

Programming II

Comp 111
Spring 2022



Department of Computer Science
Forman Christian College University

Lab 4

Classes

Lab Problems

Question 1:

Write a class to represent the geometric solid sphere. Your class should implement the following methods:

`__init__(self, radius)` Creates a sphere having the given radius.

`getRadius(self)` Returns the radius of this sphere.

`surfaceArea(self)` Returns the surface area of the sphere.

`volume(self)` Returns the volume of the sphere.

Question 2:

Implement a class to represent a playing card. Your class should have the following methods:

`__init__(self, rank, suit)` rank is an int in the range 1–13 indicating the ranks Ace–King, and suit is a single character “d”, “c”, “h”, or “s” indicating the suit (diamonds, clubs, hearts, or spades). Create the corresponding card.

`getRank(self)` Returns the rank of the card.

`getSuit(self)` Returns the suit of the card.

`BJValue(self)` Returns the Blackjack value of a card. Ace counts as 1, face cards count as 10.

`__str__(self)` Returns a string that names the card. For example, “Ace of Spades”.

Note: A method named `__str__` is special in Python. If asked to convert an object into a string, Python uses this method, if it’s present. For example,

```
c = Card(1,"s")
print c
```

will print “Ace of Spades.”

Test your card class with a program that prints out n randomly generated cards and the associated Blackjack value where n is a number supplied by the user.

Question 3:

Implement a class Customer having CustomerID, CurrentBalance and AccountID. It should also have a method DisplayInfo() that prints the current status of the bank account for a customer.