



## Use of Reference Management Software by the Research scholars of National Institute of Technology (NIT), Kurukshetra

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### Abstract

Present study aims to investigate the use of Reference Management Software among the research scholars of National Institute of Technology (NIT), Kurukshetra. A well-structured questionnaire as designed to collect the primary data, total 89 questionnaires were distributed among the research scholars of the core disciplines, out of which 84 questionnaires returned back. The collected data with an overall response rate of 94.38% were analysed to answer the set objectives of the study. The result of the study shows that most of the respondents, i.e., 72 (85.72%) were aware of Reference management software while 45 (62.50%) respondents use RMS for writing scholarly papers, whereas 41 (56.94%) used it for writing theses and dissertations.

**Keywords:** Reference Management Software, Research Scholars, NIT, Kurukshetra-Haryana



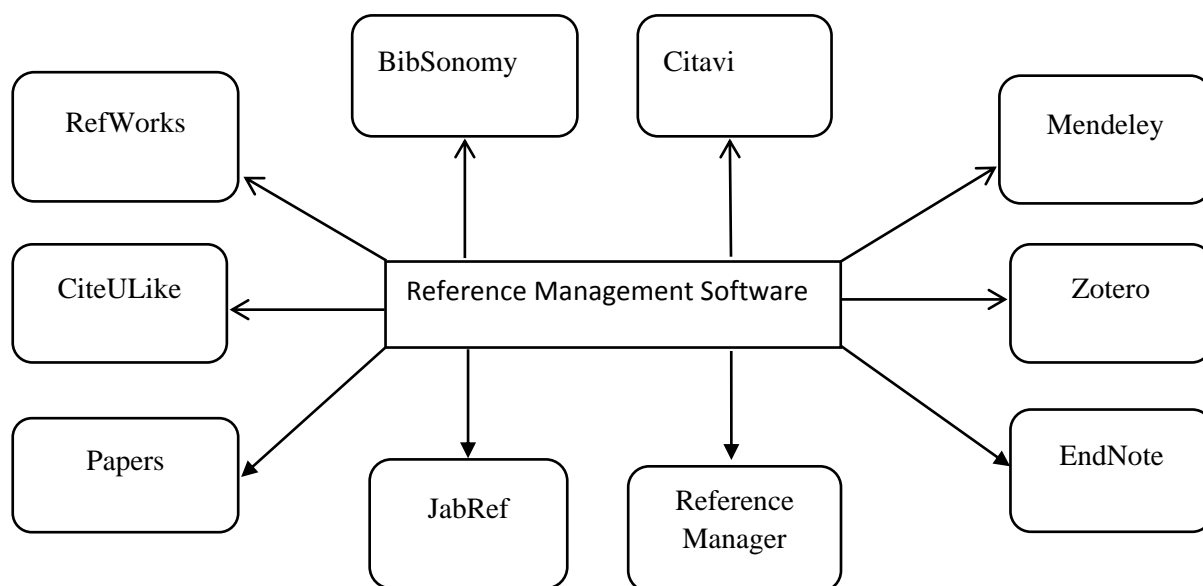
## Introduction

Reference Management Software (RMS) helps researchers to maintain and organise their research work and makes scientific publications easier to update (Francese, 2012). . One of the complex parts of being a researcher is managing references. Due to the tedious way of formatting references using a variety of citation formats, the Reference Management Software (RMS) has emerged as a vital tool for scholars. These Reference Management Softwares (RMS) are also known as reference management tools, reference manager, citation management software/ citation app/ Citation managers, paper management software, research paper management tool, bibliography management software/tool, literature review management tools, and research paper organiser etc. etc. These are used to make easier to organise the disarray in managing references in a recognised manner. A well-utilised reference management system can save, organise, and track references in addition to producing a correctly formatted bibliography as well as save time. Every researcher needs reference management software since it facilitates the drafting of research papers and offers tools for a productive atmosphere for science (Duong, 2010). However, it was found that RMS knowledge is poor among college students' community, regardless of their age, gender, race, the field of study, degree of English proficiency and academic standing or ethnicity (Mead and Berryman, (2010).Therefore, choosing a particular tool within the scientific world from a wide range of available RMS is challenging (Gilmour and Cobus-Kuo, 2011). The Mendeley, Zotero, EndNote, Citavi, JabRef, RefWorks, ProCite, Bookends, Papers, and Qiqqa are some of the most popular software programmes used today in academia and research. Some of them have their unique features like RefWorks generates most accurate citations, CiteULike is simple for social networking, and Zotero is easy in automated importing whereas Mendeley in PDF management (Lisbon, 2018) . But a common feature of several software programmes is their ability to create machine-readable file formats that may be exported in file formats. Furthermore, referring styles, reference list file formats, word processor integration, database connectivity, and password protection/network capabilities can be introduced into the software. All of these reference management software applications were developed by various teams or organisations. The Reference management softwares are both

