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Class : 1G – Business Information System
Lesson : Algorithm and Data Structure
Material : Jobsheet 1

PRACTICE

1. Please create a flowchart/ pseudocode how to solve the case:

Displays a series of numbers from numbers 1 to 15 except numbers 6 and 10, odd numbers are printed with an asterisk "*", even numbers are printed according to the original number.
Example: *2*4* *8* *12*14*

The problem below uses the function concept:

Calculate the average rating for each film

Look for films that have the highest and lowest average ratings

Film (column)

Moviegoers (row)

	0	1	2	3
0	4	3	4	2
1	1	2	1	3
3	4	3	3	2

Start

```
// Part 1: Displaying Series of Numbers
FOR each number FROM 1 TO 15 DO
   IF number EQUALS 6 OR number EQUALS 10 THEN
      // Skip numbers 6 and 10
      Continue to the next iteration
   ELSE
      IF number IS odd THEN
         // Print odd numbers with asterisk
         Print "* "
      ELSE
         // Print even numbers
         Print number + " "
```

```
        ENDIF
    ENDIF
END FOR
Print a new line // Move to the next line for clarity

// Part 2: Function to Calculate Average Rating
Function calculateAverageRating(ratings: Array) RETURNS float
    totalRating = 0
    FOR EACH rating IN ratings DO
        totalRating += rating
    END FOR
    averageRating = totalRating / length of ratings
    RETURN averageRating
End Function

// Part 3: Finding Movies with Highest and Lowest Average Ratings
movies = Array of movies with ratings
highestRating = 0
lowestRating = infinity
FOR EACH movie IN movies DO
    ratings = getRatings(movie) // Assume getRatings function retrieves ratings for a movie
    averageRating = calculateAverageRating(ratings)

    IF averageRating > highestRating THEN
        highestRating = averageRating
        bestMovie = movie
    END IF

    IF averageRating < lowestRating THEN
        lowestRating = averageRating
        worstMovie = movie
    END IF
END FOR
```

```
// Part 4: Displaying Results
Print "Series of Numbers: " // Displaying the series of numbers
// (Note: Displaying the series can be repeated from Part 1 if needed)

Print "Movie with the highest average rating: " + bestMovie
Print "Movie with the lowest average rating: " + worstMovie

End
```