IN-COURSE ASSESSMENT (ICA) SPECIFICATION

Module Title: **Rational Games Design**	Module Leader: Jack Fletcher Module Code: GAD4008-N
Assignment Title: **Prototyping with Atomics**	Deadline Date: 30th **April 2025** Deadline Time: **4:00pm** **Submission Method:** Online (Blackboard) ☑ Middlesbrough Tower ☐

Online Submission Notes:

- Please carefully follow the instructions given in this Assignment Specification.
- When Extenuating Circumstances (e.g. extension) has been granted, a fully completed and signed Extenuating Circumstances form must be emailed to scedt-assessments@tees.ac.uk or submitted to the School Reception.

Central Assignments Office (Middlesbrough Tower M2.08) Notes:

- All work (including media) needs to be secured in a plastic envelope or a folder and clearly marked with the student name, number and module title.
- An Assignment Front Sheet should be fully completed before the work is submitted.
- When Extenuating Circumstances (e.g. extension) has been granted, a fully completed and signed Extenuating Circumstances form must be emailed to scedt-assessments@tees.ac.uk or submitted to the School Reception.

FULL DETAILS OF THE ASSIGNMENT ARE ATTACHED INCLUDING MARKING & GRADING CRITERIA

Rational Games Design

In Course Assessment - ICA

GAD4008-N
Level 7 | 20 Credits

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ICA OVERVIEW

This module aims to build upon fundamental concepts involved in the creation of a game prototype with reference to industry-level rational design and employing critical analysis and research.

This module will examine the contrast between the creation of a strong core mechanic, which is immediately tactile, and how it can be expanded upon through player learning, subtractive design and variety to provide longevity. Ultimately providing an accessible, engaging and substantial gameplay experience informed by playtesting.

Students will enhance their skills both inside and outside of a contemporary game engine. Inspired by the structure of relevant titles, they will be encouraged to rigorously plan tasks from a macro and micro perspective prior to development.

Assessment will be 100% ICA, based on the creation of a playable prototype within a game engine alongside a supporting pre-production documents.

DELIVERABLES

HAND-IN REQUIREMENTS

You are required to submit a single zip file containing all elements following the structure outlined below.

[RGD] NAME_STUDENT NUMBER.zip

- **ELEMENT 1**
  - Design Document & Progression Syniposis.pdf
  - Mechanical Matrices .xls (or equivalent)
  - Production Plan.pdf
  - Comparison/Justification.pdf
- **ELEMENT 2**
  - Prototpye.exe
  - Video Playthrough .mp4

The submission should be made digitally via Blackboard. Please ensure you have checked your work prior to submission. Marks will be allocated via the attached criteria.

DEADLINE

The deadline for the ICA submission is:

Week 12

30th April 2025

ICA BRIEFING

You will be required to develop a prototype that **focuses on a core mechanic** and its progression. To facilitate progression, you will also develop **three opposing mechanics** i.e. enemies.

The core mechanic must be tactile and responsive as such **puzzle mechanics should not be considered** for this.

Consider options such as:

- Player movement
- Platforming
- Combat
- Or your own ideas

Ensure your core mechanic is communicated to your tutor in the studios.

Once a basic prototype has been created, you will **identify various atomic values** relevant to your prototype and populate these into a matrix.

You will **use the matrices to develop the core mechanics progression** and iterate on your designs through rigours playtesting.

ICA BRIEFING

You are expected to expected to keep a **series of live production documents** including:

- Design Document & Progression Synopsis
- Schedule
- Task List
- Bug tracking
- Playtesting Diary

Finally, prior to submission you should compile **a brief document illustrating the link between the matrices and progression**. Graphs should be included where necessary to visualise the correlation.

ELEMENT 1 (50%)

A portfolio of pre-production documents

1. **Design Document & Progression Synopsis –** A visual Document illustrating the prototypes design, including diagrams and outlining the players progression in terms of mechanics, opposition and atomics.
   (500 - 1000 words) (10%)

2. **Mechanical Matrices** - showing the atomic values for your core mechanic and opposing mechanics as well as their variations. It should include all relevant atomic values and be transferable to a game engine.
   (20%)

3. **Production Plan –** including a schedule for the development of your prototype along with a breakdown of tasks, bug tracking, and a playtesting diary.
   (10%)

4. **Comparison/Justification Document** - illustrating the link between the atomic values in your matrices and progression. Graphs should be included where necessary to visualise the correlation.
   (500-1000 words) (10%)

ELEMENT 2 (50%)

Prototype

An interactive prototype that demonstrates the progression of a core mechanic through three variants. It should also include three opposing mechanics each with three variants. (See table)

The prototype should clearly demonstrate the connection between atomic scaling and challenging scenarios informed by a pre-production plan and design iterations.

Development will be undertaken within a contemporary game engine and should be compiled as an executable for use on the Windows PC platform utilising associated peripherals for interaction and feedback.

A gameplay video demonstrating the mechanics should also be included.