open-source and subscription-based, like many other software programmes (Nitsos, Malliari, and Chamouroudi, 2021) .

In other words, all scholarly papers must be provided references to pertinent works. The Reference management softwares have made the time-consuming process of gathering, reading, and incorporating these references into a document easier for more than three decades. However, various new tools have been introduced and witnessed considerably greater capability during the last five years. Most recent Reference management softwares prioritise teamwork in gathering references and creating texts. To make this collaboration more accessible, many of these more recent technologies are web-based, and some are also available on smartphones and tablets. Organising and formatting references using referencing tools make it simple to include them in essays, research papers, dissertations, and Ph.D. theses. It is crucial for a researcher to select the best RMS and use it consistently out of the available number of various standard reference management tools.

### Some Important Reference Management Softwares: A Glimpse



### Objectives

This study aims to discover the usage of Reference Management Softwares(RMS) among researchers of National Institute of Technology (NIT), Kurukshetra. Various objectives of the study are given below:

1. To know and determine the awareness and use of reference management software among



research scholars of NIT, Kurukshetra.

2. To ascertain the purpose of using reference management software by research scholars.
3. To identify the problems faced by research scholars in using reference management software

### **Review of literature**

Literature review is conducted to get a picture of the status of reference management software usage. Many studies have been supported worldwide on the use and awareness of reference management software. Some of the relevant reviews are discussed as: Nitsos et al. (2021) surveyed 545 postgraduate students at Aristotle University of Thessaloniki, Greece, and revealed that Mendeley was used by more than two-thirds of responses, followed by EndNote. Adeyemi et al. (2020) examined a study of 98 academic members at the University of Ilorin, Nigeria, on the Awareness and Use of Reference Management Software. The study discovered that EndNote and Mendeley were the most popular Reference Management Software among the University of Ilorin faculty members. Farag (2019) surveyed the use of RMS in 18 Library & Information Science departments from all Egyptian universities, finding that more than 75% of respondents were familiar with RMS and most of the respondents used Endnote. Pathak and Johnson (2018) conducted a study on the use and awareness of Reference Management Software among the University of New York students, discovered that just 31% were aware of it, and 21.8% used it. Parabhoi et al. (2018) found that 59.39% were aware of and used Citation Management Software, with Mendeley ranking first at 28.75%, followed by Zotero at 22%. Amrutha et al. (2018) investigated the use of Reference Management Software among science research scholars at the University of Kerala in Kerala, India, and revealed that the users preferred Mendeley (70.3%), EndNote (38.2%), Zotero (20%), and BibTex (25.2%). EndNote Web and BibTex, on the other hand, were utilised by 46% of research researchers, Quiqqa and Cite Ulike by 3.8%, and BookEnds by 2.3%. Lonergan (2017) investigated the preferences for reference management software among 51 faculty members at Dickinson College in the United States and revealed that 29 (57%) of respondents use RMS and Zotero. Osmani (2016) studied the use of reference management software in an academic environment at Malaysian University and revealed that most of the respondents were aware of EndNote and also found that it was the most used software among faculties and researchers. Melles and Unsworth (2015) studied



postgraduate students and academics from Monash University and revealed that 71.4% of respondents used EndNote regularly, according to the study, Zotero was the second most popular programme among responders, while Mendeley was rarely utilised.

## Research Methodology

This study primarily focuses on use of Reference Management Softwares among research scholars of National Institute of Technology (NIT), Kurukshetra. A well-structured questionnaire was used to collect the data from the selected sample group of the study. The questionnaires were distributed randomly among 89 research scholars, out of which 84 filled-out questionnaires received back. Collected data is evaluated and presented in tabular and graphical form.

