

Investigating the Cybersecurity Awareness on Internet Addiction in Yobe State University Damaturu

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ABSTRACT

The Internet has become a medium of transaction in the global economy, prompting many companies to employ it in their daily operations. As a result, there is an urgent demand for cybersecurity understanding as well as the ability to defend key assets. The purpose of this article is to investigate the level of cybersecurity awareness among students in Northeastern Nigeria regarding internet addiction. Data were collected using a quantitative approach. For the initial result findings, descriptive analysis was performed utilizing OriginPro's graphical design. The preliminary results reveal that students have some moderate understanding of internet addiction however, this is a need for urgent awareness training on how to balance life with and without the internet. Based on responders, Male students account for 77.1% (N=340), while females account for 22.9% (N=101). Future studies would focus on developing awareness initiatives to raise students' awareness, particularly in Nigeria's northeast.

I. INTRODUCTION

Internet addiction is a major issue in Nigeria, as the country's internet adoption and usage are rapidly increasing. According to the Nigerian Communications Commission (NCC), the number of internet users in Nigeria will reach 151.5 million by 2021, accounting for a sizable proportion of the population. With the development of low-cost cellphones and data plans, more Nigerians are obtaining access to the internet, increasing problematic internet use. Research has revealed that internet addiction can harm people's mental health and well-being. Furthermore, a lack of awareness and education about the dangers of internet addiction in Nigeria exacerbates the problem.

In the current digital era, cybersecurity knowledge is essential for safeguarding people, companies, and societies against online dangers and attacks. With the increasing use of technology, there is a growing demand for increased knowledge of cybersecurity measures. To protect private data, stop cybercrimes, and uphold a safe online environment, cybersecurity awareness is crucial, as this essay will cover. First and foremost, maintaining data privacy and personal information requires awareness of cybersecurity. People are more vulnerable to identity theft, fraud, and other cybercrimes due to the growing amount of personal information kept online, including social media accounts, financial information, and contact details. People can lessen their chance of being victims of cyberattacks by being aware of cybersecurity best practices, which include making strong passwords, avoiding dubious links and emails, and routinely updating software.

Moreover, cybersecurity awareness is essential for stopping cybercrimes and protecting businesses from monetary losses and harm to their reputation. Because cybercriminals are always changing the ways they take advantage of holes in systems and networks, organizations must remain aware of and alert to any risks. Through the use of security measures like firewalls, multi-factor authentication, and encryption, enterprises can lessen the effect of cyberattacks and safeguard confidential information by educating staff members about cybersecurity threats. Furthermore, preserving a safe online environment for all users depends on cybersecurity awareness. The Internet of Things (IoT) is connecting more devices, which raises the possibility that cyberattacks might proliferate and create extensive disruption. Through the joint effort of individuals and organizations, we can enhance the safety and

resilience of the digital ecosystem by raising awareness about cybersecurity.

Internet addiction among Nigerian university students is an increasing worry as internet access becomes more accessible and integral to academic and social activities. While particular figures on internet addiction among Nigerian university students differ, research and anecdotal evidence indicate that a large number of students are in danger of acquiring harmful internet behaviours. Furthermore, the Internet's availability and accessibility have encouraged university students to spend excessive amounts of time online, resulting in academic procrastination, social isolation, and lower productivity. Many students may struggle to combine their online interests with their academic obligations, resulting in poor academic performance and decreased general well-being.

To address internet addiction among Nigerian university students, it is critical to raise awareness of the dangers of excessive internet use while also providing support services and resources to students who may be battling with addiction. Educational institutions can put in place programs and initiatives that focus on digital literacy, time management, and healthy online habits to assist students build a balanced and responsible approach to internet use. By increasing awareness, giving support, and developing a culture of responsible internet use, Nigerian institutions can help lessen the detrimental impact of internet addiction on their students' academic and personal lives. More study and intervention efforts are required to better understand and address the specific issues and requirements of university students struggling with internet addiction in Nigeria. This study attempts to look at Yobe State University Damaturu, Nigeria's cybersecurity knowledge of internet addiction. The study employs a quantitative methodology, leveraging pre-existing research and data to enhance comprehension of internet addiction in Nigeria and provide preventive and therapeutic techniques. To address the growing issue of internet addiction in Nigeria, the research intends to increase awareness through this academic inquiry and inspire other research and policy actions.

