

Coursework Assignment Brief

Re-Assessment - Undergraduate

Academic Year 2021-22

Module Title:	Mobile Game Development	
Module Code:	CMP6187	
Assessment Title:	Complete a Mobile Game from an Initial Prototype	
Assessment Type:	CWRK	Weighting: 100 %
School:	School of Computing and Digital Technology	
Module Co-ordinator:	Dr. Diego Monteiro	
Hand in deadline date:	12pm Mid-day on Monday 25 th July 2022	
Return of Feedback date and format	20 working days from date of submission (see Moodle for details).	
Re-assessment hand in deadline date:	12pm Mid-day on Monday 25 th July 2022 Note: the reassessment work may be different.	
Support available for students required to submit a re-assessment:	Timetabled support sessions will be arranged for the period immediately preceding the hand-in date	
NOTE:	At the first assessment attempt, the full range of marks is available. At the re-assessment attempt the mark is capped and the maximum mark that can be achieved is 40%.	
Assessment Summary	<p>This is a three-section assignment designed to give you the opportunity to develop your portfolio, at the same time you develop your academic skills and connect what has been learned to what you produce during assignment completion. All sections must be presented at once.</p> <p>Section 1 (10%) This assignment will require you (individually) to present critical analysis of topics studied during Scheduled Learning. You will be required to present well-researched arguments to support a couple of points and to present an analysis related to four topics, and how they relate to your prototype development.</p>	

Section 2 (25%)

This is Stage 1 of the two-stage development process and is worth up to 25% of the overall grade for the module. In Stage 1, you will come up with an original game idea to meet the criteria specified. You will rapidly prototype this game within the game engine Unity. You will present and demonstrate key features, mechanics and mobile market considerations through the vehicle of an elevator pitch. This can be accompanied by your choice of slide deck, or interactive demonstration of your rapidly prototyped application.

Section 3 (65%)

This is Stage 2 of the two-stage development process and is worth up to 65% of the overall grade for the module. In this stage, you will build upon Stage 1 (presented prototype) and further iterate your original game idea to meet the criteria specified. You will complete the development of the game idea using one of a selection of tools and frameworks available to you and submit to in at least one adequate publishing platform. You will submit and demonstrate your completed game application and relevant documentation based on the given criteria.

Now please

- Read the assignment brief, the details of the task and marking criteria.
- Work through the checklist at the end of this document.

Clarify any points you are unsure of with the module coordinator.

IMPORTANT STATEMENTS

Undergraduate Regulations

Your studies will be governed by the BCU Academic Regulations on Assessment, Progression and Awards. Copies of regulations can be found at <https://www.bcu.ac.uk/student-info/student-contract>

For courses accredited by professional bodies such as the IET (Institution of Engineering and Technology) there are some derogations from the standard regulations and these are detailed in your Programme Handbook

Cheating and Plagiarism

Both cheating and plagiarism are totally unacceptable and the University maintains a strict policy against them. It is YOUR responsibility to be aware of this policy and to act accordingly. Please refer to the Academic Registry Guidance at <https://icity.bcu.ac.uk/Academic-Services/Information-for-Students/Assessment/Avoiding-Allegations-of-Cheating>

The basic principles are:

- Don't pass off anyone else's work as your own, including work from "essay banks". This is plagiarism and is viewed extremely seriously by the University.
- Don't submit a piece of work in whole or in part that has already been submitted for assessment elsewhere. This is called duplication and, like plagiarism, is viewed extremely seriously by the University.
- Always acknowledge all of the sources that you have used in your coursework assignment or project.
- If you are using the exact words of another person, always put them in quotation marks.
- Check that you know whether the coursework is to be produced individually or whether you can work with others.
- If you are doing group work, be sure about what you are supposed to do on your own.
- Never make up or falsify data to prove your point.
- Never allow others to copy your work.
- Never lend disks, memory sticks or copies of your coursework to any other student in the University; this may lead you being accused of collusion.

By submitting coursework, either physically or electronically, you are confirming that it is your own work (or, in the case of a group submission, that it is the result of joint work undertaken by members of the group that you represent) and that you have read and understand the University's guidance on plagiarism and cheating.

