Software Development covers common programming techniques used in writing applications as well as demonstrating how to use the current leading Integrated Development Environment. Topics include object-oriented programming, control statements, database programming, and producing web-based applications. The capstone project for this course involves creating an application for a real-life business problem. (Prerequisite: Successful completion of COMP 1130 Programming Fundamentals with a C or higher, or instructor permission if the student has a working knowledge of at least one programming language.)

4

64

Lecture   4/64

Describe why programming style is important in a team environment.

Describe the concepts of OOP, including inheritance, polymorphism, encapsulation.
Draw a UML diagram to document a class.
Compare the differences between a flowchart and a UML diagram.
Utilize an algorithm and pseudocode to design programs.

Write programs that utilize the different data types.
Use constants as part of your program design.
Convert String data into numbers.
Convert numeric data into Strings.
Demonstrate the different ways a number can be represented using binary, decimal, and hexadecimal.

Utilize methods for greater code reuse.
Use parameters to send data to methods.
Write methods which return data.
Capture and use the data returned by a method using the assignment operator.

Determine the length of a String.
Add multiple Strings together using the concatenation.
Utilize common String methods, for example, extraction, search, alphabetiz 0 m 510.a3a to m .a3a to m .a3a to m .

Demonstrate effective debugging techniques using IDE debug tools.