JReport Requirements

What is JReport?

JReport helps to analyze the JMeter test results in a more intuitive way. It has loaded with features such as intuitive user interface, export results, interactive graphs, etc.

Requirements

Every chart must have multiple interactive elements, tooltip, customizable title, small animations, zoom in/out, customizable (https://share.qainsights.com/9ZuAxeKw) and legends.

Demo dashboard https://react-material-ui-demo.web.app/

1. User must be registered to use JReport
2. User should able to upload a single file (10MB file size)
3. Supported extensions are CSV, txt, log, or jtl
4. User should be able to create folders
5. Inside a folder, the user should be able to create a report by clicking on New Report
6. User should be able to drag-and-drop or upload a file
7. JReport engine should process the file and display the following data in the landing page
    - Report Name (FileName)
    - Total Test Duration (HH:MM:SS)
    - Total Transactions/Samplers Passed (Bar Chart)
    - Total Transactions/Samplers Failed (Bar Chart)
    - Average response time of all the transactions/samplers (Scatter Chart)
    - Percentile response time of all the transactions/samplers (Scatter Chart)
    - HTTP Error Count (Donut Chart)
    - Threads/Load (Number)
8. Separate pages need to be created for the below metrics
    - Response Time
    - Throughput
    - HTTP Response Codes
    - Transactions
    - Deep-dive
9. Response Time page

- The graph between the following must be plotted (x-axis for time)
  - Time Vs Elapsed
  - Time Vs Connect
  - Time Vs Latency
  - Time Vs Idle time
  - Response time distribution
  - Time Vs Percentile (90,95,99) Response time
- Hovering mouse should display the Sampler name (label)

10. Throughput
    - The graph between the following must be plotted (x-axis for time)
      - Time Vs bytes
      - Time Vs sentBytes
11. HTTP Response Code
    - The graph between the following must be plotted (x-axis for time)
      - Time vs Response Code
      - HTTP Code distribution
    - Hovering mouse should display the error message
12. Transactions
    - The graph between the following must be plotted (x-axis for time)
      - Transactions Per Second (TPS)
      - Response Time (Avg and Percentile) Vs TPS
      - TPS Vs Threads
13. Deep-dive
    - Deep-dive page must be displayed in the following charts
      - Time Vs First Error Occurrence
        - Hovering mouse should display the sampler and error details
      - Throughput Vs Time Vs Threads
        - Hovering mouse should display the transactions or samplers
      - TPS Success Vs TPS Errors Vs Threads
        - Hovering mouse should display the response time
14. Generate Report
    - User should be able to export the whole report
    - Format support PDF, HTML, XML, JSON, and CSV
15. Settings Page
    - Remove outliers (High Values)
      - User has to set the percentage
    - Percentile Options
      - Up to three values: defaults are 90, 95, and 99

        - Min is 1; Max is 100
    - Date and Time Format
        - This format will get displayed in the report
    - Granularity (default setting is 1m)
        - 1s
        - 5s
        - 30s
        - 1m
        - 5m
        - 15m
        - 30m
        - 60m

CSV Header Mappings

CSV Header Meaning

S.No	CSV Header	Meaning
1	timestamp	time in milliseconds
2	elapsed	response time in ms
3	label	transaction name or sampler name
4	response code	HTTP code
5	response message	HTTP response message
6	threadname	thread group name
7	datatype	request/response data type
8	success	transaction or sampler is pass if the value is TRUE, fail if the value is FALSE
9	failuremessage	response message if failed
10	bytes	received bytes

11	sent bytes	bytes sent
12	grapthreads	maximum number is the max load
13	all threads	each thread for each sampler/transactions
14	URL	URL under test
15	latency	latency in ms
16	encoding	encoding type
17	sample count	
18	error count	
19	hostname	
20	idle time	idle time in ms
21	connect time	connect time in ms

Transactions

If the responseMessage cell has the value "Number of samples in the transaction : 'n', number of failing samples: 'n'", then it is a **Transaction.**

The respective row has the response time, label, pass/fail, etc.

If a transaction has SUCCESS value, then it is a Pass Transaction.
If a transaction has FAIL value, then it is a Fail Transaction.

Samplers

If the responseMessage cell has the value OK or some other status, then it is a **Sampler.**

The respective row has the response time, label, pass/fail, etc.

If a sampler has SUCCESS value, then it is a Pass Sampler.
If a sampler has FAIL value, then it is a Fail Sampler.

Formulae

1. **Test duration = Last row of timestamp - First row of timestamp**

Output formats of test duration
One Hour Ten Minutes 30 Seconds
One Day 12 Hours 11 Minutes Ten Seconds
If the number is less than or equal to ten, use the words, else use the number.
E.g. for 10 use ten, for 15 use 15.

2. Average response time of a transaction = Sum of all the transactions elapsed time/count of transactions
3. 3. 90/95/99 percentile response time of a transaction = Percentile(range of transactions,0.90/0.95,0.99)
4. Success % of each transaction = (Number of Pass transactions / Total Transactions) * 100
5. Fail % of each transaction = (Number of Fail transactions / Total Transactions) * 100
6. Median of response time
7. Standard Deviation of response time
8. Maximum response time
9. Minimum response time
10. Average bytes sent
11. Average bytes received

Graphs

Response Time

X-Axis	Y-Axis	Z-Axis	Comment	Type of Chart
time	response time		tooltip info: transaction or sampler name	Line
time	latency			
time	connect			
time	idle			

time	90 percentile		tooltip info: transaction or sampler name	Bar
time	95 percentile			
time	99 percentile			
time	response time			Standard deviation graph with average, 90, 95, 99 percentile.