You should be aware that coursework may be submitted to an electronic detection system in order to help ascertain if any plagiarised material is present. You may check your own work prior to submission using Turnitin at the [Formative Moodle Site](#). If you have queries about what constitutes plagiarism, please speak to your module tutor or the Centre for Academic Success.

Electronic Submission of Work

It is your responsibility to ensure that work submitted in electronic format can be opened on a faculty computer and to check that any electronic submissions have been successfully uploaded. If it cannot be opened it will not be marked. Any required file formats will be specified in the assignment brief and failure to comply with these submission requirements will result in work not being marked. You must retain a copy of all electronic work you have submitted and re-submit if requested.

Learning Outcomes to be Assessed:

- 1 Research, formulate and present a design proposal for mobile game application showing an awareness of the design patterns, principles and frameworks of a chosen mobile platform.**
- 2 Design and implement intuitive user interfaces for a mobile game.**
- 3 Implement and evaluate a prototype game application on a chosen mobile platform.**
- 4 Justify design and implementation decisions made in the development of commercially viable mobile game projects.**

Assessment Details:

Title: Design and development of a Mobile Game

Style: Reports, presentation and one digital artefact.

Rationale:

Section 1 –

In this section you will complete reports and discussions regarding mobile game development and related topics and subtopics. This assessment reflects research, report writing, and the capacity to argue a point relating to your area of expertise.

Section 2 –

In this section you will propose, design and implement a prototype game idea. This is intended to introduce you to the environment of industrial mobile games development, where you will often be involved in the full life cycle (or in any of the stages) of the development of a game. The aim of the exercise is to learn the core development skills involved in the development of commercial Mobile game apps – starting with the inception and design of an idea, project planning, right through to the implementation of a prototypical game app using specific platform features and technology frameworks.

Section 3 –

In this section you will complete the implementation of a mobile game from a prototype and submit it for publishing. This is intended to introduce you to the environment of industrial mobile games development, where you will often be involved in the full life cycle (or in any of the stages) of the development of a game. The aim of the exercise is to learn the core development skills involved in the development of commercial Mobile game apps – starting

with the inception and design of an idea, right through to the implementation of a prototypical game app using specific platform features and technology frameworks. Furthermore, this project will contribute to your portfolio of published work.

Description:

Section 1 - Two reports on relevant topics and two forum discussions.

- Each report requires you to research and formulate a concise yet meaningful account of the assigned topic, in the form of a formal document. Each report should be no shorter than 300 words nor longer than 1000 words, nor contain over 10 pictures and 5 graphs. Each document is required to be submitted individually.
- Each forum post requires you to ponder and formulate an answer to an open-ended question proposed in class considering:
 - your current knowledge.
 - the information presented in class; and
 - the information that may or may not have been presented by your peers, in the existing thread.
- Each post must be more than 10 words (and 140 characters) long, and present a logical argumentative sequence relating to the existing thread. The post must contain fewer than 1000 words.
- All documents must be in English.
- For both reports and forum posts a clear attempt should be made to connect it to your prototype/game.

The reports should be conveyed in a formal style appropriate to an external professional organisation. The forum posts can be written in informal language (akin to spoken language), as long as most grammatical conventions are obeyed, and the text could be reasonably understood by most non-native qualified English speakers.

For this reporting phase the use of academic papers is not required, however it is recommended that one of your sources be from a peer-reviewed conference or journal. Statements should be backed by a referenced source that could be easily found online or through printed media.

In the beginning of the report a paragraph should state why this topic is relevant to the course, to your prototype specifically, and why you chose to write about it. Furthermore, you should be able to point to at least one commercial application as an example in your report, presenting how the application(s) make(s) use of the relevant topic (e.g., if talking about sensors *Pokemon Go* makes use of the camera and GPS sensors). Optimally, if the topic permits, an example of code should be presented as an appendix of the report, exemplifying a use case.

Topics:

The following topics are divided by groups and whether they should be presented as a report or as a forum discussion:

- Group 1:
 - Report
 - Mobile Markets
 - Use of sensors in game*
 - Rapid Prototyping tools
 - Mobile Suite*

- Forum:
 - Is mobile gaming exclusive to mobile phones? Why?
 - How does Mobile Game UX game differ from other Game UX?
- Group 2:
 - Report
 - Extended Reality using Mobile*
 - Game Engines for Mobile
 - Forum:
 - What coding tools can appeal to players psychology?
- Group 3:
 - Report
 - Mobile game taxonomy
 - Optimization*
 - Forum:
 - How can mobile games appeal to differently abled audiences?
 - Do multiple mobile sensor inputs hinder or improve Game Feel? Why?
- Group 4:
 - Report
 - Multiplayer
 - Monetization*
 - Forum:
 - Is mobile gaming Indie development friendly? Why?
 - Can different generations play mobile games together? Why?

Topics marked by an asterisk (*) allow for adding a coding example.

For the re-assessment you should have write at least two reports and two forum posts. At least one in every group. There is no upper bound in the number of topics that can be submitted, however, only the latest scoring submission will receive feedback and will be considered for the final mark. No extra points will be given for finishing more than one topic per group.

Section 2 -

You will design, rapidly prototype and pitch a prototype game application for either the Android or iOS mobile platform, to meet some base functional / design criteria (see marking criteria below). For this prototyping phase, you must use the game engine **Unity**. For Stage 2, full implementation you will have a choice of other development environments.

This prototype should outline an original game app idea, based on one of the themes and requirements presented in this document. You are expected in Stage 2 to extend your game to include at least one additional library, framework or service beyond the use of a graphics or sound library. In Stage 2 you are expected to publish your game in one App store. In Stage 1 you should design appropriately for this integration and later publication. Examples of additional libraries / frameworks which could be included:

- Use of data collection libraries for game analytics;
- Location services;
- Use of camera / photos to import custom pictures / content into the game;
- Use of online databases to import data into the game;
- Use of phone sensors for some gamified process;
- Integrated mobile service features to support, for example, monetization strategies.

The base criteria (i.e. the minimum features required) for the mobile game are:

- Create an intuitive and robust mobile 2D game for your chosen mobile platform.
- The implemented game app must be well designed to incorporate the core programming and design concepts of the chosen platform – namely Object Orientation and Design Patterns.
- The implemented game must plan for at least one additional game relevant Framework that enhances the game's playability and functional design.

Therefore, as guidance, your discussion and demonstration of your application idea must include:

- Your choice of slide deck, or interactive demonstration of your rapidly prototyped application. An elevator pitch will form the basis of a brief discussion about a 2D mobile game app idea for the mobile platform. This will include visualisations of your ideas in order to convey the intent of both mechanics and art style. For the re-assessment this will be presented in video format.

Section 3 -

You will complete the implementation of a 2D or 3D XR game application for either the Android or iOS mobile platform, from your initial prototype, to meet some base functional / design criteria (see marking criteria below). **For this delivery phase, you can use the game engine Unity, but you are encouraged to attempt to port to another system.** To further elaborate on this incentive, marks will be available for this porting process. You may, for example, choose to use one of the following for the development of your game instead of Unity:

- Unreal Engine 4 (<https://www.unrealengine.com/en-US/>)
- Flutter (<https://flutter.dev/>)
- React Native (<https://reactnative.dev/>)
- HTML5/CSS/JS Engine (e.g. Phaser.io, PlayCanvas) and Cordova or PhoneGap
- Xamarin (<https://dotnet.microsoft.com/apps/xamarin>)
- Android native (Java)
- iOS native (Objective C, Swift) with SpriteKit and GameplayKit

This delivery phase should build upon your original game app idea. Also, as part of the application design – your game is expected to include at least one additional library, framework or service beyond the use of a XR, graphics or sound library. In Stage 1 you should design appropriately for this integration. Examples of additional libraries / frameworks which could be included:

- Use of data collection libraries for game analytics;
- Location services;
- Use of camera/photos to import custom pictures/content into the game;
- Use of online databases to import data into the game;
- Use of phone sensors for some gamified process;
- Integrated mobile service features to support, for example, monetization strategies

The **base criteria** (i.e. the minimum features required) for the 2D or 3D XR mobile game are:

- Create an intuitive and robust mobile 2D or 3D XR game for your chosen mobile platform.
- The implemented game app must be well designed to incorporate the core programming and design concepts of the chosen platform – namely Object Orientation and Design Patterns.
- The implemented game must incorporate at least one additional game relevant Framework that enhances the game's playability and functional design.
- The game has been submitted to at least one publishing platform

Your discussion and demonstration of your application idea must include:

- A brief video demonstration with embedded discussion of a submitted prototype Game Application, particularly illustrating an understanding and systematic approach to designing and implementing the required features (see base criteria above)
- Further, as for the process documentation you are required to record a 5-to-10-minute video log (vlog) presenting the progress and challenges faced during development. You should present your contributions to the project.
- You should be able to present the core code and frameworks used, as well as any alterations in the project from the prototype phase.
- You should be able to judge the quality of your work

All combined work will be equivalent to 65% of your overall grade. The items below present the minimum requirements for the games.

