

Games Programming

Game Development Project Brief

Adapt & improve upon an existing Unity or Unreal project, using the provided framework to create and publish a playable, finished game.

The style and creative direction of the game is up to you to choose. You will need to create additional content, including the development of gameplay, design and technical features before publishing your game as a finished product.

This development project is designed to allow you to demonstrate your ability as a programmer to define and develop games features that play to your strengths, highlighting your technical abilities as a programmer.

Your planning and development process is as important as the final game itself. You will need to manage your time and document the stages of your development.

Project Specification

Choose to use either the Unity C# starter project or the Unreal C++ starter project.

They are both *very* different starter projects that can be developed in multiple directions. If you are familiar with both languages/engines then it's recommended you look at each option before making a decision.

You should not start over, you should adapt the existing code to show that you can read, understand and extend an existing code base.

You can and should add new files but you should also keep and use 90% of the existing codebase.

Try to follow the style which has already been demonstrated in the codebase

Each project has been developed with a clear gameplay theme in mind. It is strongly recommended you use this core theme as a base to expand upon with new features and mechanics.

Project Details + Getting Started

You have a choice of either Unity or Unreal as the development engine for this project.

Unity: Download & install **Unity 2020.1.3f1** from the Unity hub – https://store.unity.com/download

Unreal: Download & install **Unreal Engine 4.25** from the Epic Games Client - https://www.unrealengine.com/en-US/get-now

BitBucket is the source control management for this project

You will need a Bitbucket account to access the project files.

C# (Unity) Project: https://bitbucket.org/GradsInGames/sfas_2021_unity C++ (Unreal) Project: https://bitbucket.org/GradsInGames/sfas_2021_unreal

Create a private fork of this repo, which is now yours to use.

You will be expected to use this for your own source control management during the project – if you need to use an alternative source management, please ensure it can be made accessible to the assessors on request.

Itch.io is the submission + publishing platform for this project

You will need an itch.io account to submit your project.

Join the Search For A Star 2021 game jam group at https://itch.io/jam/sfas-games-programming-2021

Primary release platform is Windows PC

All finished projects must be submitted by 24th January 2021 at 11:59 PM GMT

Planning your Project

Projects are intended to take no more than **60 – 70 hours**, <u>spread across</u> <u>several weeks</u>. This should be taken into account when planning your time between now and the end of January. **Do not crunch**.

It's really easy to skip over the project planning and production, but this can just as easily lead to multiple issues throughout the project, and increases the likelihood of wasting your potential.

We recommend that before you start, you plan out your project time carefully, split clearly across pre-production, production and presentation, giving plenty of time for each section.

The example sections below can be used as starting points for your own project plan:

- Written intro & outline of your objective
- Initial concept design & development
- Core gameplay research
- Game design & features plan
- Pre-production documentation
- Source control, code management & QA considerations
- Core game development
- Advanced technical systems development
 - o networking, physics, graphics, etc.
- Balancing + refinements
- QA & optimisation
- polishing your game
- Publishing; itch.io page setup & creation of supporting assets
- Full production documentation
- Final presentation & submission

Assessment Criteria

Assessors will be awarding marks based on the following criteria

Code + Technical

Your ability to build on an existing codebase, maintain good coding practices, to write clean, efficient and readable code.

Your ability to read and understand an existing code base (do not start again from scratch). Your approach to identifying problems and implementing solutions. The full range of your technical ability & any distinct areas of specialisation e.g. gameplay, networking, AI, graphics, performance, editor extensions.

Gameplay Implementation

Your ability to identify + implement core gameplay concepts and mechanics.

This includes the core gameplay loop, defined rulesets and objectives, balanced progression systems, risk-reward mechanics and the logic of interactions with AI / other users.

Features + Additions

The construction + implementation of extra features to the base game

Wide ranging based on your development decisions. The development of both complex and basic additions to the core gameplay, and the success of the final implementations.