II. LITERATURE REVIEW

Cybercrime is a catch-all term for any type of criminal activity carried out by offenders who utilize a computer as a tool and the internet as

a conduit to accomplish a range of goals, including unlawful file downloading, piracy, spam mailing, and impersonation. Cyber threats are constantly changing, and they are now a major topic in talks about global security. Students and educational institutions are among the many groups of individuals who fall prey to cyberattacks. Cyberattacks carry significant hazards, and online criminals are becoming more skilled. Since many of its inhabitants, even college students, have had harrowing encounters with cybercrime, Nigeria is not immune to it. Online banking fraud, cyberbullying/stalking, cyber terrorism, fake news, illegal hacking, online blackmail, spamming, data theft/leakage, fraudulent electronic mail, and false identity/advanced persistent threat are among the most prevalent cybercrimes in Nigeria and the majority of this victims are students due to high internet addiction. The difficulties brought on by cyber security issues The need for cyber security education has grown globally as a means of educating individuals about online dangers and steps to take to reduce risks. The purpose of cyber security education is to improve people's awareness of cyber security dynamics and their capacity to acquire the necessary skills to protect. An important step in educating and warning people about the risks of cyber-attacks and how to use the internet safely is to increase their knowledge of cybersecurity. Cybersecurity education can help to improve risky online behaviour (Chandarman & Van Niekerk, 2017). Unfortunately, not enough schools in Nigeria incorporate cyber security in their curricula and those that do frequently lack the necessary staff members. Despite having over 92 million internet users, many Nigerians are uninformed about cybersecurity (Garba et al., 2020).

Nigeria is among the countries with the highest populations in the world. Nigeria had approximately 64 million mobile internet users as of 2023. Internet use on mobile phones is especially common. The nation is seen as a mobile-first market, with infrastructure and online usage development bypassing the widespread adoption of desktop PCs and going directly to mobile internet usage through low-cost cellphones. Nigeria ranks seventh in Africa for the percentage of mobile traffic, with smartphones accounting for over three-quarters of the country's online traffic. Mali, the Gambia, and the Central African Republic are other African markets with a comparable percentage of mobile internet traffic.

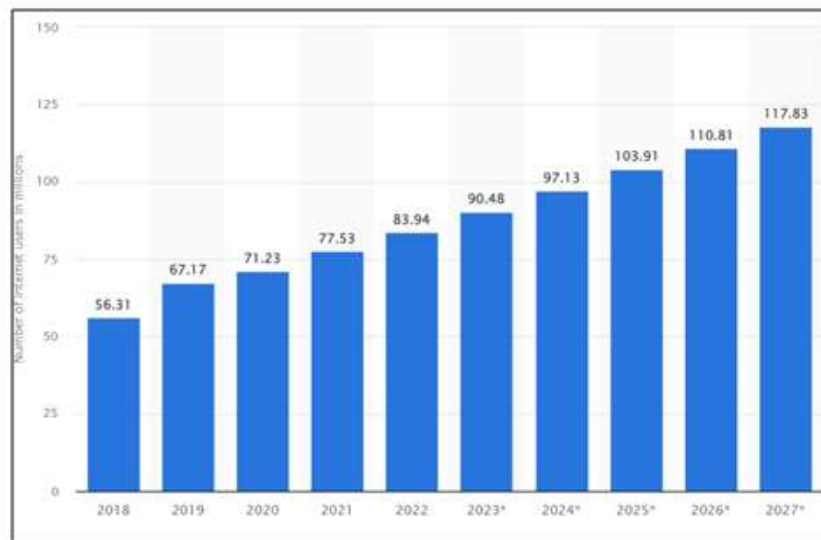


Figure 1 Internet Users in Nigeria from 2018 To 2022, With Forecasts From 2023 To 2027