### *Analysis and Interpretation*

#### *Department-wise distribution of respondents*

Table 1:  
Distribution of Respondents

S. No.	Departments of NIT, Kurukshetra	N	%
1.	Chemistry	15	17.85
2.	Civil Engineering	14	16.66
3.	Mechanical Engineering	15	17.85
4.	Computer Science	14	16.66
5.	Physics	13	15.47
6.	Electrical Engineering	07	8.33
7.	Electronics and Communication Engineering	06	7.14
<b>Total</b>		<b>84</b>	<b>100</b>

**Table 1** reveals the department-wise distribution of respondents and found that the majority of respondents are from Chemistry and Mechanical Engineering Department i.e. 15(17.85%) each, followed by 14 (16.66%)respondents from Civil Engineering and Computer Science Department each. 13(15.47%) respondents are from Physics department whereas 7 (8.33%) respondents are from Electrical Engineering Department.Only 6(7.14%) respondents are from Electronics and Communication Engineering Department.



### Awareness and Use of Different Referencing Styles

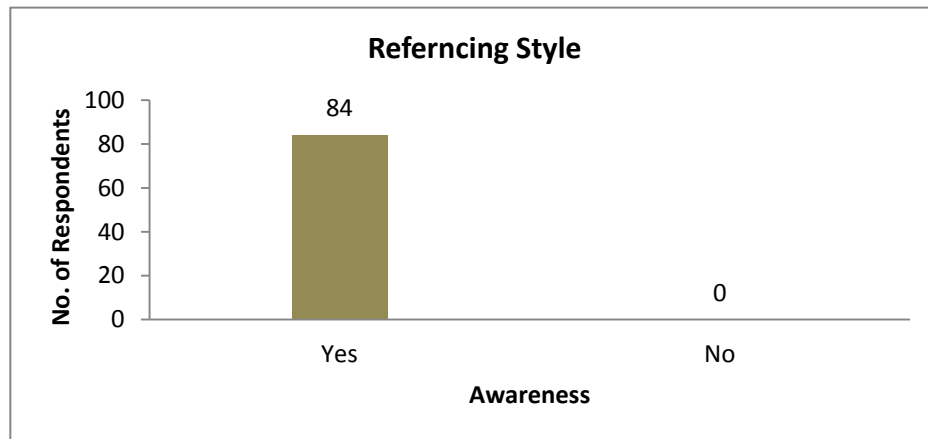


Fig.1: Awareness of Referencing Styles

Figure 1 depicts an understanding of various referencing styles. As per the data shown in the above table and graph, all research scholars are aware of referencing styles.

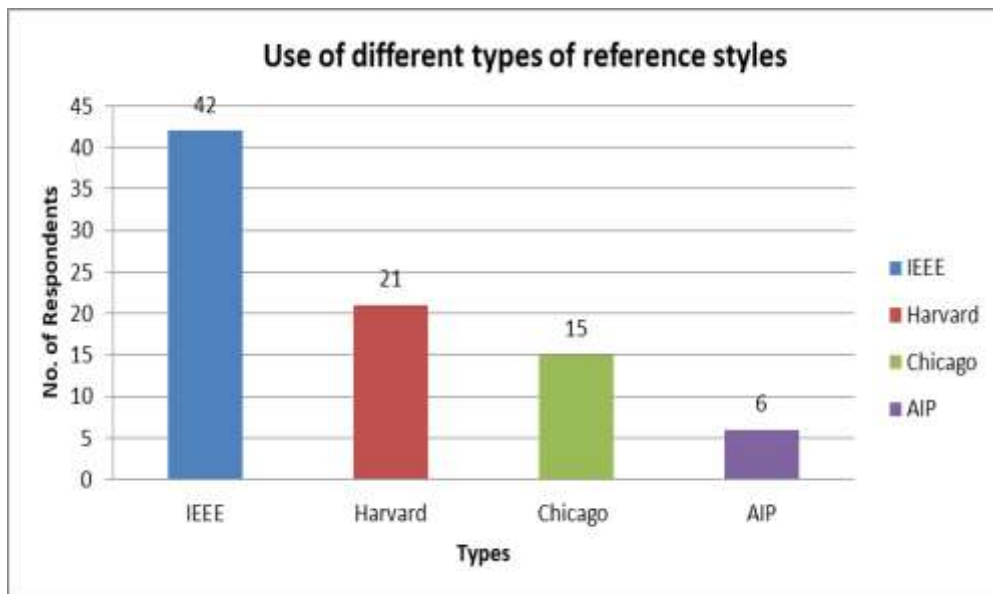


Fig. 2: Use of Different Types of Referencing Styles

Figure2 shows that 42 (50%) scholars are using IEEE referencing styles, followed by 21 (25%) respondents who are using Harvard style. Chicago referencing style is preferred by 15 (17.85%) respondents whereas 6(7.15%) respondents prefer to use AIP referencing style. Above figure shows that IEEE is the most used referencing styles by the research scholars of NIT Kurukshetra.

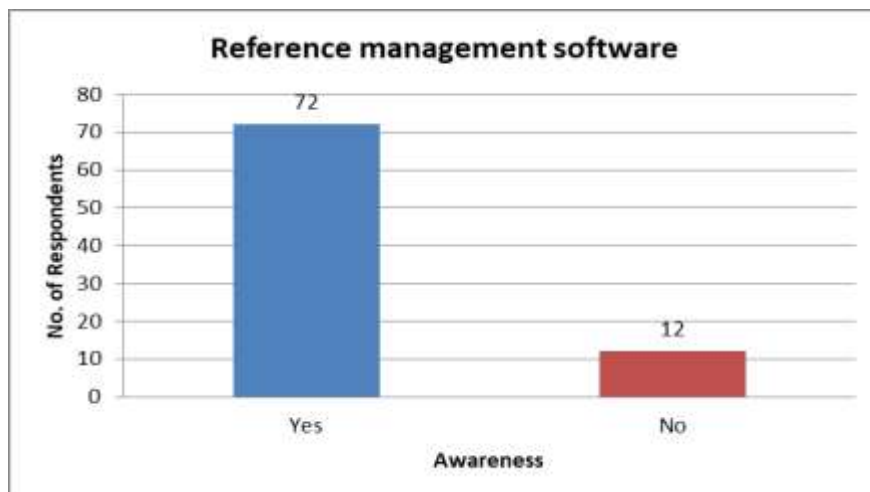


Fig. 3: Awareness and use of Reference Management Software

The figure 3 shows the respondents' knowledge of reference management software. The majority of respondents, i.e., 72 (85.72%) research researchers, are aware, and all the respondents also use reference management software, while 12 (14.28%) respondents are neither aware nor use any reference management software for their respective research work.

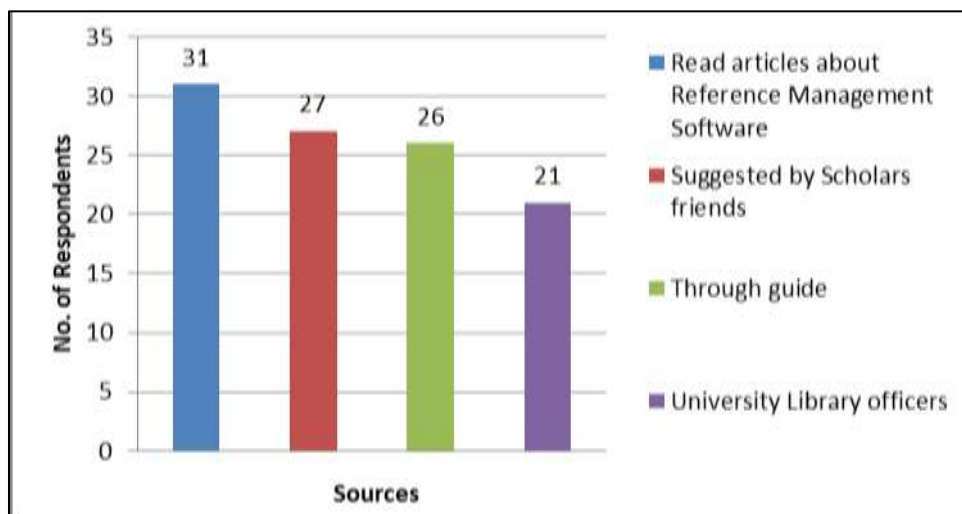


Fig. 4: Sources of Awareness of Reference Management Software

*Note: Respondents give more than one answer*

Figure 4 shows the source of awareness of reference management software. The results depict that 31 (43.05%) respondents got awareness regarding RMS from research articles, followed by 27(37.50%) respondents who got awareness from friends, 26(36.11%) respondents got knowledge about RMS through their supervisor and 21(29.16%) respondents from NIT Library staff.

