**PLANNING A COMPLEX ALGORITHM**

**Iteration 4**

**DESIGN THE ROUTINE**

CHECK PREREQUISITES

Define the problem

*User guesses a number. Computer must return a random number.*

*If the number is low, user says it must be higher. Computer must then return a number higher than its randomly guessed number.*

*If the number is high, user says it must be lower. Computer must return a number lower than its randomly guessed number.*

*Continue until user says that is correct.*

Information the routine will hide

None

Inputs to the routine

*User inputs (Guess is too low, guess is too high, correct answer)*

Outputs from the routine

Randomly generated number between 0 and 99.

Pre-conditions

*Randomly generated number*

Post-conditions

Name the Routine

*calcGuess()*

Decide how to test the routine

Should return a number

If user said “Higher”. Should return a number higher than previous

If user said “Lower”, should return a number lower than previous

Research functionality available in standard libraries

Think about error handling

Think about efficiency

Research algorithms & data types

**PSEUDOCODE**

* User clicks play
* Return random number between 0 and 99
* Try higher
* Random number now between N and 99
* Repeat
* User says correct