EXAM – DESIGN AND PROGRAMMING FOR VIDEOGAMES

Spring-Summer 2018

First Name: ……..

Last Name: ……..

Time: 90 minutes

Question 1 – Player's Mind	8 pts	
Question 2 – Story	10 pts	
Question 3 – Balancing	12 pts	
Question 4 – Elemental Tetrad	10 pts	
Question 5 – Particle Systems	10 pts	
Question 6 – User Interface	10 pts	
Total	**60 pts**	

Grade

Question 1 – Player's Mind

The game designer should take advantage of the player's mental abilities. For each ability:

a. Explain in your own words what the ability is.
b. Give an example that clearly shows the advantage of considering it.

Modeling

a. ……

……

……

b. ……

……

……

Focus

a. ……

……

……

b. ……

……

……

Empathy

a. ……

……

……

b. ……

……

……

Imagination

a. ……

……

……

b. ……

……

……

/ 8 points

Question 2 – Story

1) Give the two most commonly used manners of storytelling.

   a. ……

   b. ……

2) Describe them in your own words. You can use drawings or examples.

   a. ……

   ……

   ……

   ……

   ……

   b. ……

   ……

   ……

   ……

   ……

3) Choose and give 4 tricks useful for making stories involving and interesting. Explain the tricks with a short sentence (use can also give an example).

a. ……

……

……

b. ……

……

……

c. ……

……

……

d. ……

……

……

/ 10 points

Question 3 – Balancing

You have been hired as a game designer to create a strategy game, where the player is part of a group of 4 cavemen. His goal is to help the small tribe to survive. Briefly analyse each balancing type in the context of this game (don't hesitate to invent examples):

Fairness

……

……

……

……

……

Meaningful choices

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……

……

……

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Competition VS Cooperation

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……

……

……

……

Rewards

……

……

……

……

……

Simple VS Complex

……

……

……

……

……

Detail VS Imagination

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……

……

……

……

/ 12 points

Question 4 – Elemental Tetrad

You are involved in the development of a **stealth** videogame for PlayStation 4 and Xbox One, where the player is a monster and his goal is to survive while hunters are seeking him. Your task is to invent the concept of the videogame.

Invent the concept and analyse it by taking into the account the elemental tetrad.

1. ……..
   [write here the name of the tetrad's element]

   Analyse your concept with respect to the tetrad's element:

   …….
   …….
   …….
   …….
   …….
   …….
   …….

2. ……..
   [write here the name of the tetrad's element]

   Analyse your concept with respect to the tetrad's element:

   …….
   …….
   …….
   …….
   …….
   …….
   …….

3. ……..
   [write here the name of the tetrad's element]

Analyse your concept with respect to the tetrad's element:

…….
…….
…….
…….
…….
…….
…….

4. ……..
   [write here the name of the tetrad's element]

Analyse your concept with respect to the tetrad's element:

…….
…….
…….
…….
…….
…….
…….

/ 10 points

Question 5 – Particle Systems

1) Explain in your own words what a particle system is.

   ……

   ……

   ……

2) What's the difference between **local** and **global** particle systems?

   ……

   ……

   ……

   In videogames, which category (local or global) is the most frequently used?

   ……

   Why?

   ……

   ……

3) Particle systems are composed of the **system** (or engine) and **particles**. Give their characteristics:

   System

   ……

   ……

   ……

Particles

……

……

……

4) Draw the shape of an emitter for simulating:

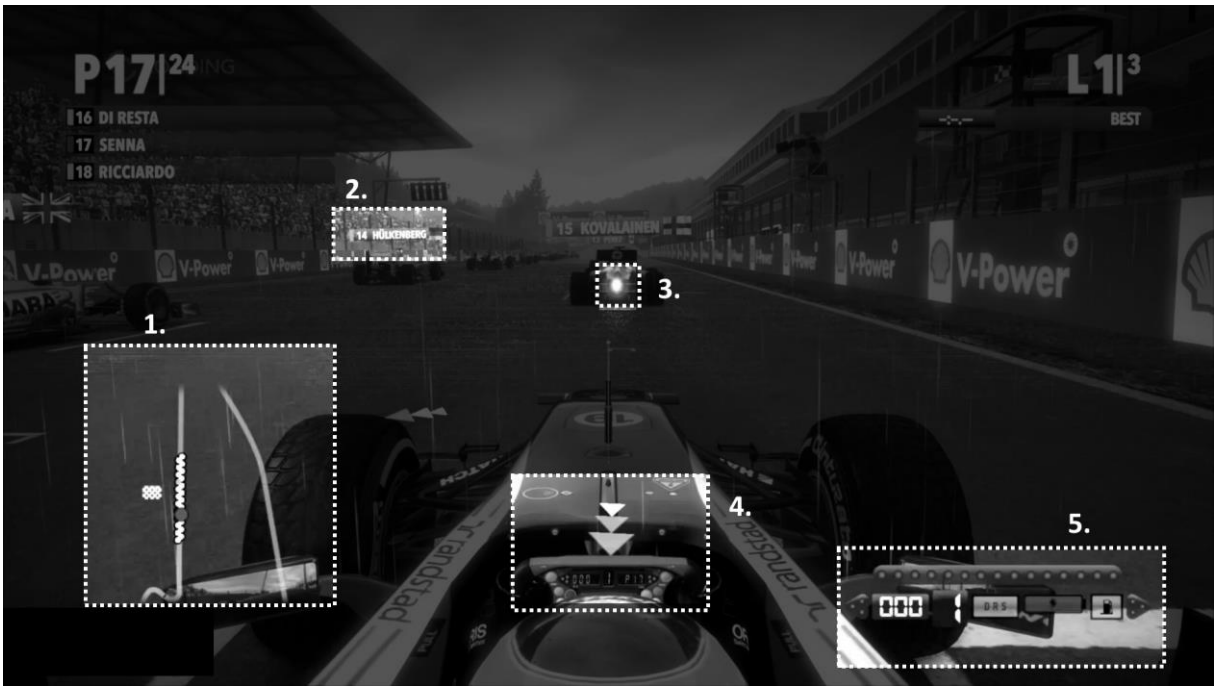
Snow

The reactor of an airplane

/ 10 points

Question 6 – User Interface

Given the following image:



a. Define the category of each UI element in respect of the **Fagerholt & Lorentzon's** model.
b. Explain why.

1.

a. ……

b. ……

……

……

……

……

2.

a. ……

b. ……

……

……

……

……

3.

a. ……

b. ……

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……

……

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4.

a. ……

b. ……

……

……

……

……

5.

a. ……

b. ……

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……

……

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/ 10 points