

03



School of Computing and Information Technologies

PROGCON - CHAPTER 2

116

$$59 \div 2 = 29.5$$

oby: Sante

CLASS NUMBER: 03

SECTION: AC 192

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DATE: 11/08/19

PART 1: Identify the following.

- Data Type 1. A classification that describes what values can be assigned, how the variable is stored, and what types of operations can be performed with the variable.
- Hierarchy Chart 2. A diagram that illustrates modules' relationships to each other.
- Data Dictionary 3. A list of every variable name used in a program, along with its type, size, and description.
- Functional Cohesion 4. A measure of the degree to which all the module statements contribute to the same task.
- Prompt 5. A message that is displayed on a monitor to ask the user for a response and perhaps explain how that response should be formatted.
- Portable 6. A module that can more easily be reused in multiple programs.
- Floating-Point Identifier 7. A number with decimal places.
- Numeric Constant 8. A program component's name.
- Declaration 9. A specific numeric value.
10. A statement that provides a data type and an identifier for a variable.
- Hungarian Notation 11. A variable-naming convention in which a variable's data type or other information is stored as part of its name.
- Integer 12. A whole number.
- Binary Operator 13. An operator that requires two operands—one on each side.
- Magic Number 14. An unnamed constant whose purpose is not immediately apparent.
- Assignment Statement 15. Assigns a value from the right of an assignment operator to the variable or constant on the left of the assignment operator.
- Alphanumeric Values 16. Can contain alphabetic characters, numbers, and punctuation.
- Keywords 17. Constitute the limited word set that is reserved in a language.
- Module Body 18. Contains all the statements in the module.
- Annotation Symbol 19. Contains information that expands on what appears in another flowchart symbol; it is most often represented by a three-sided box that is connected to the step it references by a dashed line.
- Self-documenting programs 20. Contains meaningful data and module names that describe the program's purpose.

right-associativity

- Right-to-left Associativity 21. Describe operators that evaluate the expression to the right first.
- Numeric 22. Describes data that consists of numbers.
- Left-to-right Associativity 23. Describes operators that evaluate the expression to the left first.
- Overhead 24. Describes the extra resources a task requires.
- Order of Operations 25. Describes the rules of precedence.
- In Scope 26. Describes the state of data that is visible.
- Garbage 27. Describes the unknown value stored in an unassigned variable.
- Local 28. Describes variables that are declared within the module that uses them.
- Global 29. Describes variables that are known to an entire program.
- Rules of Precedence 30. Dictate the order in which operations in the same statement are carried out.
- External Documentation 31. Documentation that is outside a coded program.
- Internal Documentation 32. Documentation within a coded program.
- Real Numbers 33. Floating-point numbers.
- End-of-job Tasks 34. Hold the steps you take at the end of the program to finish the application.
- Housekeeping Tasks 35. Include steps you must perform at the beginning of a program to get ready for the rest of the program.
- Detail Loop Tasks 36. Include the steps that are repeated for each set of input data.
- Module Header 37. Includes the module identifier and possibly other necessary identifying information.
- Lower Camelcasing 38. Is another name for the camel casing naming convention.
- Kebab Case 39. Is sometimes used as the name for the style that uses dashes to separate parts of a name.
- Module Return Statement 40. Marks the end of the module and identifies the point at which control returns to the program or module that called the module.
- Numeric Variable 41. One that can hold digits, have mathematical operations performed on it, and usually can hold a decimal point and a sign indicating positive or negative.
- Main Program 42. Runs from start to stop and calls other modules.
- Named Constant 43. Similar to a variable, except that its value cannot change after the first assignment.
- Modules 44. Small program units that you can use together to make a program; programmers also refer to modules as subroutines, procedures, functions, or methods.
- the Initializing a Variable 45. The act of assigning its first value, often at the same time the variable is created.
- Encapsulation 46. The act of containing a task's instructions in a module.
- Functional Decomposition 47. The act of reducing a large program into more manageable modules.
- Echoing Input 48. The act of repeating input back to a user either in a subsequent prompt or in output.
- Assignment Operator 49. The equal sign; it is used to assign a value to the variable or constant on its left.
- Reusability 50. The feature of modular programs that allows individual modules to be used in a variety of applications.

