**Resource Allocation in a Co-working Space Using ArrayList**

You are developing a Resource Allocation System for a co- working space. This system tracks resource requests from different teams, allowing them to specify the duration of time they need various resources. The system will store each request's details in an ArrayList, validate inputs, and sort the requests by the number of hours required. After displaying the valid requests, the system should allow deletion of a request based on a resource's description and then recalculate the average hours for the remaining resources.

**Operations to Implement:**

* Add Resource Requests: Store the request ID, description, and hours required in an ArrayList.
* Display and Sort Requests: Display each valid request in descending order by hours required.
* Delete Request by Description: Delete the request with the matching description, if it exists.
* Calculate Average Hours: After deletion, calculate and display the average number of hours required.

**Input Format**

The input consists of multiple lines:

* Request ID (integer): A unique integer between 1 and 10 representing the request ID.
* Request Description (string): The description of the resource requested
* Hours Required (integer): The number of hours requested for the resource, which must be between 1 and 100.

The input ends with the keyword 'end' on a new line, which signifies the end of resource requests.

Delete Request by Description: After 'end', enter a string representing the description of the request to be deleted.

**Output Format**

The output consists of:

For each valid request, display the details in the following format:

• Request ID: <id>

• Description: <description>

• Hours Required: <hours>

For invalid inputs, display appropriate error messages:

* Invalid ID: "ID must be a positive integer between 1 and 10 and must be unique."
* Invalid Hours: "Hours required must be between 1 and 100."
* Number Format-Exception: If a non-integer value is provided for Request ID or Hours Required, display: "Please enter a valid integer."

After deletion, print "Request with Description <description>' deleted." if a matching request is found and deleted. Otherwise, print "Request with Description '<description>' not found."

After all requests have been processed, print the average number of hours required for all the resources, formatted to two decimal places:

Average Hours Required: <average\_hours>

Refer to the sample output for formatting specifications.

**Sample Input 1**

1

Meeting Room

10

I

2

Projector

5

3

Whiteboard

2

end

Whiteboard

**Sample Output 1**

Request ID: 1

Description: Meeting Room Hours Required: 10

Request ID: 2

Description: Projector

Hours Required: 5 I

Request ID: 3

Description: whiteboard

Hours Required: 2

**Sample Input 2**

11

Conference Room

5

2

Laptop

20

3

TV Screen

45 end

All Bookn

**Sample Output 2**

ID must be a positive integer between 1 and 10 and n

**Sample Input 3**

2

Projector Screen

30

3

Teleconference Setup

10

1

Whiteboard

400

end

Ipod

**Sample Output 3**

Hours required must be between 1 and 100.

Sample Input 4

1a

Keyboard

25

26

CE

**Sample Input 4**

1a

Keyboard

15

2b

Mouse

25

3c

Monitor

5

end

Mouse

**Sample Output 4**

Please enter a valid integer.

**Sample Input 5**

1

Computer

10

2

Tablet

5

3

Mic

2

**Sample Input 5**

1

Computer

10

2

Tablet

5

3

Mic

2

end

Blackboard

**Sample Output 5**

Request ID: 1

Description: Computer Hours Required: 10

Request ID: 2

Description: Tablet

Hours Required: 5

Request ID: 3

Description: Mic

Hours Required: 2