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| **Qualification details** | | | |
| **Training Package Code and Title:** | **ICT - Information and Communications Technology (Release 7.0)** | | |
| **Qualification National Code and Title:** | ICT40120 Certificate IV in Information Technology (Gaming Development) | **State code:** | BFF9 |

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| **Assessment Title** | **AT04 Knowledge Questions (Part 3)** | | |
| **Unit National Code & Title** | ICTGAM423 Apply artificial intelligence in game development (Release 1) | | |
| ICTGAM427 Use 3-D software interface and toolsets (Release 1) | | |
| ICTGAM430 Design interactive media (Release 1) | | |
| **Date Due** | **Session 17** | **Date Received** |  |

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| **Student Name** | Richard Pountney | **Student ID** | 30007736 |
| **Student Declaration** | I declare that the evidence submitted is my own work:  RBP  ………………………………………….. | | |

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| **Assessor Name** |  | | | |
| **Assessment Decision** | Satisfactory | | Not Yet Satisfactory | |
| **Assessor Signature** |  | | **Date** |  |
| **Is student eligible for reassessment (Re-sit)?** | No | Yes | **Reassessment Date:** |  |

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| **Feedback to student** | | | |
| *Via Blackboard (LMS) – Please check [Grade] section.* | | | |
| **Feedback from student** | | | |
| *Via Blackboard (LMS) – Please use [Comment] section during submission.* | | | |
| **Student signature** |  | **Date** |  |

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| **Assessment Instructions** |

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| **TO THE ASSESSOR** | |
| Type of Assessment | *Written Questions* |
| Duration of Assessment | *5 sessions (session 13 – session 17)* |
| Location of Assessment | *Classroom (computer lab), at home* |
| Conditions | *Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.*  *This includes access to:*   * *required hardware and software and peripheral devices* * *human-computer hardware interface devices* * *a range of event-handling systems* * *the internet* * *application libraries* * *widgets* * *graphical user interface software and libraries* * *games engine* * *a range of browsers and digital devices* * *client requirements documentation* * *file storage*   *Learners are required to complete the required tasks and submit the required evidence electronically via Blackboard.* |
| Elements and Criteria | As detailed in the assessment plan.  You are required to make sure that all students meet the elements, performance criteria and foundation skill items as outlined in the provided checklist. |

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| **TO THE STUDENT** | |
| Purpose of Assessment | You are required to show your understanding of:  *ICTGAM430 - Design interactive media*   * programming techniques applicable to interactive media * specific terminology used by game developers * hardware and software requirements in a human-computer interaction environment * a range of human-computer interaction devices and their application * widgets and their usage * operations in ‘heads-up’ display environments * technical constraints imposed by hardware and software on design and development * file storage and organisational procedures that may be used in designing interactive media   You are required to meet the elements, performance criteria and foundation skill items as outlined. |
| Allowable Materials | Blackboard (Topic by topic) will include the following: Weekly Readings, Class notes, and Weekly Activities.  Internet resources must be recorded as references for the assessment. |
| Required Resources | *Computer with:*   * *Internet Access* * *Word processing software* * *Access to Learning Management System (LMS)* |
| Reasonable Adjustment | In some circumstances, adjustments to assessments may be made for you. If you require support for literacy and numeracy issues; support for hearing, sight or mobility issues; change to assessment times/venues; use of special or adaptive technology; considerations relating to age, gender and cultural beliefs; format of assessment materials; or presence of a scribe you need to inform your lecturer. |
| Assessment Submission | *All activities must be attempted.*  *Use of research tools and peers in formulating answers are acceptable – but work submitted must be your own work and must not be plagiarised.*  *Final files and documentation are to be uploaded to the appropriate area in the Blackboard course created for this unit.*  *If you are marked as NYS (Not Yet Satisfactory) on your first attempt, you will be provided with another opportunity to re-attempt the assessment.* |
| Project contents | This project consists of the following tasks:   * Answer all of the questions for each section |

**Instructions**

To the best of your ability, answer each of the following questions in full. Ensure that you have attempted to answer all questions before submitting.

**Part 3 – ICTGAM430**

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| **Question 1 – Describe the following programming elements (in the context of the C# language) and identify techniques for using them in producing interactive media.** | | |
| ***Class*** | | A Class is like a “blueprint” for the creation of objects. |
| ***Variable*** | | Variables store specific data types (int, double, char, string, bool) that contain values associated with X data type |
| ***Method*** | | Methods hold & do specific tasks |
| ***Delegate*** | | To store data in a single thing |
| ***Event*** | | Events are a type of trigger, that triggers some code in its event-method. |
| **Question 2 – Define the following terms as they relate to game development.** | | |
| ***AAA*** | | A Triple-A studio is a mid-sized or major game publisher, that have a more robust development & marketing budget |
| ***Asset*** | | Audio files, models, and scripts are all assets. |
| ***Collision*** | | Physics, like soft-body, rigid-body, gravity, velocity & so on. |
| ***HCI*** | | Human-Computer Interaction. How the player interacts with the game like using controllers & consoles. |
| ***Indie*** | | Independent developers |
| ***Platform*** | | Software platforms (e.g., Windows & Mac) Hardware platforms (e.g., PlayStation, Xbox, Switch) |
| ***UI*** | | User Interface. The visual interaction system that gives context. |
| **Question 3 – Explain the hardware and software requirements for a gaming related human-computer interaction environment of your choice.** | | |
| Hardware:  A PC tower that has all the components to operate & process for the system.  A monitor to show the graphics/visuals.  A keyboard & mouse for the main input devices.  Software:  The PC operating system.  The software drives for the input devices.  The games themselves. | | |
| **Question 4 – Identify at least three (3) different human-computer interaction devices and explain how they are used.** | | |
| ***1*** | Gamepad (Controller) reads inputs from the user | |
| ***2*** | Mouse and keyboard  reads inputs from the user | |
| ***3*** | Monitor/Screen gives the visuals (& can sometimes allow user input as a touch screen) | |
| **Question 5 – Explain what a widget is and describe how they are commonly used in digital applications and video games.** | | |
| A Widget is an on-screen interactable that does something when clicked or tapped. An example is a D-pad or joystick that is on the screen & used to move X. | | |
| **Question 6 – Describe the functionality of a ‘heads-up display’ (HUD) in interactive video games.** | | |
| A HUD is used to display important information like health, hot bar, and location (via map or corrodents). | | |
| **Question 7.a – Describe an example of a technical constraint that the hardware used for production can place on the design and development of a video game.** | | |
| It may not be able to process the graphics, & programs. This would mean that you would need to use less detail in models & particles. | | |
| **Question 7.b – Describe an example of a technical constraint that the software used for production can place on the design and development of a video game.** | | |
| Incompatibilities  This could cause issues like not working because the development software is not the correct version or not compatible with the system software. | | |
| **Question 8 – Explain the organisational standards for version control that will usually apply to file storage procedures when designing interactive media in a professional context.** | | |
| It gives the ability to go back to a prier version if there was a mistake & it also allows the ability to have different branches, so some things don’t get affected by the changes until it gets merged. | | |