

MISSION 2 - CHECKLIST AND STUDY GUIDE

MAIN TOPICS

- Making Decisions (Conditionals)
- Boolean Expressions
- Looping
- Working with Strings
- Formatting Text
- String Class
- String Builder Class
- Validation

CHECKLIST

Learn

- ☐ Use one or more of the following resources to learn this week's material. Be sure to use the **Keywords**, **Concepts**, and **Skills** sections of this document as a study guide.
 - Watch the **Cengage** videos.
 - Watch the **Developer University** videos.
 - Read **Chapter 4 and 5** in the textbook.
 - Watch the PowerPoints.
- ☐ Watch **MindTap - Visualize: Decisions.**
- ☐ Watch **MindTap - Visualize: AND or NOT.**
- ☐ Watch **MindTap - Visualize: Truth Tables.**
- ☐ Watch **MindTap – Visualize: Loops.**

Practice

- ☐ Complete all of the following exercises. Be sure to click **Submit** after all tests run correctly under the **Tasks** tab.
 - **MindTap – Programming Exercise 4.1**
 - **MindTap – Programming Exercise 4.3**
 - **MindTap – Debugging Exercise 4.1**
 - **MindTap – Programming Exercise 5-1**
 - **MindTap – Programming Exercise 5-2**
 - **MindTap – Programming Exercise 5-4**
 - **MindTap – Debugging Exercise 5-1**

Assess Knowledge

- ☐ Complete the following quizzes. Use the reviews to practice for each quiz.
 - **M2-Q3 Chap. 4 Making Decisions**
 - **M2-Q4 Chap. 5 Looping**

Submit

- ☐ M2 Mission Debriefing
- ☐ M2 Project: The Expert System
 - Submit a link to the GitHub repository.
 - Submit a link to the streaming video of the application walk-through. Demonstrate all completed skills thoroughly and show the code where necessary.
 - Upload the completed Skills Checklist.

KEYWORDS

Pseudocode	Substring	Incrementing
Flowchart	String Builder Class	Decrementing
Switch Statement	Append	Scope
Case Label	Replace	Validation
Runtime	Escape Character	Feedback
Truth Tables	Loop	Menu
String	Iteration	Robust

CONCEPTS

- A Sequence Structure vs. a Decision Structure
- The AND Operator
- The OR Operator
- The NOT Operator
- Short-circuit Evaluation
- Nesting Statements
- DateTime formats
- Number formats
- Custom formats
- While Loop
- Do/While Loop
- For Loop
- Pretest vs. Posttest Loop
- Step Value
- User Validation
- Infinite Loop

SKILLS

- The student will demonstrate the use Boolean variables and values.
- The student will demonstrate the use of the **if/else** structure
- The student will demonstrate the use of relational comparison and logical operators in decision statements.
- The student will demonstrate building a string using the Append method of the ***StringBuilder*** class.
- The student will demonstrate formatting ***DateTime*** data using different formats.
- The student will demonstrate formatting numeric data types using different formats.
- The student will demonstrate the use of the **switch/case** code block.
- The student will demonstrate the use of a **while** loop.
- The student will demonstrate the use of a **do/while** loop.
- The student will demonstrate the use of a **for** loop.
- The student will demonstrate developing robust applications with input validation.