CORE MECHANIC	LEVEL 1	LEVEL 2	LEVEL 3
OPPOSITION 1	VARIANT 1	VARIANT 2	VARIANT 3
OPPOSITION 2	VARIANT 1	VARIANT 2	VARIANT 3
OPPOSITION 3	VARIANT 1	VARIANT 2	VARIANT 3

LEARNING OUTCOMES

PERSONAL AND TRANSFERABLE SKILLS

1. Comprehensively research, scope and plan an original, specialised and complex game prototyping project, accommodating complex decision making and unpredictable situations in game design and relevant industry roles.

2. Comprehensively develop and present original game ideas and concepts in a professional manner using standard industry facing formats and processes.

RESEARCH, KNOWLEDGE AND COGNITIVE SKILLS

3. Develop original research and analysis of game industry trends, tools and practices to inform game design and development project outcomes.

4. Analyse, appraise and evaluate complex game design and development theories, generating new knowledge and making informed judgements on solutions and drive personal development.

PROFESSIONAL SKILLS

5. Demonstrate expertise and adaptability in the design, prototyping and development of professional game products.

6. Critically evaluate, select and apply appropriate techniques, software, tools and develop original procedures in the design and development of a game product.

ADVICE & BEST PRACTICE

GUIDANCE

First and foremost, ensure you have read and fully understood the assessment introduction and criteria, this tells you exactly what will be assessed within your submission. Secondly, look at the hand-in requirements and limitations set out within this document.

Think of how much time you will realistically have on this project. It would be better to create a smaller detailed game prototype. Try and focus on creating a small-scale quality prototype in both its visuals and its gameplay.

Refer to the development guide to ensure you have covered all areas during the production of your level. We are looking for a fully fleshed small scale game level making full use of visuals, dynamics and scripted gameplay.

Carry out the necessary pre-production work prior to committing a design. Keep things workable and concise. Do not make the mistake of creating a large-scale systems which you can never complete.

Iterate and develop aspects of your design to ensure gameplay polish is to a high standard. Be sure to test and polish all mechanics progressively.

Keep the artwork simple and manageable, art assets should serve a clear visual function and be readable from a gameplay perspective.

Keep a weekly schedule with tasks that need to be completed. It is easy to fall behind during the production phase. Planning and self-management is very important. Try and be as productive as possible without losing focus on important development milestones.

Get weekly feedback and help from your tutor, it is essential you get iterative feedback on all aspects of development to ensure your work is progressively improving in quality

MARKING SCHEME

WEIGHTINGS

Elements will be marked out of 100, weighted as per the table, rounded and then totalled up.

ELEMENT	WEIGHT
Design Document	10%
Mechanical Matrices	20%
Production Plan	10%
Comparison/Justification	10%
Prototype	50%
Total	**100%**

EXAMPLES

The following demonstrates some example submissions with emphasis on different elements:

Design Document 40 x 10% = 4

Mechanical Matrices 65 x 20% = 13

Production Plan 70 x 10% = 7

Comparison/Justification 60 x 10% = 6

Prototype 60 x 50% = 30

Total 60 (Merit)

Design Document 40 x 10% = 4

Mechanical Matrices 40 x 20% = 8

Production Plan 40 x 10% = 4

Comparison/Justification 40 x 10% = 4

Prototype 60 x 50% = 30

Total 50 (Pass)

DESIGN DOCUMENT & PROGRESSION SYNOPSIS (10%)

Grade	Criteria
7 – 10	A sound design. A very good array of visual means are used to illustrate important design points and convey your concept. The design fits the brief well and displays a good degree of originality. Most/All aspects of the level progression are covered and discussed in an intelligent manner.
6	Well written document. A good balance of text and visual means to convey your concept, images, diagrams and/or flowcharts and references are included to illustrate points. Work hard to describe the items that help to show level progression
5	Reasonable document and design. Communicates the concept quite well, although there is room for improvement. Visuals can really help get your ideas across
4	There is some evidence that shows a suitable level flow has been worked on but it does not go far enough to be usable in a design environment.
1-3	There is little in the way of a game scenario. You have not described how the level will flow or develop through level progression

MECHANIC MATRICES (20%)

Grade	Criteria
14– 20	The matrices you have developed are very strong in terms of balanced and feasible atomic values and how this data can be balanced against the values for the three other in-game opponents. The data sets you used would be easily transferred into a game engine for further development.
12 – 14	Your development matrices show good variation and thought in their development. There is evidence that thought has been applied to their use and how they balance against other game elements giving a strong level progression.
10 – 12	Reasonable effort has been made to convey the development of mechanics through alteration of the atomic values. You show some imagination in their use but this could have been taken further.
8 – 10	The matrices show some evidence of thought in their production but could have been expanded further to help make the game progression easier to develop in terms of gameplay and opposition.
1–7	The matrices show little evidence of thought in their use in a development process. They need to have a clear correlation between their development and level progression.