### Reference Management Software Used by Scholars

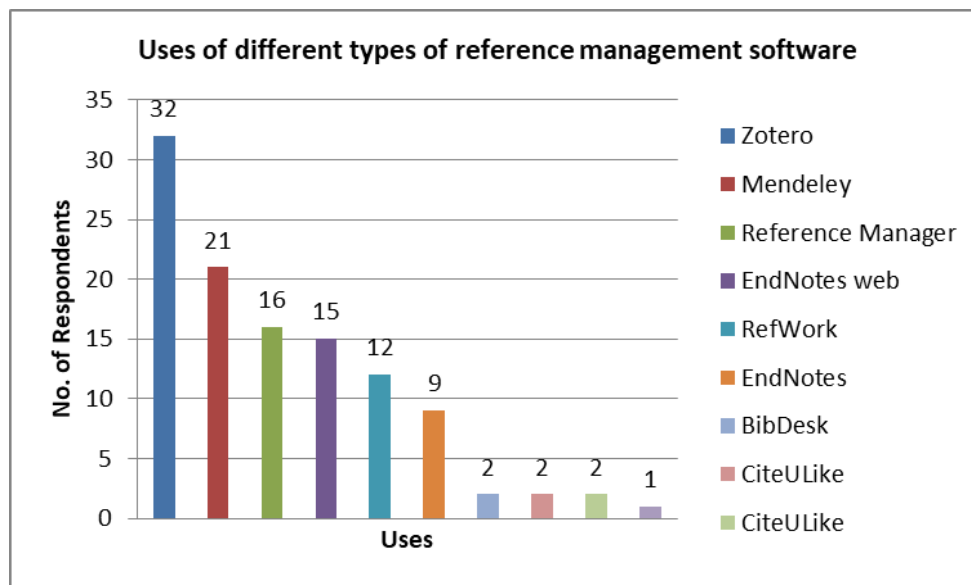


Fig. 5: Reference Management Software Used by Scholars

*Note: Respondents give more than one answer.*

Figure 5 shows various reference management software used by the respondents. The data shows that most of the respondents i.e. 32(44.44%), use Zotero, whereas 21(29.16%) respondents use Mendeley. 16 (22.22%) respondents prefer to use Reference Manager, 15(20.83%) respondents use Endnote Web, 12 (16.66%) respondents use RefWorks RMS, whereas only 9(12.50%) respondents use Endnote software for their research assignments. Results of the above figure shows that Zotero is the most used reference management software by the research scholars of NIT Kurukshetra.

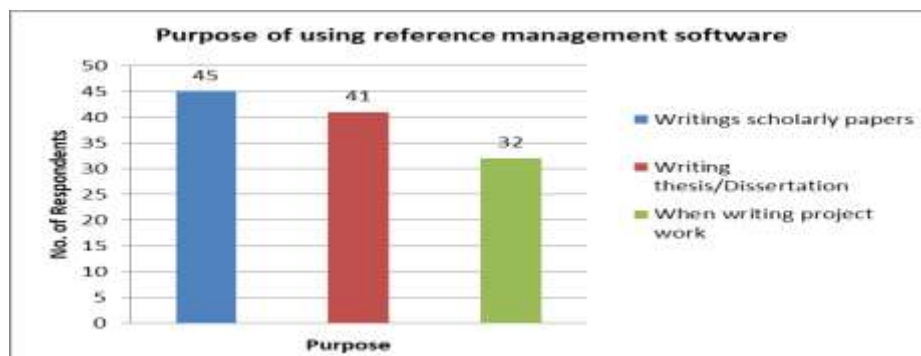


Fig. 6: Purpose of using Reference Management Software

*Note: Respondents giving more than one answer.*





Purpose of using reference management software is shown in figure6. As per the findings, 41 (56.94%) respondents responded that they use RMS to write thesis and dissertation and 45 (62.50%) use RMS to write their scholarly papers. 32 (44.44%) respondents use RMS while they work on some project works.

