Problem Statement Description:

Develop pseudocode for a student grading system. The system should calculate the average grade, determine the grade letter, and handle exceptions for invalid input. Implement loops to handle multiple students' data.

Solution :

START

```
FUNCTION calculate_grade(grades)
    total = 0
    count = 0
    FOR grade IN grades
        total = total + grade
        count = count + 1
    END FOR
    average = total / count
    RETURN average

FUNCTION determine_grade_letter(average)
    IF average >= 90
        RETURN "A"
    ELSE IF average >= 80
        RETURN "B"
    ELSE IF average >= 70
        RETURN "C"
    ELSE IF average >= 60
        RETURN "D"
    ELSE
        RETURN "F"
    END IF
```

```
LOOP UNTIL user finishes entering student data
   INPUT student_name
   SET grades = empty list
   LOOP UNTIL user finishes entering grades for the current student
      INPUT grade
      TRY
         CONVERT grade TO INTEGER
         IF grade is not between 0 and 100
            RAISE an exception
         END IF
         ADD grade to grades list
      CATCH exception
         DISPLAY "Invalid input. Please enter a valid grade between 0 and 100."
         CONTINUE to next iteration of inner loop
      END TRY
   END LOOP
   IF grades list is empty
      DISPLAY "No grades entered for this student."
      CONTINUE to next iteration of outer loop
   END IF
   CALL calculate_grade with grades as argument
   CALL determine_grade_letter with average grade as argument
   DISPLAY student_name, average grade, and grade letter
END LOOP

END
```