Based on such tistic Nig has internet addiction would drastically increase overtime due to the cheapest internet subscription. Much literature has reported on information security and cybersecurity awareness to be the best practices in the school setting for internet addiction minimization (Hanus & Wu, 2016; Richardson, M. D., Lemoine, P. A., Stephens, W. E., Waller, 2020; Slusky & Partow-Navid, 2012; Tirumala et al., 2016). Slusky and Partow-Navid published the results acquired with students at the College of Business and Economics, California State University, in 2011, and associated cyberawareness with how students implement their information security expertise in real-world and Wu of the University of Texas used the theory of motivation to examine the influence of consumers' cyberawareness. The findings of the key authors demonstrated that cybersecurity riskiness has a considerable impact on risk severity perception, reaction efficacy, self-efficacy, and response cost. The risks of Internet use among higher education students are outlined in (Zwilling et al., 2019). The authors assessed cyberawareness by administering a questionnaire to students at the International School for Social and Business Studies in Slovenia, which included questions about respondents' acquaintance with cybersecurity and cyberawareness. The study published a set of cybersecurity best practices that can be applied by a wide range of users, including cyberawareness at all levels, active professionals, and the unemployed. The study also stressed the importance of improving cyberawareness practices throughout the school sector in general.

A set of studies surveys and reports almost cyberawareness within the school setting were as of now accessible. In 2011, a survey was coordinated with children and guardians, to assess the online innovations and Web involvement in twenty-five European nations (Livingstone et al., 2011).

A study was conducted on people's attitudes and behaviours around cybersecurity (Hadlington, 2017). The main conclusions attempt to clarify how attitudes and actions of individuals, together with Internet addiction and impulsivity, are inextricably linked to the cybersecurity risks that the organizations take. The "Abbreviated Impulsiveness Scale" (ABIS), "Online Cognition Scale" (OCS), "Risky Cybersecurity Behaviors Scale" (RScB), and "Attitudes Towards Cybersecurity and Cybercrime in Business" (ATC-IB) are the four online questionnaires that the author used to assess these issues. The following are the main conclusions: The involvement of individuals in risky behaviours was negatively correlated with their attitudes toward cybersecurity; risky behaviours are directly linked to Internet addiction and impulsiveness. All this literature has shown many countries have to investigate internet addiction and solutions were proposed, in this research paper a qualitative approach was adopted to investigate internet addiction in Nigeria at Yobe State University Damaturu.

III. RESEARCH METHODOLOGY

The quantitative data collection approach is commonly used in data collection and analysis as reported in (Garba et al., 2020; Kim, 2014; Yang et

al., 2017). Similarly, this study adopted a similar research method for data collection and analysis from 575 participants. The question used in this research was adapted from a study by (Khalid et al., 2018) where they tried to investigate University students' internet addiction in Malaysia. The questionnaire was designed using Google Forms and distributed via various platforms. The questions were organized under the above items, each item consists of four questions making a total of twenty questions. All these questions were asked to answer the research objective. To answer the question each participant is required to indicate the level of agreement and disagreement with the statements using the concept of a five-point Likert scale from strongly disagree "1" to strongly agree "5" as Table 1 shows the instrument used in data collection. More than 446 participants were selected to participate, and a total of 5 feedbacks were

deleted after filtering the completed questionnaires. Therefore 441 feedbacks were used for the analysis.

IV. RESULT AND DISCUSSION

This section examines the responses to internet addiction these include a demographic study of internet addiction. analysis of demographics. This section explains the survey participants, including their age and gender. The age group is shown in Figure 2. The three age group categories and the number of participants are displayed in Figure 1. The age group between 18 and 20 is represented by 17.9% of respondents, or 79 respondents; the age group between 21 and 25 is represented by 45.6%, or 201 respondents; and the age group between 26 and 30 is represented by 36.6%, or 161 respondents.

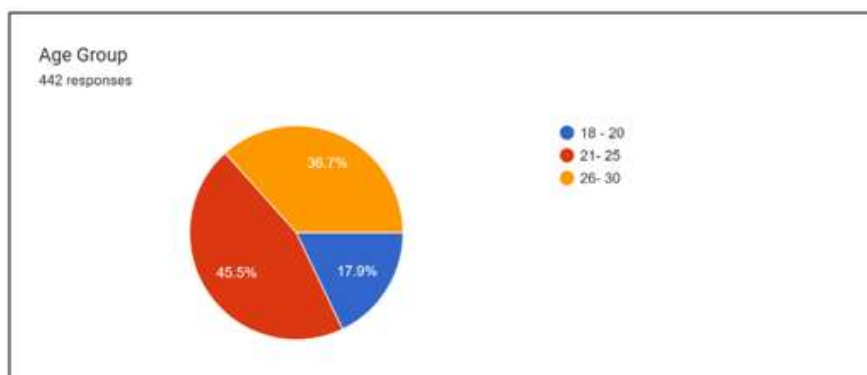


Figure 2 Age Group Analysis

Analysis of Gender Groups

This section details the participants' gender group and the proportion of each gender that took part in the survey. Figure 2 displays the type of gender. Figure 2 displays the number of

participants by gender: 340 males, or 77.1% of the total, and 101 females, or 22.9% of the total. The data indicate that men are more interested in cybersecurity awareness than women, with men making up over 77% of the respondents.