UI / UX

The clarity + ease of use of user systems.

The implementation and practicality of navigation & control systems, functional integrations, interfaces and game accessibility features.

Creativity + Originality

The implementation of great ideas, overall style + creative concepts.

Subjective assessment looking at everything from concept development & design plan, your creative decisions throughout development, all the way to your published games page and the final game content.

Submission Guide

All finished projects are required to be published on the itch.io platform and submitted to the Search For A Star 2021 game jam by 24th January 2020 at 11:59 PM GMT

You must join the SFAS21: Games Programming jam page to take part : https://itch.io/jam/sfas-games-programming-2021

We strongly advise that you set up an itch.io account, join the game jam & set up a draft of your project page in advance, in order to avoid any last minute issues!

Setting up your project page

To create your project page, go to your itch.io Dashboard and select the 'Upload New Project' option.

Complete the submission form, in line with itch.io's **Quality Guidelines**

- 1. Set Title to the name of your game
 - a. This should be an actual name you've chosen for your game, rather than a general project title or description of the project.
 - b. Avoid reference to the challenges or your own name in the title; you can add this to the description fields instead if needed.
- 2. Set Classification to 'game'.
- 3. Set Kind of project to 'Downloadable'.
- 4. For Release State, choose an option that best describes your project, even if 'prototype' or 'in development'.
- 5. Set pricing to 'Disable all payments' You can change this once all projects have been marked by the judges, if you wish.
- 6. Upload your compiled release build as a single zip file
 - a. It must be possible for a user to download, unzip and then immediately run your game.

- 7. Upload your supporting documentation as a separate PDF file alongside your game file. This should include:
 - a. Your intro explaining what you want to create for the project
 - b. Discussion of your ideas and any research
 - c. An outline of your design plan
 - d. A list of any external tools or 3rd party assets used
 - e. Any dev diary or production notes (especially if you've written about problems encountered/solved)
 - f. A short reflective summary, saying how you think you did & what you might have done differently
- 8. Complete the Description text field with information about your game. Include information on the following:
 - a. An overview of what your game is
 - b. Your game controls
 - c. Any accessibility features / limitations
 - d. Any recommendations for playing (e.g. controllers, multiplayer)
- 9. For Genre, Tags, Custom Noun, Community, complete to your own preferences.
- 10. Include a cover image & screenshots. Include a gameplay video or trailer if possible.
 - a. gameplay gifs are great
- 11. When your project is complete, set 'Visibility & Access Settings' to 'Public'
 - a. To prevent your project showing up in public listings, choose the option for 'Unlisted in search & browse'.

When you're ready to submit your game

To submit your project, return to the **SFAS21: Games Programming**page and press the 'Submit your jam' button

Select your finished project, complete the requested details and press 'Submit'.

- Fill in your name
- Choose the challenge tier that you are taking part in
- Link to your BitBucket source code & grant read access to the BitBucket user d.dudley@aswift.com
 - You may be contacted in order to allow additional users access, depending on assessment requirements.

You may create, submit, update & make changes to your project page at any point during the submission period (before the deadline), but you will not be able to upload any further changes during the assessment period (25th January – 3rd March 2021)

Please note there is no 'fail' criteria. Do what you can & submit what you are able. Even unfinished pieces & works in progress can show potential ability.

If you have any issues with the submission process, questions about your project or want to clarify anything, let me know either on the Grads In Games Discord https://discord.gg/PktNw4z or email me at dan@gradsingames.com

Support + Resources

Support information, FAQ & resources can be found in the <u>#sfas-code</u> channel on the <u>Grads In Games community Discord</u>.

Additional help & guidance will also be posted on Discord throughout the challenge, so it's recommended you check it regularly. https://discord.gg/PktNw4z

We'll also be active in the community Discord to help you out & answer questions.

If you have any questions about the project or challenges you can also contact Grads In Games / Aardvark Swift at dan@gradsingames.com or call us on 01709834777