# Information and Communication Technology 2019 v1.0

## Unit 4 assessment instrument

### Project – 2D Platformer Game

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| **Purpose** |
| This technique assesses a response to a single task, situation and/or scenario in a module of work that provides students with authentic and/or real-world opportunities to demonstrate their learning. The student response will consist of a collection of at least two assessable components, demonstrated in different circumstances, places and times, and may be presented to different audiences, and through differing modes. |
| **Dimensions to be assessed** |
| This assessment technique is to be used to determine student achievement in objectives from all of the following dimensions:   * Knowing and understanding * Analysing and applying * Producing and evaluating.   All objectives from each dimension must be assessed. |

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| **Subject** | Information and Communication Technology |
| **Technique** | Project – 2D Platformer Game |
| **Unit number** | 4 |
| **Module number and name** | Module 8: Game Development 2 |
| **Conditions** | |
| **Written Component** | 500-900 words |
| **Product Component** | Entire asset base and game source files |
| **Due Date** | As per college assessment calendar |
| **Individual / group** | Individual |
| **Resources available** | Laptop access |
| **Context** | |
| Platformer games such as Mario, Sonic and more recently Limbo and Cuphead have achieved tremendous accolades. These games can be played across multiple platforms using a variety of control methods, including keyboard and gamepad. 2D Platformer games are an ideal game genre for independent game developers to create a gaming experience and show off their skills. | |
| **Task** | |
| Plan, produce and evaluate a prototype platformer game, that has gravitational, frictional and / or other pseudo-force physics (such as pendulum physics, inverse gravity, maintain velocity through teleports, etc.)  The game you produce needs to incorporate the following mechanics:  1. illustrate some of the physics discussed above.  2. be considered to fit within the 2D platformer genre.  3. be created with a theme that is:   * Appropriate for a viewing audience of teenagers (aged 13-17) * Of measurable value to this audience (to address the criteria 'use of ICT in society').   Note: The focus of the subject matter for this unit is *elective context 2: Application development* (ICT Syllabus page 18), and that nowhere is *elective context 5: Digital imaging and modelling* (ICT syllabus page 23) covered throughout this course. As such, students are welcome to use the prefabricated sprite-sheets and tile sets provided, or (alternatively) utilise, import and adapt existing royalty free web assets. Students are not expected to create their own sprites, sprite-strips / sprite-sheets, textures, background imagery or audio samples from “scratch”.  The task includes two components. Upon successful completion of these components, you should have evidence for each of the syllabus descriptors:   * Component 1: Written   Write a document containing:   * + your background research, rationale, game specifications and level designs   + an evaluation of the final product and project lifecycle (following component 2 below), which includes supporting recommendations. * Component 2: Product   + Generate a 2D platformer prototype game. | |
| **To complete this task, you must:** | |
| * identify and explain the software and hardware requirements relevant to this task (K&U1) * identify and explain how this game may be received in society (K&U2)   + *identify and explain how your proposed game is unique to existing titles* * analyse the requirements, risks and problems with developing, deploying or maintaining this game, and identify potential solutions or alternatives (A&A1)   + *apply the suggested technique for analysis: mind-map* * synthesise concepts and ideas from your analysis to plan *game world designs and / or game mechanic diagrams* for your game (P&E1)   + *communicate important game mechanics in the planned game world using colours and annotations* * produce a game that systematically addresses the task requirements (P&E2)   + *produce the elements required in the task description above*   + *apply learnt GML techniques to develop game management frameworks, variables to track progression, knowledge of physics and collision behaviours, aesthetics, and other game flow mechanics.*   + *apply asset, media and project management techniques to deliver your game in an accepted format via the appropriate digital submission platform* * evaluate the project outcomes and lifecycle, and make recommendations or offer advice for future directions where feasible (P&E3) * submit the above written and product components, ensuring throughout both you:   + communicate ICT information to an audience using a considered selection of visual representations and language conventions and features (A&A2)   + apply software and hardware concepts, ideas and skills to complete the set of tasks listed within the range of ICT contexts included in this project (A&A3) | |
| **Checkpoints** | |
| □ Term [X] Week [X]: Discuss ideas with teacher | |
| □ Term [X] Week [X]: Complete draft submission | |
| □ Term [X] Week [X]: Final submission | |
| **Authentication strategies** Your teacher will use ways to check that the work you are assessed on is your own work. | |
| * Discuss with your teacher or provide documentation of your progress. | |
| * Take part in interviews or consultations with your teacher as you develop your response. | |
| * Submit drafts and respond to teacher feedback. | |

Instrument-specific standards matrix

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|  | **Standard A** | **Standard B** | **Standard C** | **Standard D** | **Standard E** |
| **Knowing and understanding** | The student work has the following characteristics: | | | | |
| * **accurate** identification and **comprehensive** explanation of software and hardware requirements related to ICT problems * **accurate** identification and **comprehensive** explanation of the use of ICT in society | * **accurate** identification and **detailed** explanation of software and hardware requirements related to ICT problems * **accurate** identification and **detailed** explanation of the use of ICT in society | * identification and explanation of software and hardware requirements related to ICT problems * identification and explanation of the use of ICT in society | * **partial** identification and **simple** description of software and hardware requirements related to ICT problems * **partial** identification and **simple** description of the use of ICT in society | * **minimal** identification and **superficial** description of software and hardware requirements * **minimal** identification and **superficial** description of the use of ICT in society |
| **Analysing and applying** | The student work has the following characteristics: | | | | |
| * **logical** analysis of ICT problems to identify solutions * **coherent** communication of ICT information to an audience using **a considered selection of** visual representations and language conventions and features * **proficient** application of software and hardware concepts, ideas and skills to complete tasks in a range of ICT contexts | * **considered** analysis of ICT problems to identify solutions * **clear** communication of ICT information to an audience using **relevant** visual representations and language conventions and features * **competent** application of software and hardware concepts, ideas and skills to complete tasks in a range of ICT contexts | * analysis of ICT problems to identify solutions * communication of ICT information to an audience using visual representations and language conventions and features * application of software and hardware concepts, ideas and skills to complete tasks in ICT contexts | * **description** of aspects of ICT problems * **vague** communication of ICT information to an audience using visual representations and language conventions and features inconsistently * **basic** application of software and hardware concepts, ideas and skills to complete tasks in ICT contexts | * **partial description** of aspects of ICT problems * **unclear** statements of ICT information * **use** of software and hardware concepts, ideas and skills in ICT contexts |
| **Producing and evaluating** | The student work has the following characteristics: | | | | |
| * **logical** synthesis of ICT concepts and ideas to **proficiently** plan solutions to given ICT problems * production of solutions that **systematically** address ICT problems * **reasoned** evaluation of problem-solving processes and solutions, and **logical** recommendations made. | * **effective** synthesis of ICT concepts and ideas to **successfully** plan solutions to given ICT problems * production of solutions that **effectively** address ICT problems * **considered** evaluation of problem-solving processes and solutions, and **plausible** recommendations made. | * synthesis of ICT concepts and ideas to plan solutions to given ICT problems * production of solutions that address ICT problems * evaluation of problem-solving processes and solutions, and recommendations made. | * listing of related ICT concepts and ideas to **partially** plan solutions to given ICT problems * production of responses that engage with ICT problems * description of problem-solving processes and solutions, and **basic** recommendations made. | * collection of information related to planning solutions to given ICT problems * production of partial responses that engage with aspects of ICT problems * fragmented description of problem-solving processes and solutions, and statements of opinion made. |

### Comments: