

Review Form 3

Journal Name:	Journal of Advances in Mathematics and Computer Science
Manuscript Number:	Ms_JAMCS_130822
Title of the Manuscript:	Performance Analysis of Linear Congruential Generator Pseudo Random Generators using Python and Java Languages
Type of the Article	Original Research Article

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PART 1: Comments

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript provides an excellent contribution to the study of pseudo-random number generators (PRNGs) by focusing on the Linear Congruential Generator (LCG), a foundational algorithm in the field. By comparing implementations in Python and Java using different seeding methods, the paper offers both theoretical insights and practical recommendations that are highly relevant for developers and researchers working in domains such as cryptography, simulations, IoT, and AI. The systematic experimentation and analysis presented here add substantial value to the existing body of knowledge and make this work a significant asset for the scientific community.	Reviewer has appreciations regarding paper .hence does not need any important changes
Is the title of the article suitable? (If not please suggest an alternative title)	Title is good	NA
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	<p>The abstract does a good job of introducing the study, but it could be slightly enhanced by explicitly stating the main findings and their significance. Including key results will immediately highlight the value of the research. For example:</p> <p>Mention that system-time seeding demonstrated superior performance.</p> <p>Highlight that Java outperformed Python in terms of execution speed.</p> <p>Here's a suggested revision:</p> <p>"This study examines the performance of Linear Congruential Generator (LCG) pseudo-random number generators (PRNGs) implemented in Python and Java using three distinct seeding methods: manual, system time, and hash/object-based. The experiments reveal that system-time seeding provides the most balanced performance in terms of speed and randomness, while Java demonstrates significantly faster execution times compared to Python. These results provide valuable insights for selecting efficient PRNG implementations for applications in AI, IoT, and statistical modeling."</p> <p>This revision ensures the abstract is complete and impactful.</p>	I have done the revision.
Is the manuscript scientifically, correct? Please write here.	<p>The manuscript is scientifically sound and demonstrates a strong understanding of PRNGs and their application. The theoretical background provided is clear, and the experiments are well-designed and executed. The references are relevant and sufficient, covering foundational and contemporary work in the field.</p> <p>Overall, the scientific foundation and citations are robust and commendable.</p>	NA
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	To further strengthen the manuscript, the authors might consider including a reference to more advanced PRNG algorithms such as the Permuted Congruential Generator (PCG). This would provide readers with additional context for future studies and potential alternatives.	Shall be taken care in our next publication

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Is the language/English quality of the article suitable for scholarly communications?	good	NA
<u>Optional/General</u> comments	<p>The manuscript is well-organized, with clear headings and a logical flow that makes it easy for readers to follow the analysis.</p> <p>The experimental results are presented in a structured manner, and the tables and graphs are clear and informative. Including visualizations such as histograms to show randomness distribution could further enhance the presentation.</p> <p>The conclusion is concise and effectively summarizes the findings. It might be helpful to briefly discuss the broader implications of these results for application development, particularly in IoT and AI tools, as mentioned in the manuscript.</p> <p>This manuscript provides a thorough and well-executed study of LCG PRNGs and their performance in different programming environments. It is an important contribution to the field and is highly recommended for publication with only minor revisions.</p>	NA

PART 2:

	Reviewer’s comment	Author’s comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	