JAVA

Question 1: Create a simple JAVA application following the requirements below to allow entry of six game scores for a
bowler so that an average score can be calculated, minimum and maximum scores determined, with all results
displayed.
Detailed requirements:
 When the program starts the bowler is prompted for a score for ‘Game 1’.
 Accept the bowling score from the user; valid bowling scores are whole numbers between 0 and 300.
 Once a valid numeric score is entered then perform range validation to ensure it is within the required
entry range. If the bowler enters a value outside of the acceptable range, or for any entries that aren’t
whole numbers, the program should display an appropriate error message and re-prompt for that game’s score.
 Once the entered score passes all validation, store the score in a list, which will eventually hold all six
scores that are entered.
 The steps outlined above will all have to repeat (iterative structure required) to allow the entry of valid
scores for six games. Refer to the sample output on the next page to help guide you in your planning.
 Once six game valid scores have been entered and stored in your list, you can then go ahead and
process the list to determine the average of the six player scores rounded to the nearest whole number,
as well as the high score and low score for the player.
 Using the entered scores, produce output to match the screenshots supplied.
 Display the original scores as shown followed by the player average, high score, and low score.
 Display a prompt to the user asking if they would like to process another bowler’s scores for average
calculation and high/low determination. If the user elects to enter another bowler’s scores, repeat the
entire process again beginning with a prompt to enter a score for Game 1; otherwise end the application
with no further notification.

Sample output under various conditions:

Prompts for six game scores, re-prompts as necessary after bad entries:

```
Please enter score for Game 1: 125
Please enter score for Game 2: 400

Score must be between 0 and 300. Please Try again.

Please enter score for Game 2: 300
Please enter score for Game 3: 256
Please enter score for Game 4: Bob

Scores must be numeric, whole numbers only, no decimals. Please try again.

Please enter score for Game 4: 100
Please enter score for Game 5: 218
```

Resulting output, and the user elects to enter another set of scores:

```
================================================================================

Game 1: 125     Game 2: 300     Game 3: 256     Game 4: 100     Game 5: 218     Game 6: 200

================================================================================

Average Score for Bowler: 200

High Score for Bowler: 300

Low Score for Bowler: 100


Would you like to process another set of bowler scores?

Please enter 'Y' to continue or 'N' to exit: Y
```

Second run:

```
Please enter score for Game 1: 200
Please enter score for Game 2: 238
Please enter score for Game 3: 242
Please enter score for Game 4: 198.8
```