

# Chapter 5 CRT

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1. To repeat actions until a specified condition is met.
  2. A “do while” loop executes the action first, then checks if the condition is true, while a “while” loop checks the condition first, then executes the action.
  3. Example: Guessing game.
  4. a) A loop that runs indefinitely.
- b) A loop can become infinite due to errors, such as the condition always being true, or syntax errors like missing a semicolon.
- c) Overflow occurs when a value exceeds the storage capacity, such as a float exceeding the limit of decimal digits it can hold.
5. It will execute the loop 60 times.
  6. Everything 120 and below.
  7. Counters track the number of iterations, while accumulators add values to get a sum.
  8. `for (int i = 3; i <= 10; i++) { total += i; }`
  9. Choosing a loop depends on two factors: whether you want the loop to run a set number of times or to repeat until a condition is met.