

# Programming Variation Assignment - Intake 2025-2026

We have created this programming assignment to assess your suitability for our educational program. This might be your first experience with programming and game development. We have created a series of tutorials to help you get started. You can find it here: <https://www.3dgep.com/cpp-fast-track-1-getting-started> We recommend that you follow this tutorial series step-by-step from start to finish. This will take some time and dedication.

Carefully read the instructions below. If something is not clear, please let us know. We don't expect you to build a commercial quality game for this assignment. Most of you are new to programming and we'll take this into account when assessing the work. However, we do want to see that you put in effort and that you give it your best. Good luck!

**The .ppt template for delivering the assignment only becomes available through 'My Online Application' as you follow the application procedure:**

## Programming your own Game

Requirements:

1. The theme of your game should be 'Collide'. You can interpret the theme from very literal to very abstract.
2. The game must be written in **C++**.
3. The game must have **graphical gameplay**.
4. You are allowed to use the template from the tutorial series (mentioned above) as a starting point for your own game.
5. Another highly recommended option is to use SFML which you can find here: <https://www.sfml-dev.org/> SFML is well documented and comes with clear step-by-step [tutorials](#) to get you started.
6. The game must be your own work, but you are allowed to use external libraries. However, **you are not allowed to use a game engine** (like Unity or Unreal Engine)
7. You are allowed to use existing art assets (images, 3d models, audio, etc) or use simple shapes (lines, boxes, circles, etc). **You will be assessed on the quality of your code, not the quality of the assets.** Example assets: <https://itch.io/game-assets>
8. If you use existing source code, tutorials and/or art assets from others then state this clearly.
9. Your game should compile using Visual Studio Community (<https://visualstudio.microsoft.com/vs/community>) which is freely available.
10. Your code is well structured and commented.
11. You must provide a **zip-file** that contains the full project (including assets, source code and other dependencies) that we can build and run without installing additional software. **Test your zip-file before you upload it:** extract the zip-file to a new folder and check that you can successfully compile and run your game (in debug and release mode). *NB Upload the zip-file at the same time you upload this PowerPoint.*
12. Include a **readme.txt** explaining how to play the game (including which buttons/keys to use)



(Ants – An example project from a previous year)

If you have never programmed before, then along with [the online tutorials](#) we mentioned above we also recommend the book [Beginning C++ Through Game Programming \(4th Edition\) by Michael Dawson \(2006\)](#) published by Course Technology (EAN 9781305109919). Although this book does not go into graphical games, it is still highly recommended that you work through this book before you begin your study as this helps with your C++ foundation.