

CST0006 – Computer Programming Foundations

WEEK00/WEEK01 Review

- What is a Source Code Management System?
- What is Git?
- What is a Central Software Repository?
- What is the Agile workflow vs the Waterfall workflow?
- What is a Workflow Board?
- What is GitLab/GitHub and why are they important to software development?

WEEK02 Review

- What is an IDE?
- What is a Git GUI Client?

WEEK03 Review

- What is an Algorithm?
- Name one person that has been influential in Computer Science and why?

WEEK04 Review

- What is a Programming Paradigm and give an example of a Programming Paradigm?
- What does Programming Language Syntax mean?
- What does White Space mean when referring to Programming Languages?

WEEK05 Review

- What is a Data Type?
- What is a Variable?
- How do Data Types and Variables relate to each other?
- What is the difference between a statically typed language and a dynamically typed language?
- What is an Array?
- What is a keyword?
- What is the difference between declaring and defining?

WEEK06 Review

- What are the comparison operators and what are their definitions?
- What is the result of the comparison and how does it relate to the Boolean data type?
- How does an IF statement and a Boolean data type relate to each other?
- What is a Flow Chart?
- What is Pseudo Code?
- How do they relate to an Algorithm?
- Why are nested if statements good to avoid if possible?

WEEK07 Review

- What is a WHILE loop?
- What is a FOR Loop?
- What is Recursion?

WEEK08 Review

- What is Modular Programming?
- What is a function and why is it preferred?
- What is the difference between a Parameter and an Argument?
- What does it mean to Pass-By-Value vs Pass-By-Reference?
- What is the difference between Mutable and Immutable?
- What does a Return Value mean in relation to a function?
- What does Variable Scope mean?

WEEK09 Review

- What is Input and give examples?
- What is Output and give examples?
- What are String Formatting Specifiers and give examples of three of them?
- When opening files for reading and writing, what is the syntax for them?
- What is a Data Structure and why are they preferred?
- How does the Big-O notation relate to searching and sorting of data?

WEEK10 Review

- What is Object Oriented Programming?
- What is a Class?
- What is an Object?
- What is a Method?
- What is Abstraction?
- What is Polymorphism?
- What is Inheritance?
- What is Encapsulation?
- If given A.P.I.E, can you name the four?
- What is an Access Specifier?
- What are the differences between Public, Protected and Private?

WEEK11 Review

- What is a Software Library?
- What is a Framework?
- What is the difference between them?
- What is an API?
- What is a Design Pattern?
- What is the MVC Pattern?
- What is a GUI Framework?
- What is a Gaming Engine?

The exam will consist of questions **like** these and **half** of the questions will come directly from the questions asked in the lab assignments. This will show me who has done their own work, and who copied their friend's work.