**Lab 4 Report**

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1. **A description of the objectives/concepts explored in this assignment including why you think they are important to this course and a career in CS and/or Engineering.**

The objectives/concepts explored in this lab were inheritance, polymorphism, virtual functions, and abstract classes. We learned how to create Base classes and derive from them. We utilized virtual functions to understand how functions will be called when derived classes are declared with base class type. All these concepts are important to know and master in the coding. These concepts made writing this code more efficient and made the code more readable. They are all common occurrences in many programs, so understanding how they work will be beneficial in a career in CS/Engineering.

1. **The sections from each task indicated to be included in the lab report.**

**Task 1, Step 3. Include in the submission how each member will be available in derived classes (i.e., not available, available if not overridden, etc.…).**

For the Show class, the getters and setters for private variables will be available in the derived class.

Play () function is declared as a virtual function, which means that even if a pointer to Show is actually pointing to a derived class (Show \*s = new Derived ();), calling the Play() function will call the declaration inside derived class instead of base class Show.

Finally, Details () function of Base is available. For pointer to Show pointing to a derived class (Show \*s = new Derived () ;), details of base will be called even if it is overridden inside derived class.

**Task 2, Step 4: Include in the submission what version of the derived class members will be available in instances of the derived class and in instances of the derived class declared as the base class type.**

For instances of derived class:

Details () from derived will be available

Play () from derived will be available

For instances of derived class declared as base class type:

Details () from Show will be available

Play () from derived will be available