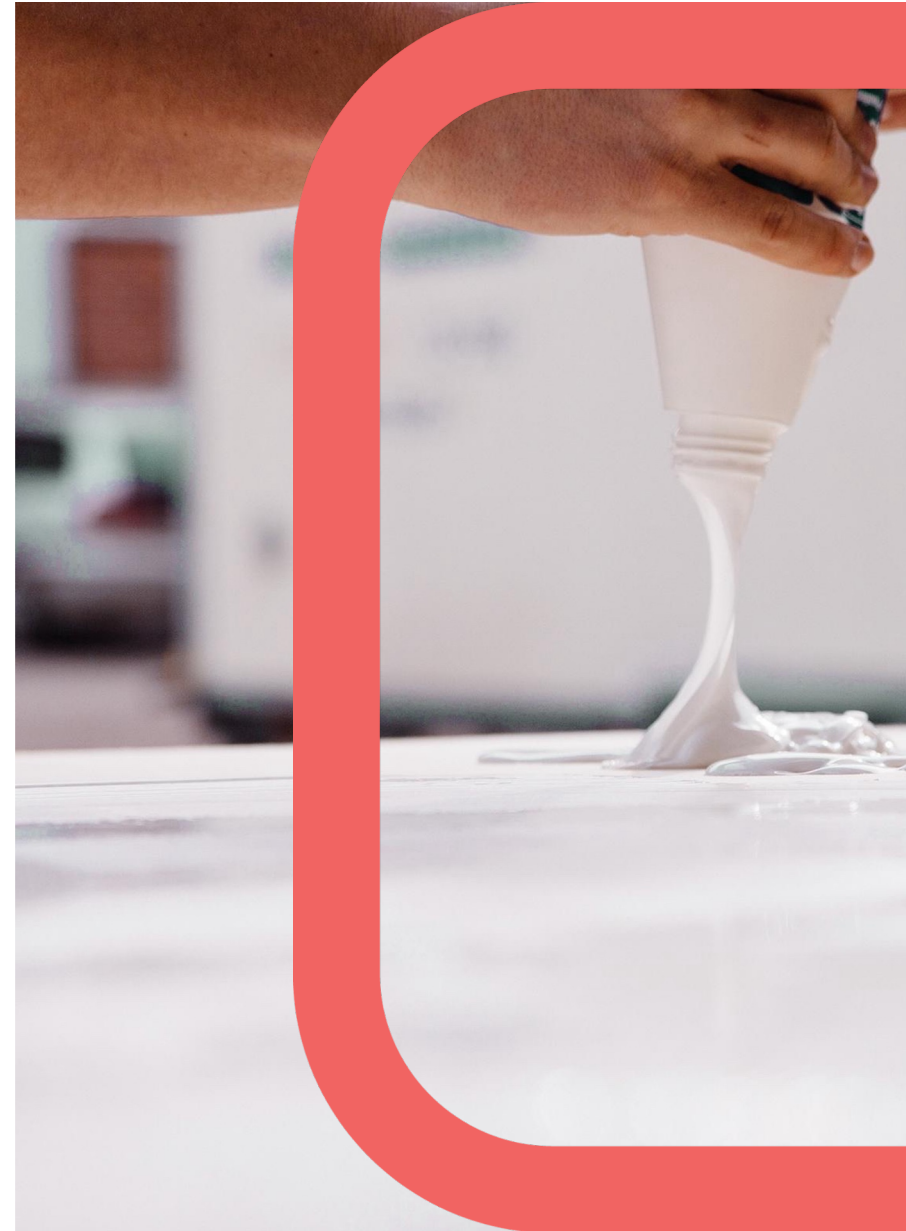
Wednesday 30.10. 15-17 *shared session with PDP
Needfinding

Wednesday 6.11. 15-17 *shared session with PDP
Value mapping, Visiting lecture from [Ville Eloranta](#)

Wednesday 13.11. 15-17
Problem framing

Wednesday 20.11. 15-17 *shared session with PDP
Ideation

Wednesday 27.11. 15-17 *shared session with PDP
Concepts and Patents, Visiting lecture on patents from [the Finnish Patent and Registration Office \(PRH\)](#)



