

# CS 535: Assignment 01

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## Programming Assignments (80%)

- **This assignment is in C++.**
- Copy `src/app/VulkanStart.cpp` and name it **`src/app/Assign01.cpp`**
- Change the application name from "VulkanStart" to "Assign01"
- Change the window title to be "Assign01: " + your SITNET ID
  - o E.g., "Assign01: realemj"
- Make a copy of the `vulkanshaders/VulkanStart` folder and name it **`vulkanshaders/Assign01`**
- Modify **`CMakeLists.txt`** by adding the following line to the end of the file:
  - o `CREATE_VULKAN_EXECUTABLE(Assign01)`
- Make sure the program configures, compiles, and runs as-is
- Find where the **background color** is set.
- **Animate the background color in whatever manner you see fit** with the following restrictions:
  - o You must at least have two notably different colors you change between.
  - o The values for red, green, and blue should be between 0.0f and 1.0f.
  - o Make sure that the alpha value is always 1.0f.
  - o Feel free to use the `glm::vec3` and `glm::vec4` structs from GLM.
  - o You must use the `pro::getTime()` and `pro::getElapsedSeconds()` functions (defined in `ProTime.hpp`) to ensure that your change is based on TIME and not on framerate.
  - o Please do not change the color so quickly that a seizure warning would be deemed necessary.
  - o For this assignment, feel free to use globals.
  - o Be creative 😊

## Screenshot (10%)

- **Take a screenshot** of the application window.
  - o *Windows:* Alt + Screenshot button OR Windows Button + Shift + S
- Copy the image into the **`screenshots`** folder as "Assign01.png"

## README (10%)

- In `README.md`, change "Your Name Here" to your full name.
- Under the "Applications" section, add a subsection (same format as `VulkanStart`) very briefly describing what you decided to do for your background animation.

## Grading

Your OVERALL assignment grade is weighted as follows:

- 80% - Programming
- 10% - Screenshot
- 10% - README

I reserve the right to take points off for not meeting the specifications in this assignment description.

The following specific penalties (applied to the WHOLE assignment) can be expected:

| Problem  | Maximum Penalty |
|--|-----------------|
| Code that does not compile   | 60              |
| No animation (or colors barely distinguishable)                        | 60              |
| Not syncing animation with time  | 15              |
| Animation WAY too fast   | 10              |
| Bad/out-of-range background color values (including alpha)             | 10              |
| Incorrect application name   | 5               |
| Incorrect window title   | 5               |
| Technically correct code, but poor code design (globals are fine here) | 5               |
| Missing assignment Git branch  | 5               |
| Missing shaders folder   | 10              |
| Missing screenshot   | 10              |
| README update missing/incorrect  | 10              |

In general, these are things that will be penalized:

- **Code that does not compile (up to 60 points off!)**
- Sloppy or poor coding style
- Bad coding design principles
- Code that crashes, does not run, or takes a VERY long time to complete
- Using code from ANY source other than the course materials
- Collaboration on code of ANY kind; this is an INDIVIDUAL PROJECT
- Sharing code with other people in this class or using code from this or any other related class
- Output that is incorrect
- Algorithms/implementations that are incorrect
- Submitting improper files
- Failing to submit ALL required files