

# Programming II

Comp 111  
Spring 2022



Department of Computer Science  
Forman Christian College University

## Lab 9

# Inheritance, Abstaraction, Polymorphism

<b>Question #</b>	<b>Total Marks</b>
Question 1	10

## Lab Problem

### Question 1:

Define a class named `Payment` that contains a member variable that stores the amount of the payment. Also create a member function named `paymentDetails` that outputs an English sentence describing the amount of the payment.

Next, define a class named `CashPayment` that is derived from `Payment`. This class should redefine the `paymentDetails` function to indicate that the payment is in cash. Include appropriate constructor.

Define a class named `CardPayment` that is derived from `Payment`. This class should redefine the `paymentDetails` function to indicate that the payment is with card. Include appropriate constructor.

Separately define a class named `CreditCards`. This class should contain member variables for the name on the card, expiration date, and credit card number. Include appropriate constructor. Associate this class with `CardPayment` class to enable customers to pay with cards. Finally, redefine the `paymentDetails` function to include all credit card information in the printout.

Create a main function that creates at least two `CashPayment` and two `CardPayment` objects with different values in a list and calls to `paymentDetails` for each. Hint: Abstraction and polymorphic behavior should be mentioned.