Random Date Generator

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Summary

This report describes the application details, the testing process of the Random Data Generator application, and the issues found during the test process. The report does not include testing of JSON formatter, Hex Color Codes, My Ip, Search, Recent links, etc.).

This report was made in response to a testing learning challenge given to me by James Bach.

Product Information

Random Date Generator helps to generate random dates based on the parameters provided by the user. The tool is handy in various applications, including quality assurance testing, simulations, and data analysis. **Random Date Generator** application can be accessed **here**.

Random Date Generator can generate random dates based on the following parameters:

- Date Format (MM-DD-YYYY, YYYY-MM-DD hh:mm:ss, YYYY-DD-MM hh:mm:ss, MM-DD-YYYY hh:mm:ss, ISO8601, Year Month Date hh:mm:ss, Year Date Month hh:mm:ss, Month Date Year hh:mm:ss)
- Number of Dates
- Custom Date Format (YYYY YY MM month mon DD d hh h mm m ss s)
- Start Date
- End Date

Test Process

I began the testing by learning about the product. I didn't have any documentation or requirements. The testing approach was highly exploratory.

I performed a visual examination of the user interface, including the appearance of the fields and screens. I checked that the limits and the updates of the fields made sense, I assessed the functionality of the drop-down lists, arrow buttons, checkboxes, and calendar selections.

One by one I selected each date formatting option. I tested the fields with bad data (ex: alphabetical characters, special characters, wrong dates, empty fields). For the Custom date format, I have tested it individually with these formats:

- "**YYYY YY MM month mon DD d hh h mm m ss s**"
- "**s ss m mm h hh d DD mon month MM YY YYYY**"
- "**YYYY**"
- "**YY**"
- "**MM**"

- **“month”**
- **“mon”**
- **“DD”**
- **“d”**
- **“hh”**
- **“h”**
- **“mm”**
- **“m”**
- **“ss”**
- **“s”**

To check the accuracy of the output field, I used Notepad++ to compare the number of generated dates against the expected number.

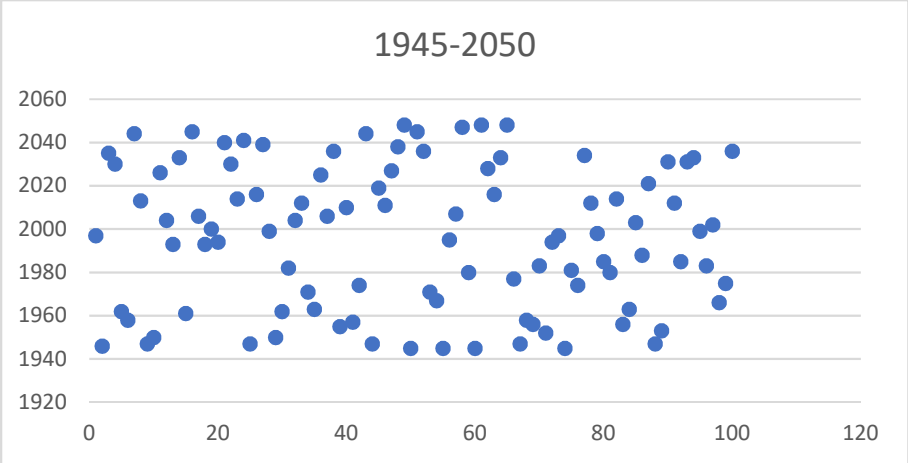
The purpose of the application is to generate random dates. To check this functionality, I selected Custom Date Format and utilized individually “YYYY”, “MM”, “DD”, and “mm” formats. I used an Excel file and created a chart for data analysis. I have also used the COUNTIF function to count the occurrences of each number.

Test Results

The application is user-friendly and intuitive. Most of its features seem to be stable and usable. Exceptions include the number of dates feature which can lead to a crash, and certain custom date formats which lead to garbage in the dates.

When I tested the custom date format, for “YYYY” I set the input for the Start Date to 1945, and the End Date to 2050. For the “How many dates to generate” I set the input for 100. I copied the generated output into an Excel file and created a chart for data analysis.

As you can observe the numbers appear to be random. The numbers show a diverse range and distribution, with no apparent pattern or evident sequence.



Below you can find a list of bugs and discoveries found while testing the application.

Bugs:

- **Application crashes** when adding a huge number (160000) in the “How many dates to generate?” field
- The number of generated dates may be **decreased under 0**
- When **selecting Year Date Month hh:mm:ss**, the generated date format displayed is **Year Month Date hh:mm:ss** (ex: 2022 January 19 21:44:50, 2021 May 25 02:02:53).
- When selecting **Custom date format YYYY-month-DD hh mm ss**, the **letter “h”** from March is replaced with the number from the **hour**, the **letter “m”** from September, November, and December, is replaced with the number from **minutes**, and the **letter “s”** from August is replaced with the number from **seconds**.
- When **clicking on the Save&Share** button an error is displayed.
- Start / End date can be selected ascended and descended (ex: Start date: 2021-01-01, End date 2023-01-01 vs Start date: 2023-01-01, End date 2021-01-01).
- Inconsistency in the field titles: certain words are written in upper case, some in lower case (ex: How many dates to generate? Date Output Format, Custom date format Use, Start date).

Curios (discoveries of things that might be bugs):

- Details about ISO 8601 (International Organization for Standardization - a standard way to express a numeric calendar date -- and optionally time -- in a format that eliminates ambiguity between entities)
- An error message should be displayed when a wrong format dates and wrong dates are selected
- “Custom date format Use” should be displayed only when Custom date format is selected
- Clicking on the “New” button, restores the application to its default state.

Test Coverage Outline