

**GAME ENGINE FOUNDATIONS**

**MIDTERM EXAM**

**FALL 2018**

**TIME: 90 MUNUTES**

**INSTRUCTOR: ALIREZA MOGHADDAM**

**INSTRUCTIONS:**

* **Read the questions very carefully**
* **Manage your time carefully**
* **This is an open book exam and any usage of any course material during the exam is allowed**
* **Do not forget to write your name**

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| --- | --- |
| **STUDENT NAME** |  |
| **STUDENT ID** |  |
| **SIGNATURE** |  |
| **EMAIL** |  |
| **MARK** |  |
| **RE-MARK** |  |

You are requested to create the basics of a simple game. Specifically, you are requested to accomplish the following tasks:

1. **(20 marks)** Add a textured sky and a textured ground to your scene (Use your own arbitrary texture images: one for sky and one for ground).
2. **(15 marks)** Use a model loader and load a teapot (The model is named Teapot.obj and is located on the BB->Assignments->MidTerm). No texture is required.
3. **(25 marks)** Render five teapots and place them on the ground. Notice that this is a rotated model of a teapot and you will need to modify it so that the bottom of the teapot is placed on the ground. No texture is required.
4. **(20 marks)** Use the model loader again and import a human body. (The model is named Human.obj and is located on the BB->Assignments->MidTerm).
5. **(20 marks)** Place five of these obstacles on the ground as they are constantly rotating in place.

**Note:**

* The player must be able to traverse the world using “WASD” keys and mouse, just as what we did in class.
* Add comment to your code.
* You will receive partial marks if you cannot complete each of the following tasks.

**To submit:**

Once you are finished, follow these instructions to submit your midterm:

* Create a folder and name it with your firstName and lastName, for instance: adam\_william
* Copy ONLY those files that you have modified during the test and paste them inside the folder
* Write down your name, student ID and email address on the exam sheet
* Place your exam sheet also in the folder
* Zip the folder and submit through the blackboard

**Do NOT submit your project folder as it may not fit and you will lose your submission**