Today's session

Developing ideas into concepts

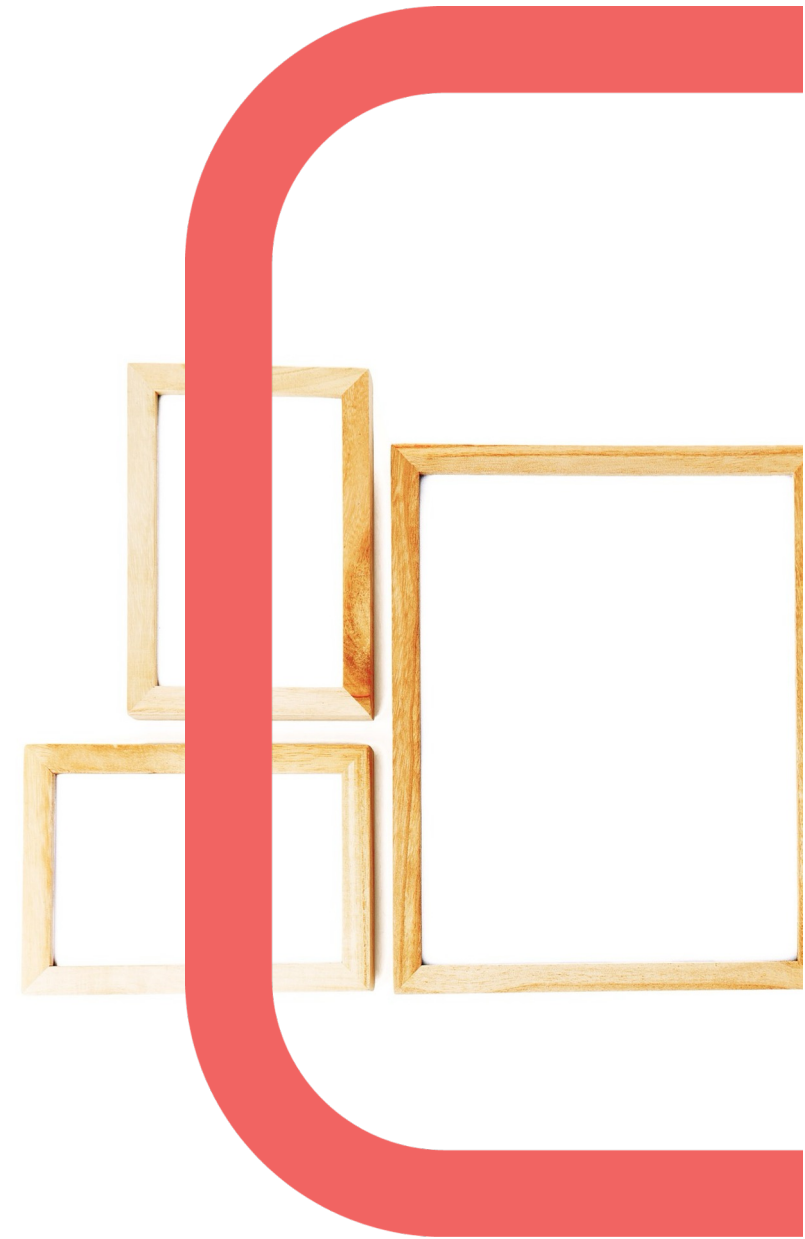
Patents visiting lecture from the Finnish Patent and Registration Office (PRH)



Last time...

Ideation

Ideation assignment – selecting 5 ideas.





