**University of Technology, Jamaica**

**Faculty of Engineering and Computing**

**School of Computing and Information Technology**

**Lab Test # 1**

**Course:** Object-Oriented Programming (CIT2004) October 2023

1. Create a folder on the respective drive of your computer using your name for example “**BridgetteJones”** and append your student identification number to your name of the folder “**C:\BridgetteJones\_1234567”**. Then upload to the Moodle Container.
2. Using the Language of Choice (C++ or Java), create a project called **LabTest1** in the folder created in task 1 above. **(1 mark)**

A diagram of a military base

Description automatically generated with medium confidence

1. Complete the implementation for each of the classes in the UML diagram above, also implement a Display method or 'to string' method for all classes **(7 + 5 + 5+4 marks)**
2. Add a driver file/class to your project **(1 mark).**
3. Add code to the ‘main’ method of the driver file/class to demonstrate the following:
   1. Create three **“ArmForce objects”** using the default, primary and copy constructors.

**(3 + 3 + 3 marks)**

* 1. Display each object’s state using the object’s ‘Display’ / ‘toString’ method **(3 marks).**
  2. Change the values of the “rankId” and the “salary” of the “ArmForce class” **(2 + 2 marks)**
  3. Create two **“Police objects”** using the default and primary constructors **(3 + 3 marks)**
  4. Display each object’s state using the object’s ‘Display’ / ‘toString’ method **(2 marks)**
  5. Create two **“Soldier objects”** using the Copy and primary constructors **(3 + 3 marks)**
  6. Display each object’s state using the object’s ‘Display’ / ‘toString’ method **(2 marks)**

End of Test -

Total of 55 Marks for this Test