**FINAL TEST** 

| TERM | COURSE NAME | COURSE CODE | VERSION |
| --- | --- | --- | --- |
| SUMMER  2020 | GAME CONTENT CREATION | DPS936 | A |

| Name | (write your full name here) |
| --- | --- |
| Student Number | (write your student number here) |
| Section | (write your section number here) |

DATE: AUGUST 12, 2020

TIME ALLOWED: 110 MINUTES

PERCENTAGE: 20

TOTAL MARKS: 100

PROFESSOR(S): Alireza Moghaddam & Catherine Leung

SPECIAL INSTRUCTIONS:

1. This is an open book exam. So, you are allowed to use course materials as well as your previous works
2. You are requested to implement what you are asked using 3DSMAX 2020.
3. Submit a video capture of your scene, be sure to clearly demostrate each of the requirements
4. Submit the 3DS Max file and all assets into your github repository. Please name all files using the prefix (start the file name with) "finaltest-*yourname*"

This exam includes a *cover page*, plus \_\_1\_\_ pages of questions.

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| SENECA’S ACADEMIC INTEGRITY POLICY |
| As a Seneca student, you must conduct yourself in an honest and trustworthy manner in all aspects of your academic career. A dishonest attempt to obtain an academic advantage is considered an offense, and will not be tolerated by the College. |

APPROVED BY:

Kathy Dumanski, Chair, School of SDDS

You are requested to simulate take-off of an aircraft carrying a flag in a windy and snowy night. Specifically, you are requested to implement the following:

* **Runway (10 marks):** Model a textured runway and add grass texture to the area surrounding.
* **Light (10 marks):** Add a few stand lights around the runway in order to provide visibility. Also, add small lights all along on either side and in the middle of the runway in order to signify the borders and the middle.
* **Aircraft (10 marks):**Create an aircraft with no texture and place it at the beginning of the runway.
* **Snow (15 marks):** Use particle system to create rain that covers all area during the simulation. **Note:** The rain drops should fall and remain on the ground.
* **Flag (15 marks):** The flag of “Canada” attached to the tail of the aircraft.
* **Physics (30 marks):** 
  + Once the simulation begins, apply enough force to the aircraft to accelerate from rest and fly off the ground somewhere close to the end of the runway. **(15 marks)**
  + Also, apply wind force opposite to the motion direction of the aircraft. In order to look like more realistic, you are requested to add some turbulence to it. **(5 marks)**
  + A few seconds after taking-off, the flag comes off from the air and gets affected by gravity. **(5 marks)**

**Note:** The effect of wind should be visible from the direction of snow flakes and the flag that is waving.

* **Camera (10 marks):** Add one camera to the scene and animate it so that the aircraft and other contents get clearly visible.

**Submission:**

* **Capture a video of your scene**. Place the video into MS Stream and share it with Alireza Moghaddam
* Place the following files into your github repo, ensure that the file names are prefixed (starts with "finaltest-*yourname*" for example: "finaltest-Alireza-Moghadam-texture1.jpg:
  + your 3DS Max file
  + all your textures and external assets
  + Video file