

Task 6 Algorithm Design Template

Task 6 Study Session Helper Program - Unit 4 - 20%

Task 6 Algorithm Design Template

1. Algorithm Summary

Describe the main logic of your product in plain language.

My program will:

2. Main Algorithm Pseudocode

Write pseudocode for the main part of your program.

Your pseudocode should show:

- sequence
- input
- output
- variables
- at least one selection structure
- at least one iteration structure
- validation or error handling

3. Selection Logic

Where does your program make decisions?

Decision	Condition tested	What happens if true	What happens if false

4. Iteration Logic

Where does your program repeat?

Loop purpose	Loop condition	What changes each loop?	How does the loop stop?

5. Validation or Error Handling

Possible user error	How the program should respond

6. Flow Chart

Create or attach a flow chart for your main algorithm.

Your flow chart should show:

- start and end
- input/output
- processes
- decisions
- loops where needed
- arrows showing the correct direction of control

7. Trace Table

Use a trace table to check part of your algorithm. Choose a section that includes a decision or loop.

Step	Input/value	Variable changes	Output/decision
1			
2			
3			
4			
5			
6			

8. Logic Check Before Coding

- ☐ I can explain what my program does from start to finish.
- ☐ My algorithm uses sequence.
- ☐ My algorithm uses selection.
- ☐ My algorithm uses iteration.
- ☐ My variable names are meaningful.
- ☐ My algorithm includes input and output.
- ☐ I know what invalid input could look like.
- ☐ I know what a successful final output should look like.