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| Stage 2 Design, Technology and Engineering **Assessment Type 2: Design Process and Solution**  **Game Making** |

This is an individual assessment component, which requires you to apply a combination of design and programming knowledge and skills you have developed to create an interactive multimedia game for a genuine need in industry, education or entertainment. The product will incorporate media elements prepared as recommended from the Resources Investigation.

**Investigating and Analysis** (approximately 800 words)

In game making the design and realisation process should begin with the use creative thinking techniques such as brain storming and mind mapping to explore ideas/concepts. Once you have identified a concept for the type of game application that you will be creating use the following possible investigation and analysis strategies:

* analysing existing product or system characteristics and features to inform the design and realisation process
* collecting and analysing data from a target audience e.g. survey, questionnaire.

Ideas and associated feedback will be considered, and specific criteria and constraints will be documented through the development of a formal design brief. The design brief will include functional outcomes, aesthetic considerations, and constraints. Conducting peer review and feedback in relation to your design brief is recommended.

**Design Development and Planning** (approximately 600 words)In response to an established design brief you will use innovation, invention, iteration and creativity to find suitable solutions to realise design brief outcomes. You will document your design ideas and make plans to use the available resources such as time, materials and technologies to realise the solution. This should include the use of the following:

* preparing timelines and procedures using a Gantt chart
* working drawings and concept sketches for characters and user interface components
* story boards and flow charts
* colour schemes and text investigation
* initial testing of code functions to realise specific features
* testing and preparing suitable materials including graphics and sounds.

**Solution Realisation** (approximately 1000 words)This phase involves applying your knowledge, skills, processes and techniques to realise your planned solution. You will need to demonstrate your understanding of the associated software and code in order to meet the requirements of your design brief outcomes/features. For a high achievement independence must be demonstrated in problem solving along with the use appropriate processes and techniques, this includes the debugging of code issues and sophisticated use of the related software. The materials used should incorporate appropriate characteristics and properties as outlines in the Resource Investigation.

To be successful the solution developed will need to demonstrate:

* excellent time organization and project management
* creative thinking and a good understanding and appreciation of the design process
* good knowledge of the technology used to create the product including media development/preparation and appropriate code concepts
* a level of originality and be free from any copyright restrictions.

At least 8 critical production stages including annotated images (using correct technical language) must be included as supporting evidence of the production process.

**Solution Evaluation** (approximately 600 words)

On completion of your game you will evaluate the solution you have created in relation to your specified design brief outcomes and the design product realisation process employed. A critical comparison of the solution with the requirements of the design brief, and an explanation of, and justification for any modifications made. The evaluation should also include a reflection on personal skills development with recommendations for possible improvement or redevelopment of designs or procedures employed.

To be successful the solution evaluation will need to demonstrate:

* how effectively the requirements of the design brief specifications have been met
* reflecting on the effectiveness of procedures used in the design and realisation process
* reflecting on personal learning e.g. project management, practical skills, capabilities
* testing of product or system with end point users
* reflection on materials, ideas, or procedures, with recommendations for improvements.

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| **Assessment Criteria** | |
| Investigation  and Analysis | I1 | Analyse the design features of products, processes, materials, systems and/or production techniques. |
| Design Development and Planning | D1  D2 | Communicate design concepts using technical language.  Plan and develop design concepts and procedures. |
| Production | P1  P2 | Application of skills, processes, procedures and techniques to create a solution.  Development of solutions to technical problems or recommendations for improvement. |
| Evaluating | E1 | Evaluation of the solution features, realisation process and/or response to issues. |