Table 2  
Features of Reference Management Software

Sr. No.	Mostly used features	N	%
1.	Inserting citations into the research paper while writing	41	56.94
2.	Prepare citations according to the required citation style	37	51.38
3.	Creating lists of references	36	50
4.	Sharing references with others	34	47.22
5	Organising references for easier retrieval and management	32	44.44
6.	Discovering new referencing	32	44.44
7.	Organising full-text papers	29	40.27

*Note: Respondents give more than one answer.*

Table 2 shows that the majority of respondents, i.e. 41 (56.94%), use RMS for inserting citations in writing their research papers, and 37(51.38%) respondents use RMS to Prepare citations according to the required citation style. 36(50%) research scholars use reference management software to create reference lists, followed by 34(47.22%) respondents for sharing references with others, 32(44.44%) respondents use it to discover new references and also to organise references for easy retrieval and management. The table further shows that 29 (40.27%) respondents use RMS to organise full-text papers.

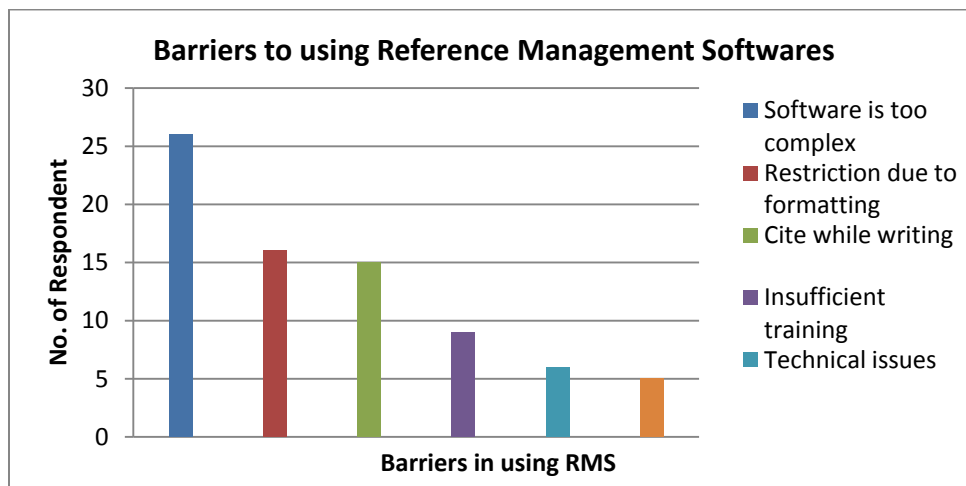


Fig. 7: Barriers in using Reference Management Software

*Note: Respondents give more than one answer.*

Figure 7 shows the barriers faced by research scholars in using Reference Management Software. The maximum number of respondents i.e., 26 (36.11%), find that RMSs are complex to use, whereas 16 (22.22%) respondents face restrictions due to formatting in RMS. In addition, 15 (20.83%) respondents are unable to understand cite while writing issues, whereas 9 (12.50%) respondents feel that they have insufficient training, only 6 (8.33%) respondents are facing technical issues, and 5 (6.94%) respondents face the problem related to downloading citation.

## Major Findings

- The results of the study shows that 72 (85.72%) research scholars are well aware about the Reference Management Software and all of them use the Reference Management Software.
- 32 (44.44%) respondents use Zotero, followed by 21 (29.16%) respondents who use Mendeley, 16 (22.22%) respondents use Reference Manager, 15 (20.83%) respondents use Endnote Web, 12 (16.66%) respondents use RefWorks RMS whereas only 9 (12.50%) respondents use Endnote software for their research works.
- Most of the respondents, i.e. 45 (62.50%) informed that they use RMS for Writings scholarly papers, and 41 (56.94%) use it for writing thesis and dissertation work.

## Conclusion

The Citation and referencing are the most prominent and requisite component of research. Now researchers can easily insert citations into the research work while writing and preparing



citations according to the required citation style with the help of reference management tools. Most of the research scholars of NIT Kurukshetra are well aware and use reference management software tools for their respective research assignments. Their major concern for RMS is gathering references and working on collaborative projects. Besides this, it is also observed that researchers need to be educated and trained for optimal usage of various Reference Management Softwares as a valuable and convenient tool to perform the research work efficiently and effectively to enhance the productivity of quality research.

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