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Programming Methodology 1

Professor Jorge Ortiz

Lab 10

Exercise 1

```
samirvarma@Samirs-MacBook-Pro-2 ex1 % ./shapes
Circle name: Red Circle
Rectangle color: Blue
Base shape area: 0
Circle area: 50.2655
Rectangle area: 15

Polymorphic display of all shapes:
Shape Information:
  Name: Base Shape
  Color: White
  Area: 0
Area: 0

Circle Information:
  Name: Red Circle
  Color: Red
  Radius: 4
  Area: 50.2655
Area: 50.2655

Rectangle Information:
  Name: Blue Rectangle
  Color: Blue
  Width: 5
  Height: 3
  Area: 15
Area: 15
```

Exercise 2

```
samirvarma@Samirs-MacBook-Pro-2 ex2 % ./polymorphism
Testing function overloading:
Integer addition: 30
Double addition: 5.85
String concatenation: C++ Polymorphism
Triple integer addition: 30

Testing runtime polymorphism:
DeviceInterface constructor called for Pixel 6
SmartPhone constructor called for Pixel 6
DeviceInterface constructor called for ThinkPad
Laptop constructor called for ThinkPad
Device info: Pixel 6
Pixel 6 powered on
Pixel 6 performing: Run system check
Pixel 6 powered off

Device info: ThinkPad
ThinkPad powered on
ThinkPad performing: Run system check
ThinkPad powered off

SmartPhone destructor called for Pixel 6
DeviceInterface destructor called for Pixel 6
Laptop destructor called for ThinkPad
DeviceInterface destructor called for ThinkPad
samirvarma@Samirs-MacBook-Pro-2 ex2 %
```