# 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.
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| **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)
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| **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.
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| * Take part in interviews or consultations with your teacher as you develop your response.
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| * Submit drafts and respond to teacher feedback.
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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
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| **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
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| **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.
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### Comments: