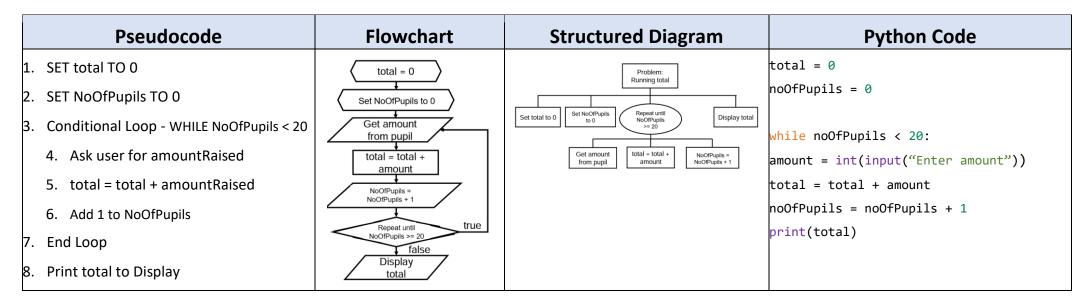
Standard Algorithms – Design to Implementation

Running Total with Fixed Loop (For)

Pseudocode	Flowchart	Structured Diagram	Python Code
 Set total TO 0 Fixed Loop – repeat 20 times Ask user for amountRaised total = total + amountRaised End Loop Print total to Display 	counter = 1 Get amount from pupil total = total + amount counter = counter + 1 plisplay total	Problem: Running total Set total to 0 Repeat 20 times Display total total = total + amount	<pre>total = 0 for counter in range (0, 20): amount = int(input("Enter amount raised")) total = total + amount print(total)</pre>

Running Total with Conditional Loop (While)



Standard Algorithms – Design to Implementation

Input Validation

Pseudocode	Flowchart	Structured Diagram	Python Code
 Ask user to enter age Conditional Loop - WHILE age < 0 OR age > 120 Display error message - Invalid Ask user to re-enter age End Loop 	Get age from user Display error message true age < 0 or age > 120 false	Problem: Input validation Get age from user While age < 0 or age > 120 Display error message Get age from user	<pre>age = int(input("Enter your age: ") while age < 0 or age > 120: print("Invalid age - enter 0-99 only") age = int(input("Enter your age: ")</pre>

Traversing a 1D Array

Pseudocode	Flowchart	Structured Diagram	Python Code
 SET names[] TO array of strings FOR loop = 1 to 5 Ask user to enter name STORE name in array[] END LOOP FOR each item in the array SEND name TO DISPLAY END LOOP 	names = T 5 Counter = 1 Cell pipel Counter = Counter =	Set names to Repeat 5 times Get name from keyboard, store in array Repeat 5 in array Display name	<pre>names = [""]*5 for counter in range(0, 5): names[counter] = input("Enter the pupil's name.") for counter in range(0, len(names)): print("Pupil name: " + names[counter])</pre>