Game key features working as an individual:

- Has game environment design.
- Has game assets: for example, character and enemy/obstacles design (if applicable).
- Has game material design: light, texture, material for the game assets
- Has game animation: animation of game assets
- Playable with one of the devices sensors
- Fully functioning user interface displaying information of game related elements (such as player lives or health, scores and rewards / penalties.)
- Stationary AR

Additional information: For the video report portion of the assessment, each student will deliver a video which can be no more than 15 minutes in duration in which to summarise the elevator pitch and then separately their core game mechanics, technical achievements, playability value, market competition and analysis and unique selling points for their produced app. The app should be deployed on one or both of Android and iOS. Moreover, the first minute of the video should include a non-edited demo of the game.

For advice on writing style, referencing and academic skills, please make use of the Centre for Academic Success: <https://icity.bcu.ac.uk/celt/centre-for-academic-success>

Workload: This assessment is equivalent to 4000 words and a typical student would be expected to take 40 hours to pass this assessment.

Transferable skills:

- Written presentation skills.
- Discussion and defence skills.
- Research-based skills.
- Proposing, defending and developing innovative and original project ideas.
- Proposing solutions to client requirements;
- Oral communication and presentation skills
- Troubleshooting and problem solving.
- Reflection and improvement.
- Time management and planning.
- Portfolio-based skills – video presence.
- Technical skills transferable to other computing disciplines.

Marking Criteria:**Table of Assessment Criteria and Associated Grading Criteria- Section 1****Table of Report (2.5%)**

Assessment Criteria	Written presentation
Learning outcome being assessed	1. Justify design and implementation decisions made in the development of commercially viable mobile game projects.
Weighting:	2.5%
Grading Criteria 0 – 29%	No submitted work. The work presents many major flaws, no reflection on the theme, and no visible attempt to add related content is present.
30 – 39%	The work presents some major flaws, however some reflection on the theme is present, and little or no visible attempt to add related content is present.
40 – 49%	The report presents some of the required structure; however, a good amount of reflection, exposition and related content is missing
50 – 59%	The report follows the guidelines and meets the minimum requirements; however, the reflection, exposition and related content are poorly presented.
60– 69%	The report is well written and referenced. Appropriate diagrams have been used to support the written work. It is possible to associate the concepts with the student's prototype/game
70– 79%	The report is very well written with clear and concise explanations. The diagrams are very good, clear, and explanatory supporting the written work. The report follows the university writing guidelines. It is easy to associate the concepts with the student's prototype/game
80– 89%	It is an excellent academic report with very good descriptive diagrams which support a well written and referenced piece of work. It is very easy to associate the concepts with the student's prototype/game
90 – 100%	The report is outstanding; an exceptional amount of reflection and exposition is presented. All other requirements are met. And the consideration with the student's prototype/game is masterfully presented.

Table of Forum Discussion (2.5%)

Assessment Criteria	Written presentation
Learning outcome being assessed	1. Justify design and implementation decisions made in the development of commercially viable mobile game projects.
Weighting:	2.5%
Grading Criteria 0 – 29%	No submitted work. No visible attempt to present any sort of arguments, or an argument completely out-of-scope of the discussion.
30 – 39%	Very poor attempt to present any sort of arguments, or an argument out-of-scope of the discussion, however following some reason to indicate how it could relate to the discussion.

40 – 49%	Poor attempt to present an argument within the scope of the discussion.
50 – 59%	A basic argument within the scope of the discussion and that a few references, reasoning and examples.
60 – 69%	A novel and good argument within the scope of the discussion and that presents some references, reasoning and examples.
70 – 79%	A novel and very good argument within the scope of the discussion and that presents clear references, reasoning and examples.
80 – 89%	A novel and excellent argument within the scope of the discussion and that presents clear and well-researched references, reasoning and examples.
90 – 100%	Exceptional and novel arguments within the scope of the discussion presenting masterfully researched references, reasoning, and examples.