CONCEPT DESIGN PHASE

Adding detail

From one-liners to one-pagers

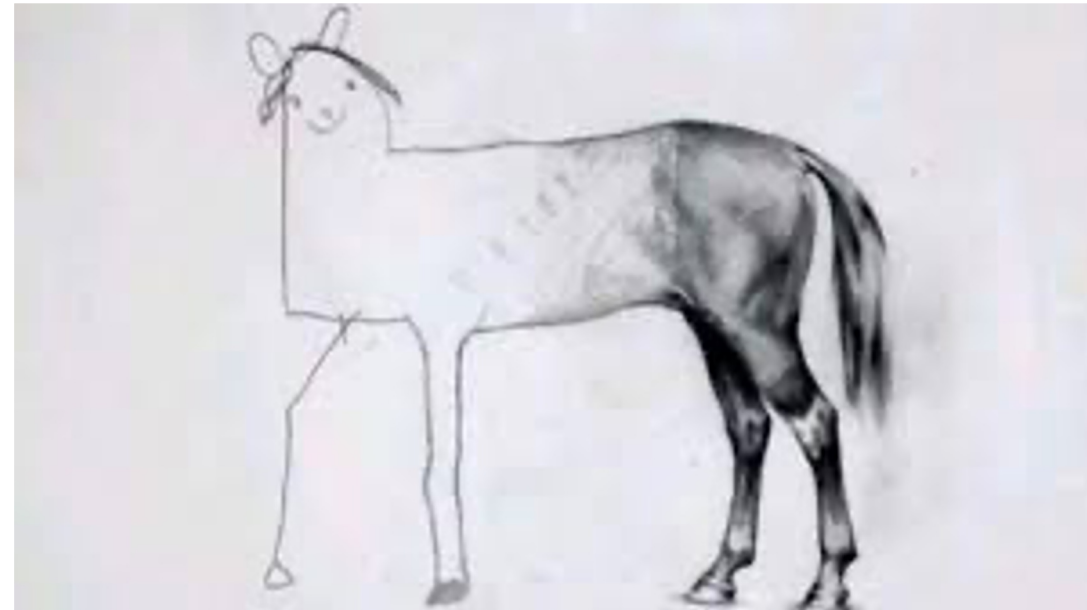
Ideation sessions produce raw ideas
– more work is needed to flesh out ideas.

Concept development can also be done:

in collaboration with customers

in a form of more detailed ideation

through prototyping different potential versions



Concept description

Team name:

Concept name:

What is the value to the customer? – also, who is the customer?



How is it different from other solutions?

How does it work? - Describe in practice?

What is the business value? – How do you make money?



A group of people are gathered around a table in a workshop or classroom setting, focused on a project. The scene is dimly lit, with the primary light source coming from the left, creating a moody atmosphere. The people are engaged in various tasks: some are looking at a laptop, others are handling components on the table, and one person is using a hot glue gun. The background shows other people and tables, suggesting a larger workspace. The overall tone is professional and collaborative.

Insight = A Problem Worth Solving + Why?

Proactively reframing design briefs; Björklund 2013

Why concept design?

A shared **vision** of an overall **direction**.

Dictates **what will actually be designed** next.

Which and what types of problems to solve on a detailed level.

At this point there are often still more questions than answers.

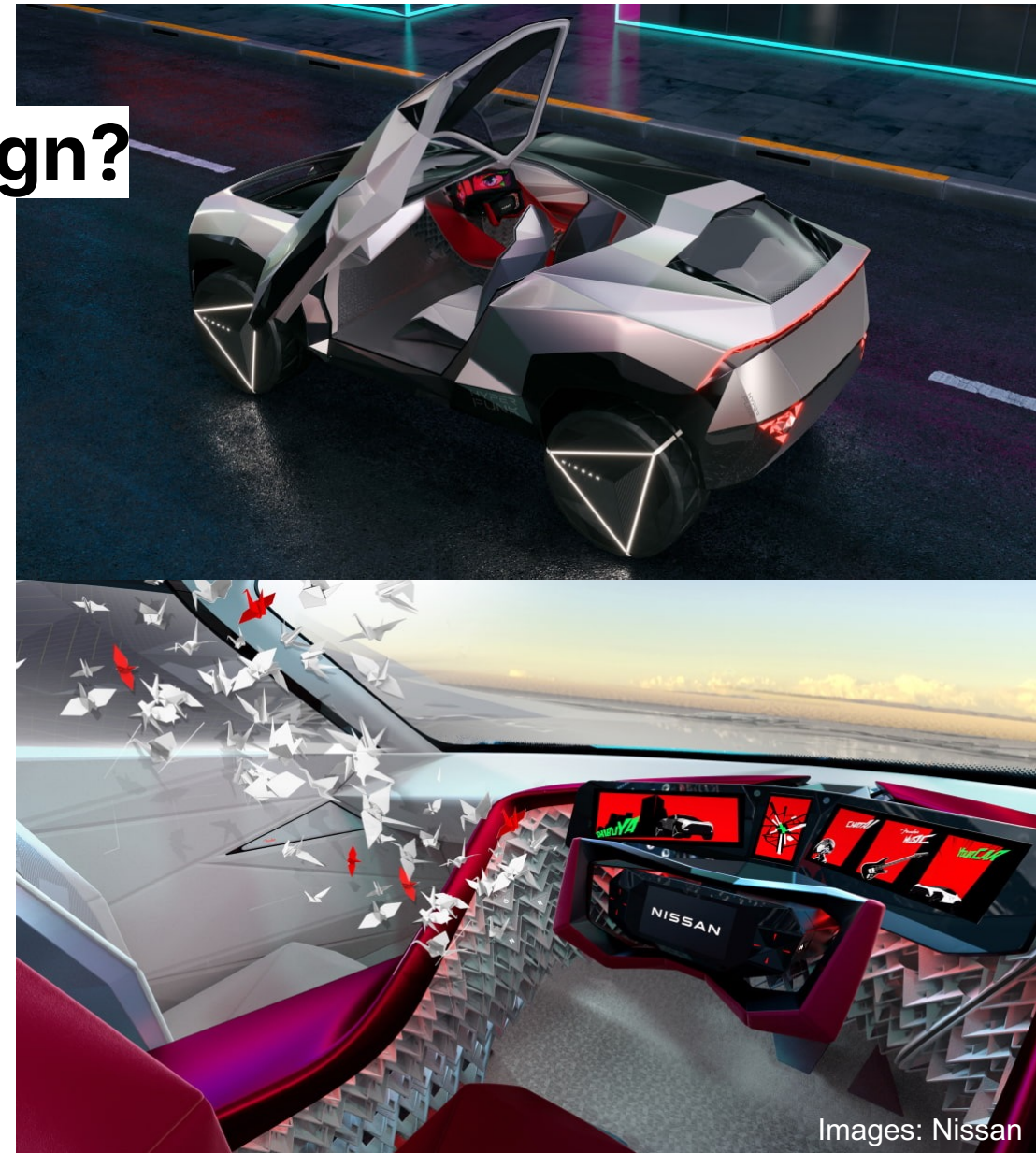
Why concept design?

Concept design can be used as a tool share visions even without an actual product development project at hand.

Envisioning futures, exploring what could be

Training the users, effecting public opinion

...



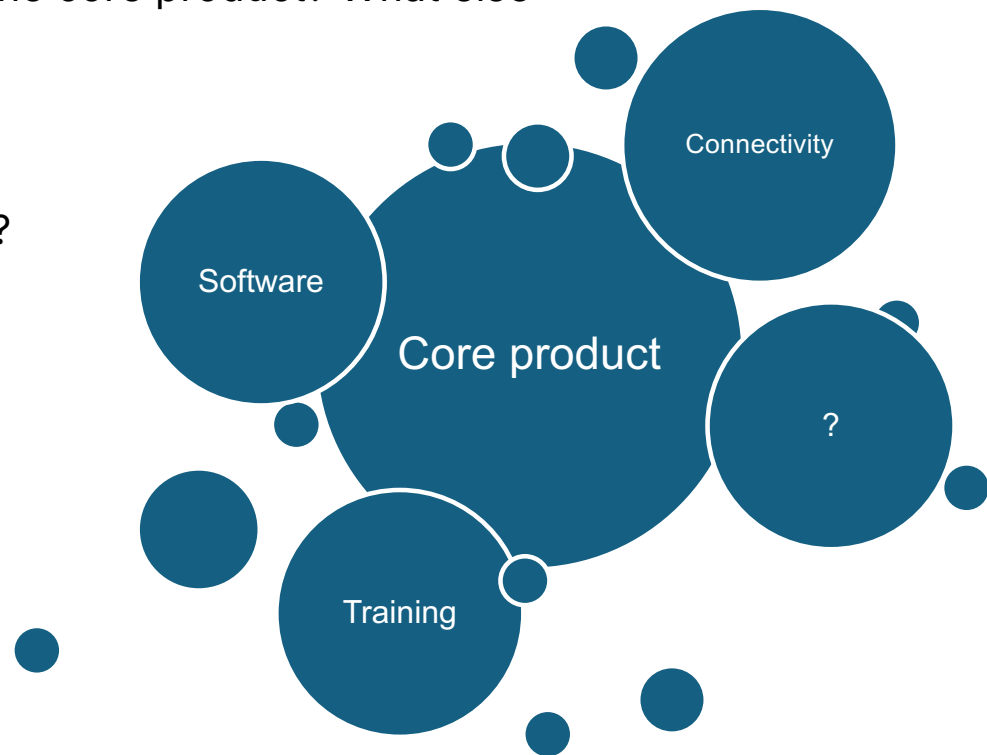
Images: Nissan

Around a product concept

What else is there in addition to the core product? What else could there be?

What makes it stand out?

How is it linked to other systems?





Concept

Product



Concept development focuses on...

Ergonomics

Material selection,

Sustainability

Visual appearance

Manufacturability

...



Task:

1. In your group, have a look at the five ideas you selected as a part of the previous homework assignment.
2. Discuss and evaluate those ideas in means of which ones would be interesting to explore a bit further by fleshing them out into concepts. Why? What makes the ideas strong? What is missing?
3. Prepare to share your thoughts to the class.

Concept selection

Evaluating against customer needs and other design criteria

Comparing the strengths and weaknesses of multiple concepts

Selecting one or more concepts for further investigation, testing, and development.

Not forgetting:

User feedback

Testing, reflecting, and learning

+ Use a method for selection

(many methods are available, e.g. in Product design and development, Ulrich & Eppinger)

Concept selection

Convergent phase (compare to ideation that is divergent.)

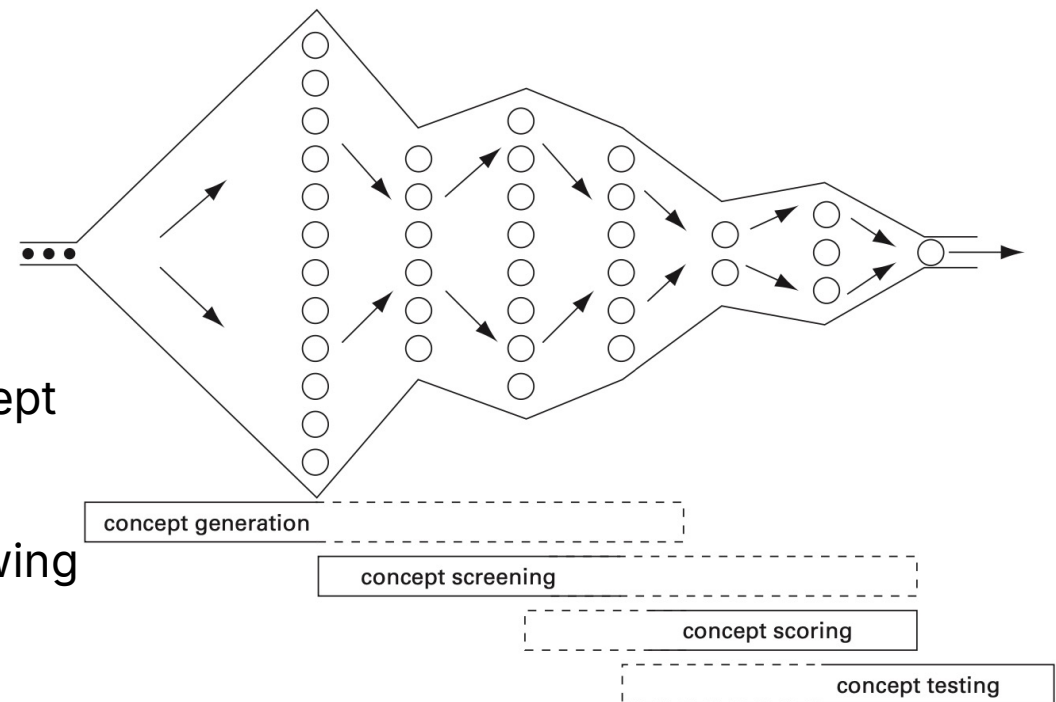
Space for analytical thinking.

Frequently iterative!

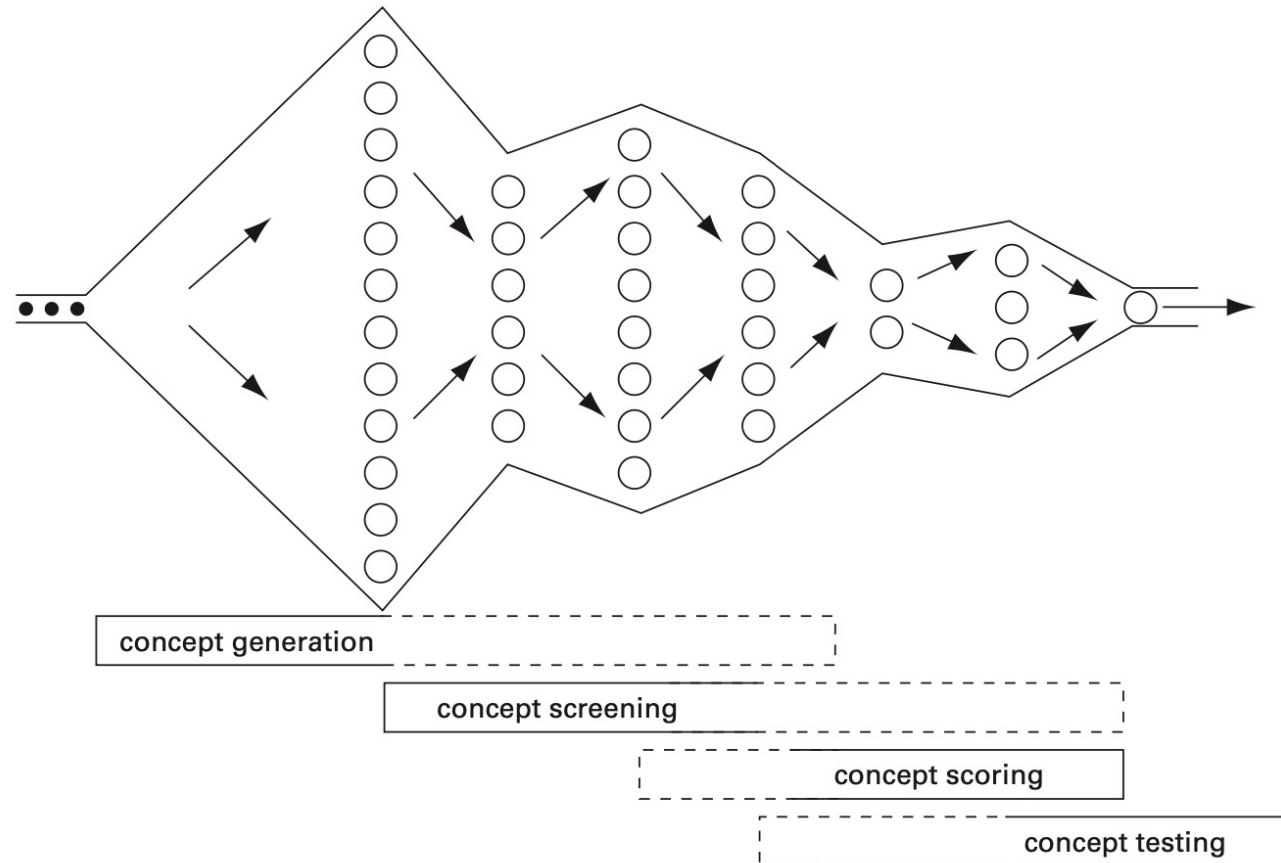
Not getting to one winning concept immediately.

Possibility to go back to the drawing board.

Combining, improving, ideating subsections



Concept selection



This is brilliant!

When you think you might have invented something new...

IP - legally protectable ideas, concepts, names, designs, and processes associated with a new product.

There are multiple mechanisms and tools.

Make sure to do these:

Group assignment

Concepting assignment, DL 5.12.

Group submission through MyCo.

Individual assignment :

Quiz based on readings, DL 5.12.

Quiz based on course contents, DL 5.12.





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**THANK YOU FOR
THIS COURSE!**

A”

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