PRODUCTION PLAN (10%)

Grade	Criteria
7 – 10	Your production plan and development schedule shows an excellent understanding of the processes required to create working documents that are suitable for the game development industry. You have included all the elements required and created contingencies for stretch goals if applicable.
6	Your production plan and development schedule shows a good amount of effort has been made to include areas needed for development and the creation of a competent schedule suitable for its development.
5	Your production plan and development schedule shows that a reasonable effort has been made to include the areas for development and some thought has gone into creating a suitable schedule for production.
4	Your production plan and development schedule show some work and thought but do not go far enough to be useful in a game development environment.
1–3	You have shown little evidence that any effort has gone into this section. Production planning is a critical stage of any game development.

COMPARISON DOCUMENT (10%)

Grade	Criteria
7 - 10	Your comparison document is of a very high quality. You show very strong correlation between the described level progression and the data sets given in the matrices. All the evidence has been tied neatly together showing a real understanding on how the relevant information work together to create meaningful gameplay and progression.
6	Your comparison document is well put together and show a strong link between the level progression and the atomic data described in your matrices. You give a good account on how one will affect the other but could still go further in the descriptions and documentation of evidence.
5	Your comparison document is fairly well presented and goes some way to describe the correlation between level progressions and your atomic data sets but it could still go further in its descriptions and evidence of relevance between the elements.
4	Your comparison document shows some correlation between the level progression and atomic matrices but it does not go far enough to prove the links are valid or would be of any benefit to gameplay.
1-3	Your comparison document does not show any real correlation between your level progression and the atomic data shown in your matrices.

PROTOTYPE (50%)

Grade	Criteria
35- 50	The prototypes you created clearly show how the datasets your created for the atomic values have been turned into meaningful gameplay and level progression. Your datasets were successful in creating exciting gameplay which increases in difficulty whilst remaining entertaining and balanced.
30- 35	The prototypes you created are of a good standard and show that a good effort has been made to turn the datasets described into meaningful gameplay and level progression. Some more effort is needed to show an exact replica of the data but this is a good effort.
25 - 29	The prototypes you created are of a reasonable quality and show that some effort and thought has gone into their development and some effort has been made to follow your data sets to help create a meaningful level progression.
20 - 24	The prototypes you created go some way in demonstrating the level progression and manipulation of atomic values but it falls well short of what was required.
1-19	The prototypes you created do not show how the data sets have been used to create meaningful level progression or interesting gameplay.

GRACE PERIOD & RESITS

SUBMISSION GRADING

Students receiving below 50%, will have failed the module ICA. You may be entitled to a resubmission, where you would be expected to make good on the previous effort.

Students who fail the module overall, may still be entitled to a resubmission, this would need to be ratified by the exam board and you would be contacted to inform you of the procedure.

MISSING COMPONENTS

Missing elements of the ICA will have a dramatic impact on the potential to pass the module. You are highly advised to complete all elements.

Should you only complete a certain percentage of any one element, you are advised to still submit whatever you have, regardless of whether it is complete.

GRACE PERIOD

You can submit up to a maximum of 7 days after the original deadline, any such submission would be capped at a maximum of a Pass. Any submission after the 7-day grace period would be classified as a fail.

If you have an extension, then the 7-day grace period still applies.

RESITS

Students who fail may be entitled to a resubmission; this will be determined by the assessment board at the end of the academic year.

You will be contacted by admin and given a submission deadline. Initial submission feedback will provide you with guidance on the areas you to need to concentrate on to ensure a valid pass.

Resubmissions would also be capped at a maximum of a pass. Any subsequent fails would again go to the exam board to decide upon student progression.

ICA EXTENSIONS

There is the possibility of an extension being granted which extends the initial deadline date with no penalty. Following this revised deadline, a one-week grace period will commence.

To request an extension, contact your tutor in the first instance who may refer you onto your module or course leader. Please note that extension requests require evidence, and **all of the following are NOT VALID reasons for requesting an extension:**

- Study related circumstances (personal equipment failure, printer problems, failure to take back-up copy of work, misreading the examination timetable, oversleeping, taking the wrong examination).
- Normal exam stress or anxiety experienced during revision or the assessment period.
- Personal disruptions within a student's control (moving house, change of job, normal job pressure, holidays, weddings, failed travel arrangements, financial issues, poor time-management, routine medical appointments, disruption to routine caring responsibilities).
- Grounds of religion, unless notification was given at the start of the academic year.
- Foreseeable and preventable circumstances.
- Statement of a medical condition without reasonable evidence (medical or otherwise) to support the case.
- Complaints against staff or in relation to delivery of the module/programme. (These are managed through the University's Student Complaints Policy and Procedure).
- Medical circumstances outside the relevant assessment or learning period for which appropriate adjustments for extenuating circumstances have already been made.
- Long term health condition, for which a student is already receiving reasonable and appropriate adjustments.
- Medical condition supported only by retrospective evidence (such as a doctor's note stating that a student was seen after the illness, and that a student declared they had been ill previously).
- Late disclosure of circumstances, where a student could reasonably be expected to have contacted a member of staff about the problem, but did not do so.