Table of Assessment Criteria and Associated Grading Criteria – Section 2
Table Prototype Presentation (25%)

Assessment	1	3		
Learning Outcomes	Research, formulate and present a design proposal for mobile game application showing an awareness of the design patterns, principles and frameworks of a chosen mobile platform	Implement and evaluate a prototype game application on a chosen mobile platform.		
Assessment Criteria	1. Game Idea Presentation (LO1)	2. Prototype Game Core Implementation (LO3)	3. Consider use of additional Game related frameworks (LO3)	4. Understanding of mobile application Architectures and core Programming concepts (LO3)
Weighting:	30%	40%	20%	10%
Grading Criteria				
0 – 29%	An ill formulated and poorly expressed mobile game idea that shows little awareness of the targeted platform and technologies	A very poor (unsuccessful – but code present) attempt at implementing a basic mobile Game.	A very poor (unsuccessful – but code present) attempt at implementing a basic mobile Game that attempts to consider an additional game-based framework.	A very poor overall demonstration – showing little or no understanding of the core concepts covered in the module
30 – 39%	A basic mobile game idea that shows limited awareness of the targeted platform and technologies	A very basic attempt (partially successful) attempt at implementing a single scene.	A very basic attempt (partially successful) attempt at implementing a single scene game that attempts to consider an additional game-based framework.	A weak demonstration – showing a weak understanding of the core concepts covered in the module
40 – 49%	A viable, but uninspired mobile game idea, backed by some basic research into the target platform's features	A basic but successful attempt at implementing a game that demonstrates an intuitive and robust UI	A basic but successful attempt at implementing a game that successfully considers an additional game-based framework.	A basic or partial demonstration – showing a basic understanding of the core concepts covered in the module

50 – 59%	A good mobile game idea backed by some basic research into target platform features and an awareness of essential frameworks and techniques / mechanisms for developing games on mobile platforms.	A fully successful attempt at implementing a game that demonstrates a highly robust and intuitive UI design	A fully successful attempt at implementing a mobile game, considers and designs for an additional game-based framework and has a plan for integration of at least one of its features successfully.	A good demonstration –showing a good understanding of the core concepts covered in the module.
60 – 69%	A very good mobile game idea backed by detailed research into target platform features. Preparation for implementation is also evident – e.g. some basic Assets (such as characters and background designs) and Game Scene(s) prepared and presented.	A fully successful attempt at implementing a game that demonstrates a highly robust and intuitive UI design with data persistence and must contain at least one advanced feature which has not been demonstrated through tutorials.	A fully successful attempt at implementing a mobile game, considers and designs for an additional game-based framework and has a plan for integration of at least two of its features successfully.	A very good and successful demonstration – showing a very good understanding of the core concepts covered in the module.
70 – 79%	A highly inspired mobile game idea backed by detailed research into target platform features. Presentation includes a comprehensive set of resources – and some planning of gameplay implementation – e.g. comprehensive Assets and at least one animated scene design	A fully successful attempt at implementing a game that demonstrates a highly robust and intuitive UI design with data persistence and must contain at least two advanced features which have not been demonstrated through tutorials.	A fully successful attempt at implementing a game, considers and designs for an additional game-based framework and has a plan for integration of at least three of its features successfully.	A very good and fully successful prototype demonstration – showing a full understanding of the core concepts covered in the module. Also, able to suggest design improvements to the presented implementation
80 - 89%	An excellent and novel game idea backed by an in-depth research and understanding of the target platform features. Presentation includes a comprehensive set of resources – and detailed planning of gameplay implementation – e.g. Assets and multiple detailed and fully animated scene designs.	An excellent and professional game that demonstrates a highly robust and intuitive UI design with data persistence and must contain at least three advanced features which have not been demonstrated through tutorials.	An excellent and professional attempt at implementing a game, considers and designs for multiple additional game-based frameworks – has a plan for integration of at least two features successfully from each framework. Additional frameworks included to implement animations, physics, sound, lighting, camera, etc.	An excellent, professional and confident presentation of a prototype demonstration – showing a deep understanding of the core concepts covered in the module. Also, able to suggest detailed and novel improvements to the presented design and prototype. The design of the application should show awareness of mobile game programming paradigms and architectures.
90 – 100%	An excellent and novel game idea matching both theme and framework presented in this document and backed by an in-depth research and understanding of the target platform	An excellent and professional game that demonstrates a highly robust and intuitive UI design with data persistence and must contain at least three advanced features which have	An excellent and professional attempt at implementing a game, considers and designs for multiple additional game-based frameworks – has a plan for integration of at least	An excellent, professional and confident presentation of a prototype demonstration – showing a deep understanding of the core concepts