- Reliability 51. The feature of modular programs that assures you a module has been tested and proven to function correctly.
- Camel Casing 52. The format for naming variables in which the initial letter is lowercase, multiple-word variable names are run together, and each new word within the variable name begins with an uppercase letter.
- Pascal casing 53. The format for naming variables in which the initial letter is uppercase, multiple-word variable names are run together, and each new word within the variable name begins with an uppercase letter.
- Mainline Logic 54. The logic that appears in a program's main module; it calls other modules.
- Lvalue 55. The memory address identifier to the left of an assignment operator.
- Modularization 56. The process of breaking down a program into modules.
- Abstraction 57. The process of paying attention to important properties while ignoring nonessential details.
- Call the module 58. To use the module's name to invoke it, causing it to execute.
- Program Level 59. Where global variables are declared.
- Program Comments 60. Written explanations that are not part of the program logic but that serve as documentation for those reading the program.

Choose from the following

- | | | |
|--------------------------------|-----------------------------------|--|
| 1. Abstraction ✓ | 22. Hierarchy chart ✓ | 43. Modules ✓ |
| 2. Alphanumeric values ✓ | 23. Housekeeping tasks ✓ | 44. Named constant ✓ |
| 3. Annotation symbol ✓ | 24. Hungarian notation ✓ | 45. Numeric ✓ |
| 4. Assignment operator ✓ | 25. Identifier ✓ | 46. Numeric constant (literal —
numeric constant) |
| 5. Assignment statement ✓ | 26. In scope ✓ | 47. Numeric variable ✓ |
| 6. Binary operator ✓ | 27. Initializing the variable ✓ | 48. Order of operations ✓ |
| 7. Call a module ✓ | 28. Integer ✓ | 49. Overhead ✓ |
| 8. Camel casing ✓ | 29. Internal documentation ✓ | 50. Pascal casing ✓ |
| 9. Data dictionary ✓ | 30. <u>Kebab case</u> ✓ | 51. Portable ✓ |
| 10. Data type ✓ | 31. Keywords ✓ | 52. Program comments ✓ |
| 11. Declaration ✓ | 32. Left-to-right associativity ✓ | 53. Program level ✓ |
| 12. Detail loop tasks ✓ | 33. Local ✓ | 54. Prompt ✓ |
| 13. Echoing input ✓ | 34. Lower camel casing ✓ | 55. Real numbers ✓ |
| 14. Encapsulation ✓ | 35. Lvalue ✓ | 56. Reliability ✓ |
| 15. End-of-job tasks ✓ | 36. <u>Magic number</u> ✓ | 57. Reusability ✓ |
| 16. External documentation ✓ | 37. Main program ✓ | 58. Right-associativity and
right-to-left associativity ✓ |
| 17. Floating-point ✓ | 38. Mainline logic ✓ | 59. Rules of precedence ✓ |
| 18. Functional cohesion ✓ | 39. Modularization ✓ | 60. Self-documenting ✓ |
| 19. Functional decomposition ✓ | 40. Module body ✓ | |
| 20. Garbage ✓ | 41. Module header ✓ | |
| 21. Global ✓ | 42. Module return statement ✓ | |



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24 + 3 = 27
corrected by: Grace

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PART 2: Identify whether each variable name is valid, and if not explain why.

3 a) Age = valid

5 b) age_* = invalid because usage of symbols such as @, #, \$, %

5 c) +age = invalid as it contains a mathematical character. ^{first} therefore it will turn out that the first variable will be number before words. On the other hand, even if it is a word before the "plus" sign it will be wrong as underscores is the appropriate one.

3 d) age_ = valid

3 e) _age = this maybe invalid as the "before the underscore" character is a number therefore stating a word first is more appropriate to conclude it as a valid variable.

3 f) Age = valid

5 g) 1age = invalid as the before word is a number that is against the qualification of being a valid variable

h) Age 1 = valid

Alt: MathWorks

corrected by: