Movie Rating System

Loops - Extra

1. Calculate Average Rating

- **Task:** Write a function that calculates and returns the average rating for a given movie.
- **Inputs:** An array of movie objects, a movie name.
- **Example:**
  - Input:
    ```
    [{ name: "Movie 1", ratings: [5, 6, 7]}, { name: "Movie 2", ratings:
    [8, 9, 9]}]
    ```
    , movieName: "Movie 1"
  - Output: `6`
- **Tip:** Use a loop to iterate over the movie objects, when you find the movie with the specified name, use another loop to calculate the sum of all ratings and then divide by the number of ratings.

2. Find Highest Rated Movie

- **Task:** Write a function that finds and returns the highest rated movie object.
- **Inputs:** An array of movie objects.
- **Example:**
  - Input:
    ```
    [{ name: "Movie 1", ratings: [5, 6, 7]}, { name: "Movie 2", ratings:
    [8, 9, 9]}, { name: "Movie 3", ratings: [6, 8, 8]}]
    ```
  - Output: `{ name: "Movie 2", ratings: [8, 9, 9]}`
- **Tip:** Use a loop to iterate over the movie objects, for each movie calculate the average rating and keep track of the highest rating and the corresponding movie object. You can use the function you created in exercise 1.

3. Find Most Rated Movie

- **Task:** Write a function that finds and returns the movie object with the most ratings.
- **Inputs:** An array of movie objects.
- **Example:**

- o Input:

  ```
  [{ name: "Movie 1", ratings: [5, 6, 7, 6]}, { name: "Movie 2",
  ratings: [8, 9, 9]}, { name: "Movie 3", ratings: [6, 8, 8]}]
  ```

  - o Output: `{ name: "Movie 1", ratings: [5, 6, 7, 6]}`
- **Tip:** Use a loop to iterate over the movie objects and keep track of the movie object with the most ratings.

4. Remove Lowest Rating

- **Task:** Write a function that removes the lowest rating for a given movie.
- **Inputs:** An array of movie objects, a movie name.
- **Example:**
  - o Input:

    ```
    [{ name: "Movie 1", ratings: [5, 6, 7]}, { name: "Movie 2", ratings:
    [8, 9, 9]}]
    ```
    , movieName: "Movie 1"
  - o Output: `{ name: "Movie 1", ratings: [6, 7]}`
- **Tip:** Use a loop to iterate over the movie objects, when you find the movie with the specified name, use another loop to find and remove the lowest rating.

5. Movie Rating Histogram

- **Task:** Write a function that builds a histogram (object) with keys as unique ratings and values as their frequencies for a given movie.
- **Inputs:** An array of movie objects, a movie name.
- **Example:**
  - o Input:

    ```
    [{ name: "Movie 1", ratings: [5, 6, 7, 7]}, { name: "Movie 2",
    ratings: [8, 9, 9]}]
    ```
    , movieName: "Movie 1"
  - o Output: `{ 5: 1, 6: 1, 7: 2 }`
- **Tip:** Use a loop to iterate over the movie objects, when you find the movie with the specified name, use another loop to build the histogram.