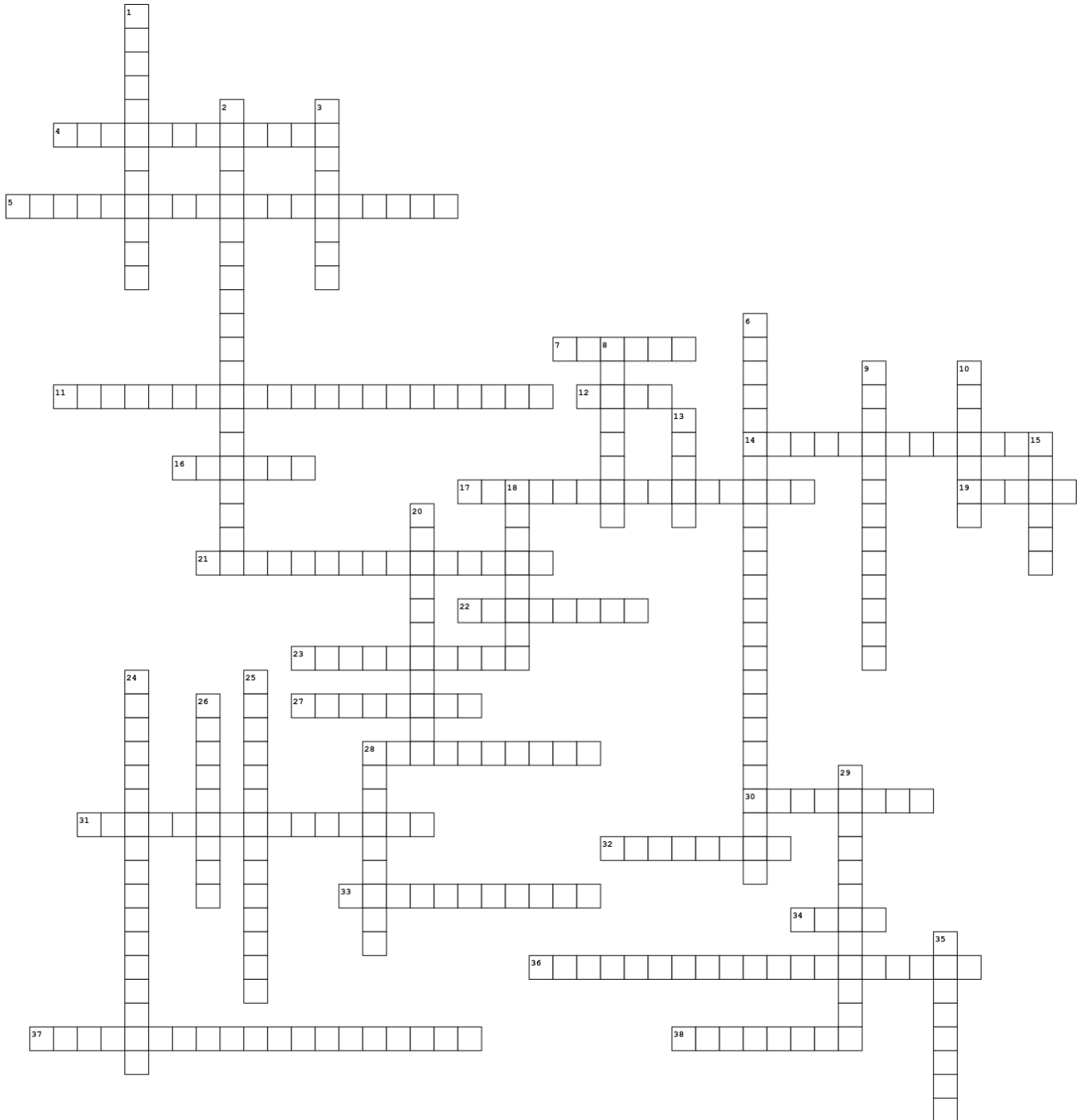


CS 5004 Module 7 Worksheet

More Complex Program Design

Each worksheet will help you review some of the very important concepts that we have been learning in this class. It can be hard to learn the vocabulary that is used to discuss programming but it is very important for us to be able to communicate with each other, with future employers. In this worth, you should complete the following crossword puzzle which reviews the vocabulary we have learned thus far.



Across

4. if $A = B$ and $B = C$, then $A = C$

Transitivity

5. an abstract data type in Java that has only one single abstract method (20)

Single Abstract Method

7. unified interface to a more complex subsystem

Facade

11. the error thrown when a method call could cause the fields of the class to contain incorrect values

IllegalStateException

12. special value that means that a reference does not refer to anything

NULL

14. mechanism used to avoid code reuse in related classes

abstract class

16. program that is used demonstrate how a model should be used

driver

17. way to test if two values are not equals

instanceof

__ s __ n __ e __ a __

19. a general collection that can store primitive types

Down

1. the type of the parameter passed to the reduce method

bifunction

2. each class should represent one thing in our design

SingleResponsibility

3. if $A = B$ then $B = A$

Symmetry

6. the error thrown when a client passes in incorrect values in a method call

IllegalArgumentException

8. degree to which two classes depend on each other

Coupling

9. placing data and behaviors into a single component

Encapsulation

10. true or false

boolean

13. the component of the MVC pattern responsible for the functionality of the application

model

15. when a parameter is named the same thing as a field

static

array

- 21. the determination of which method to call based on the type of the calling object

dynamic dispatch

- 22. testing that is written without knowing anything about the implementation

blackbox

- 23. another word for a parent class (10)

superclass

- 27. the type of the parameter passed to the `map` method

function

- 28. the component of the MVC pattern responsible for handling user input

Controller

- 30. method used to generate a representation of an object that can be printed to the console

toString

- 31. the need to declare variables before using them

Static data types

- 32. testing that contains specific knowledge of the implementation

whitebox

- 33. A = A

- 18. another word for a child class

subclass

- 20. representing essential features without implementation details

abstraction

- 24. using private as much as possible

Secure programming

- 25. another word for inheritance relationships (14)

super-sub class

- 26. the type of the parameter passed to the `filter` method

Predicate

- 28. method used to determine the absolute ordering between two instances

compareTo

- 29. how elements are organized in software and how they relate to each other

architecture

- 35. degree to which a class has a well-defined purpose

coupling

Reflexivity

- 34. the component of the MVC pattern responsible for showing results to the client

View

- 36. the SOLID principle that requires backwards compatibility

Liskov's substitution

- 37. declaring variables of an interface type instead of the concrete type

Dependency inversion

- 38. to pass responsibility to another object used as a field

disposable

