**DEPARTMENT OF COMPUTER SCIENCE**

**Coursework Assessment DESCRIPTION**

**MODULE DETAILS:**

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| --- | --- | --- | --- |
| Module Number: | 08356 | Semester: |  |
| Module Title: | Advanced Graphics and Games | | |
| Lecturer: | Jon Purdy | | |

**COURSEWORK DETAILS:**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Coursework Assessment Number: |  | of | | |  | | | |
| Title of Assignment: | Development and porting exercise | | | | | | | |
| Format: |  |  | | | | |  | |
| Method of Working: |  | | | | | | | |
| Workload Guidance: | Typically, you should expect to spend between | 30 | | and | | 40 | | hours on this assessment |
| Length of Submission: | This assignment should be **no** more than: | |  | | | | | |

**PUBLICATION:**

|  |  |
| --- | --- |
| Date of issue: | 16 October, 2008 |

**SUBMISSION:**

|  |  |  |  |
| --- | --- | --- | --- |
| ONE copy of this assignment should be handed in via: |  | If Other  (please state method) |  |
| Time and date for submission: | **21 November 2008** | 5.00pm | |
| If **multiple hand–ins** please provide details  *(as appropriate):* |  | | |

The assignment should be handed in **no later** than the time and date shown above, unless an extension has been authorised on a *Request for an Extension for an Assessment* (Mit Circs) form which is available from the Office or <http://www.student-admin.hull.ac.uk/downloads/Mitcircs.doc>. The extension form, once authorised by the lecturer concerned, should be sent to Amanda Millson.

**MARKING:**

|  |  |
| --- | --- |
| Marking will be by: |  |

**BEFORE** submission, each student must complete the **correct** departmental coursework cover sheet dependant upon whether the assignment is being marked by student number, student name, group number or group name. This is obtainable from the departmental student intranet at

<http://intra.net.dcs.hull.ac.uk/sites/home/student/ACW%20Cover%20Sheets/Forms/AllItems.aspx>

**ASSESSMENT:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| The assignment is marked out of: | 100 | and is worth |  | % of the module marks |

**ASSESSMENT STRATEGY AND LEARNING OUTCOMES:**

The overall assessment strategy is designed to evaluate the student’s achievement of the module learning outcomes, and is subdivided as follows:

|  |  |  |
| --- | --- | --- |
| LO | Learning Outcome | Method of Assessment  *{e.g. report, demo}* |
| ***2***  ***3***  ***4***  ***5***  ***6***  ***7*** | *Develop and apply original solutions to the design and implementation of game programming problems on a variety of hardware platforms.*  *Assess the suitability of key technologies and techniques with respect to different application and problem areas.*  *Use current games programming techniques.*  *Select strategies for developing game software.*  *Critically evaluate game production problems in terms of their programming requirements.*  *Understand the application of vectors and matrices to graphical problems.* | demo |

|  |  |  |
| --- | --- | --- |
| Assessment Criteria | Contributes to Learning Outcome | Mark |
| 1) Initial 3D Program  Production of initail 3D  rotateing cube programme in  DirectX3D  2) Demonstration of sound effects using  DirectSound or Direct Audio    3) Port of spinning cube to Game Cube  4) Connecting the sound playing to the  position of the cube  5) Using these to make a simple game | 3,4  3,4  2  5,6,7  1,4,5,6 | 40  10  20  20  30 |

**FEEDBACK**

|  |  |  |  |
| --- | --- | --- | --- |
| Feedback will be given via: |  | Feedback will be given via: |  |
| Exemption  (staff to explain why) |  | | |
| Feedback will be provided no later than 20 working days after the submission date. | | | |

This assessment is set in the context of the learning outcomes for the module and does not by itself constitute a definitive specification of the assessment. If you are in any doubt as to the relationship between what you have been asked to do and the module content you should take this matter up with the member of staff who set the assessment as soon as possible.

You are advised to read the **NOTES** regarding late penalties, over-length assignments, unfair means and quality assurance in your student handbook, also available on the department’s student intranet at: [**http://intra.net.dcs.hull.ac.uk/sites/home/student/default.aspx**](http://intra.net.dcs.hull.ac.uk/sites/home/student/default.aspx). In addition, **please note** that if one student gives their solution to another student who submits it as their own work, **BOTH** students are breaking the unfair means regulations, and will be investigated.

In case of any subsequent dispute, query, or appeal regarding your coursework, you are reminded that it is your responsibility, not the Department’s, to produce the assignment in question.

**Specification**

**Aim**

To produce a simple 3D game using a limited set of functions and resources .

**Program Specification.**

The program should be based on a textured cube spinning in 3D, the position of the cube should be initially controlled by a timer driven rotation matrix, but could be user controlled in the final game specification. The final details of the game implementation should be developed by the student, however it should be noted that **no marks** are allocated for game design so very little time should be spent on this aspect of the assignment.

The program individual aspects that should be demonstrated are:

* A DirectX shell displaying a smoothly rotating cube in 3D
  + - The cube should be loaded from an x.file and should be colored and textured.
* A sound file should be played and dynamically altered. The sound file should be loaded from a wav file and played at runtime.
* The spinning cube should be ported to the Game Cube console.
* The sound file should be modulated depending on the orientation of the cube.

Extra implementation required for distinction level:

* + These basic features should be incorporated into a fully functioning PC game

**Submission Requirements**

**The full program workspace should be demonstrated and submitted, including all resources, bitmaps and sound files. The program executable should be saved in a separate folder called ‘*executable*’ from where it can be operated. The source code must be *fully* commented and explained within the source files. *Failure to comment your code will restrict the marks you can achieve.***

**Resources**

Tutorials and help documents: (Available from the module web page)

**DEPARTMENT OF COMPUTER SCIENCE**

**COURSEWORK FEEDBACK SHEET**

|  |  |
| --- | --- |
| Student Name or Number | *To be completed by student* |
| Module Number and Title | 08356  *To be completed by staff* |
| Assignment Title | *To be completed by staff* |
| Mark Awarded |  |

Extent to which your work meets the stated learning outcomes

Strengths and positive aspects of your coursework submission

Aspects of your work which could be improved

Signature                                                                          Date

**All Students: Please submit this form with your coursework cover sheet and assignment.**