	features. Presentation includes a comprehensive set of resources – and detailed planning of gameplay implementation –e.g. Assets and multiple detailed and fully animated scene designs.	not been demonstrated through tutorials. The UI takes differently abled people into consideration.	two features successfully from each framework. Additional frameworks included to implement animations, physics, sound, lighting, camera, etc. Considers cross-platform integration.	covered in the module. Also, able to suggest detailed and novel improvements to the presented design and prototype. The design of the application should show an in-depth awareness of mobile game programming paradigms and architectures.
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Table of Assessment Criteria and Associated Grading Criteria- Section 3
Process evaluation (45%)

Learning outcome being assessed	4 Justify design and implementation decisions made in the development of commercially viable mobile game projects		
	Assessment Criteria		
	1. Video Log – Code Understanding (LO4)	2.Video Log – Development process (LO4)	3. Publication (LO4)
Weighting:	40%	45%	15%
Grading Criteria 0 – 29%	No consideration of the core code is presented	Video does not present the development process in an individual level or even if perfectly done does not represent the delivered product.	The game has not been submitted to any platforms
30 – 39%	Limited understanding of the code is presented	Video presents a small part of the development process, without coherence, making it difficult to judge the evolution of the project	The game has been submitted to no App Stores; however, it is kept in an open repository.
40 – 49%	Basic understanding of the code is presented	Video presents the basic idea of the development of the game. Showing the initial choices and outcomes.	The game has been submitted to at least one major App Marketplace (App Store or Google Play)
50 – 59%	Basic understanding of the code with basic considerations to why the algorithm was selected	Video presents the basic idea of the development of the game. Showing most choices and outcomes, however in an uninspired manner.	The game has been submitted to at least one major App Marketplace (App Store or Google Play), with a clear presentation.

60 – 69%	Good understanding of the code with explanation to why the code was selected, with some consideration to performance	Video presents most of the development of the game. Showing a clear rationale of choices and outcomes.	The game has been submitted to at least two major App Marketplace (App Store or Google Play), with a clear presentation.
70 – 79%	Good understanding of the code with explanation to why the code was selected, with some consideration to performance. And alternative solutions	Video skilfully presents most of the development of the game. Showing a deep rationale for choices and outcomes.	The game has been submitted at least two major App Marketplace is available online through open repositories. All with clear presentations.
80 - 89%	Excellent understanding of the code with explanation to why the code was selected, with deep consideration to performance. And alternative solutions.	Video skilfully presents most of the development of the game. Showing a deep rationale for choices and outcomes. And next stages in the development	The game has been submitted to at least two major App Marketplace is available online through open repositories. All with exceptional presentation.
90 – 100%	Outstanding understanding of the code with explanation to why the code was selected, with deep consideration to performance and portability. And alternative solutions	Video skilfully presents most of the development of the game. Showing a deep rationale for choices and outcomes. And well-considered next stages in the development	The game has been submitted to at least two major App Marketplaces, is available online through open repositories and is available on a localized App store. All with exceptional descriptions.

Table of Assessment Criteria and Associated Grading Criteria- Section 3
Product evaluation (20%)

