

COSC4302 Operating Systems

Group Project

Due: 10:00am, July 29, 2022 (Friday)

This is a **group** project. Each group can have up to **3 students**.

The project must be implemented on **Linux platforms** using **C or C++ language**.

Every student in the same group needs to contribute to the project and understand how the project is designed and implemented.

Project Description:

Part 1:

Textbook: p. 76 -> Lab 2.1. A simple shell...

Please provide a simple *Readme* file for your course code.

Part 2:

In part 1, `fork()` is used to create a child process and execute the command. In Part 2, instead of using `fork()` to create a child process, please use `pthread_create()` to create a thread and execute the command.

Part 1 and Part 2 should be separate C or C++ programs.

Documentation:

Please properly document your program. This includes the documentation of important variables, statement and program structure.

What to submit:

1. A **report**: please check section “Requirement of the Written Report”
2. **Softcopy**: Please submit the **source code** and the **report** for your project to BlackBoard.
3. Each group just needs to submit one report and one copy of source code.

How to Submit:

Please submit your group project on BlackBoard.

Class Policy:

Some programming questions are used in previous semesters. Please do **NOT** borrow solutions from those students who have taken this class before. We keep a database of all previous solutions.

Programming solutions will be checked carefully for plagiarism. Students who are caught copying directly will receive 0 for this project.

Requirement of the Written Report:

1. Please provide an introduction part of the project
2. Please organize the report well
3. Please explain the technical content well. You may use **diagrams** and **figures** to help explain important concepts.
4. Please discuss how to implement the projects and how to run the projects,
5. Please write grammatically correct report