Learning outcome being assessed	2		4	
	Design and implement intuitive user interfaces for a mobile game		Justify design and implementation decisions made in the development of commercially viable mobile game projects	
Assessment Criteria	1. Game Core Implementation (LO2 & LO4)	2. Use of additional Game related frameworks (LO2 & LO4)	3. Understanding of mobile application Architectures and core Programming Concepts (LO4)	4. Game Video Demonstration (LO2 & LO4)
Weighting:	40%	30%	15%	15%
Grading Criteria	A very poor (unsuccessful – but code present) attempt at implementing a basic mobile game	A very poor (unsuccessful – but code present) attempt at implementing a basic mobile game	very poor overall application – showing little or no understanding of the core concepts	Video ill formulates and poorly expresses the mobile game idea that shows little awareness
0 – 29%				

		that attempts to implement an additional game-based framework.	covered in the module.	of the targeted platform and technologies.
30 – 39%	very basic attempt (partially successful) attempt at implementing a single scene	A very basic attempt (partially successful) attempt at implementing a single scene game that attempts to implement an additional game-based framework.	weak application – showing a weak understanding of the core concepts covered in the module	Video illustrates a basic mobile game idea that shows limited awareness of the targeted platform and technologies.
40 – 49%	A basic but successful attempt at implementing a game that demonstrates an intuitive and robust UI	A basic but successful attempt at implementing a game that successfully implements an additional game-based framework.	basic or partial application – showing a basic understanding of the core concepts covered in the module	A viable, but uninspired video showing your mobile game idea, backed by some basic research into the target platform's features
50 – 59%	A fully successful attempt at implementing a game that demonstrates a highly robust and intuitive UI design	A fully successful attempt at implementing a mobile game, implements an additional game-based framework and implements at least one of its features successfully.	good application – showing a good understanding of the core concepts covered in the module	Video demonstrates a good mobile game idea backed by some basic research into target platform features and an awareness of essential frameworks and techniques / mechanisms for developing games on mobile platforms.
60 – 69%	A fully successful attempt at implementing a game that demonstrates a highly robust and intuitive UI design with data persistence and must contain at least one advanced feature which has not been demonstrated through tutorials	A fully successful attempt at implementing a game, implements an additional game-based framework and implements at least two of its features successfully.	A very good and successful application – showing a very good understanding of the core concepts covered in the module	Video demonstrates a very good mobile game idea backed by detailed research into target platform features. Preparation for implementation is also evident –

				e.g. some assets (such as characters and background designs) and game scene(s) prepared and presented.
70 – 79%	fully successful attempt at implementing a game that demonstrates a highly robust and intuitive UI design with data persistence and must contain at least two advanced features which have not been demonstrated through tutorials	A fully successful attempt at implementing a game, implements an additional game-based framework and implements at least three of its features successfully.	A very good and fully successful application – showing a full understanding of the core concepts covered in the module. Also, able to suggest design improvements to the presented implementation.	Video demonstrates a highly inspired mobile game idea backed by detailed research into target platform features. Presentation includes a comprehensive set of resources – and some planning of gameplay implementation – e.g. comprehensive assets and a game scene with a cogent theme.
80 - 89%	An excellent and professional game that demonstrates a highly robust and intuitive UI design with data persistence and must contain at least three advanced features which have not been demonstrated through tutorials	An excellent and professional game that implements multiple additional game based frameworks - Includes at least two features successfully from each framework. Additional frameworks included to implement animations, physics, sound, lighting, camera, etc.	An excellent, professional and fully functional application – showing a deep understanding of the core concepts covered in the module. Also, able to suggest detailed and novel improvements to the presented design and prototype. The design of the application should show an in-depth awareness of mobile game programming paradigms and architectures.	Video demonstrates an excellent and novel game idea backed by an in-depth research and understanding of the target platform features. Presentation includes a comprehensive set of resources – and detailed planning of gameplay implementation – e.g. assets, animations, technical design and multiple

				detailed game scenes.
90 – 100%	An excellent and professional game that demonstrates a highly robust and intuitive UI design with data persistence and must contain at least three advanced features which have not been demonstrated through tutorials. Game prototype ported to another system besides Unity. The theme meets the requirement from Stage 1 and	An excellent and professional game that implements multiple additional game based frameworks - Includes at least two features successfully from each framework. Additional frameworks included to implement animations, physics, sound, lighting, camera, etc. Game prototype ported to another system besides Unity.	An excellent, professional and fully functional application – showing a deep understanding of the core concepts covered in the module. Also, able to suggest detailed and novel improvements to the presented design and prototype. The design of the application should show an in-depth awareness of mobile game programming paradigms and architectures. Including state-of-the-art concepts researched from new academic publications and an awareness of cross-platform portability	Video demonstrates an excellent and novel game idea backed by an in-depth research and understanding of the target platform features. Presentation includes a comprehensive set of resources – and detailed planning of gameplay implementation – e.g. assets, animations, technical design and multiple detailed game scenes. The game has been ported to another system besides Unity, and the Video shows the game being downloaded from an App Store

Submission Details:

Format:

- **Section 1**
The report should be uploaded in pdf format. The pdf naming convention for this coursework should be the following **[StudentID]_[Name]_[LastName]_[Milestone]_[Topic]**, for example 123456_Diego_Monteiro_1_Sensors.pdf. The pdf should not be over 50 MB.
- **Sections 2 & 3**

All files including PowerPoint, game source code, mp4 video, assets and code need to be uploaded to Moodle as one zip file at the required time points. The zip file naming convention for this coursework should be the following **[StudentID]_[Name]_[LastName]_[Section]_[ProjectName]**, for example 123456_Diego_Monteiro_1_ARInvaders.zip.

You should also submit your completed checklist (see end of this document).

Regulations:

- The minimum pass mark for a module is 40%
- Re-sit marks are capped at 40%

Full academic regulations are available for download using the link provided above in the IMPORTANT STATEMENTS section

Late Penalties

If you submit an assessment late at the first attempt then you will be subject to one of the following penalties:

- if the submission is made **between 1 and 24 hours** after the published deadline the original mark awarded will be reduced by **5%**. For example, a mark of 60% will be reduced by 3% so that the mark that the student will receive is 57%. ;
- if the submission is made between **24 hours** and **one week (5 working days)** after the published deadline the original mark awarded will be reduced by 10%. For example, a mark of 60% will be reduced by 6% so that the mark the student will receive is 54%.
- **if the submission is made after 5 days following the deadline, your work will be deemed as a fail and returned to you unmarked.**

The reduction in the mark will not be applied in the following two cases:

- the mark is below the pass mark for the assessment. In this case the mark achieved by the student will stand
- where a deduction will reduce the mark from a pass to a fail. In this case the mark awarded will be the threshold (i.e.40%)

Please note:

- **If you submit a re-assessment late then it will be deemed as a fail and returned to you unmarked.**

Feedback:

Marks and Feedback on your work will normally be provided within 20 working days of its submission deadline via Moodle.

Where to get help:

Students can get additional support from the library for searching for information and finding academic sources. See their iCity page for more information:

<http://libanswers.bcu.ac.uk/>

The Centre for Academic Success offers 1:1 advice and feedback on academic writing, referencing, study skills and maths/statistics/computing. See their iCity page for more information: <https://icity.bcu.ac.uk/celt/centre-for-academic-success>

Additional assignment advice can be found here: <https://libguides.bcu.ac.uk/MA>

Fit to Submit:

Are you ready to submit your assignment – review this assignment brief and consider whether you have met the criteria. Use any checklists provided to ensure that you have done everything needed.

Assignment Checklist

Run through this simple tick list before submitting your work!

Final submission check list

Item	Completed ✓
I have read all of the assignment brief, its learning outcomes and marking criteria. I have clarified anything that I am unsure of with the module coordinator.	
I have made regular backup copies of my work.	
Report Checklist:	
Title slide, giving proposed application's and authors' name, etc.	
Overview of game application project idea	
Unedited demonstration of the Gameplay	
Description of application Requirements	
Detailed description of UI / Interaction design (e.g. screen shots, game assets, scenes)	
Description of application internal design (e.g. class diagram)	
Proposed use of additional frameworks	
Discussion of perceived challenges and plan	
Video logs have been uploaded, weekly progress reported.	
My presentation explains the task I have undertaken. All images are presented using academic conventions (using figure numbers, heading and titles).	
All work that is not my own is correctly referenced either in the presentation and / or sources code.	
I have watched my video to check for any inaccuracies.	
I have made sure the audio is of good quality and/or text is clear.	
Source Code / Project Files and Built App Checklist::	
Fully commented game application source code	
Clear demonstration of implementation of prototype to include requirements, design and feature set as proposed in Stage 1	
Clear and obvious approach to the testing of the game and an understanding of game performance monitoring and optimisation	
I have my source code with me too.	
I have uploaded all the required files in plenty of time to the correct module Moodle assessment point.	
I have prepared and export the videos to mp4 format.	
I have read the feedback, clarified any points I did not understand with the tutor and have acted upon the advice.	