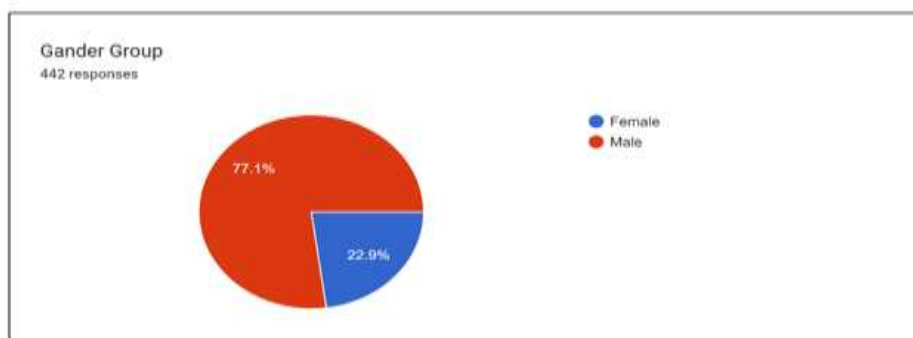


Figure 3 Gender Group Analysis

Awareness of Internet Addiction

This section explains the results obtained from the survey based on internet addiction, there are five questions with their percentage obtained from the participants.

Q1 I will be extra excited when I use the internet

The question was intended to gauge how engaged students are with the internet. The results indicate that (N=148, 33.6%) and (123, 27.9%) of

the respondents agreed to be thrilled when using the internet, whereas 11% disagreed with the question and (23.4%) expressed less interest in it. Nearly 60% of respondents, according to the analysis, are content with their internet experience. This suggests that if cybersecurity awareness is low, there may be a risk of cyberattacks. Therefore, adequate education on how to use the internet safely without being a victim of cyber threats is necessary as Figure 4 shows.

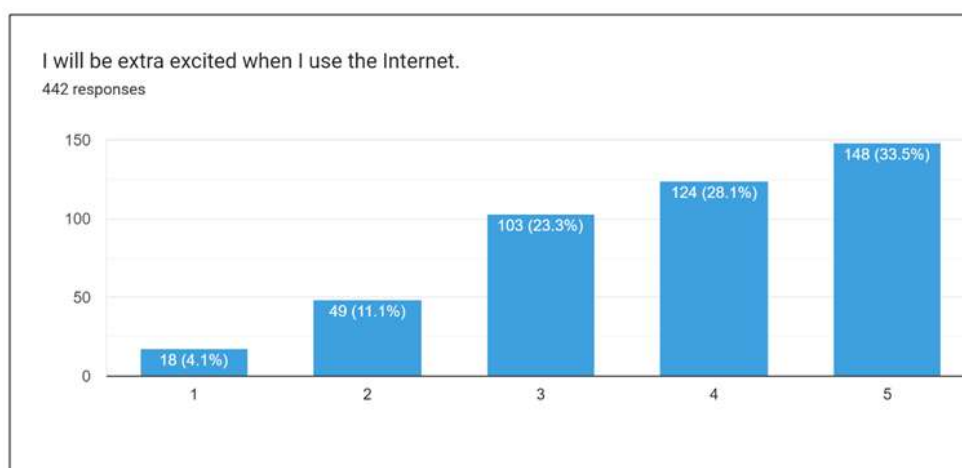


Figure 4 Q1

Q2 The Time Spent Without Surfing the Internet is the Most Boring Moment

The results of this question indicate that (N=111, 33.6%) and (N=98, 22.25) have agreed that using the internet makes them happier. However, 29% of students disagree with the question, and 23.3% of students are neutral about it. Feedback revealed that 55% of students' lives are

boring when they aren't using the internet. But it also confirms the previous question, which asked about respondents' extra excitement when using the internet. This suggests that students should exercise caution when interacting with others because many criminals use the internet to find their next victim as Figure 5 shows.

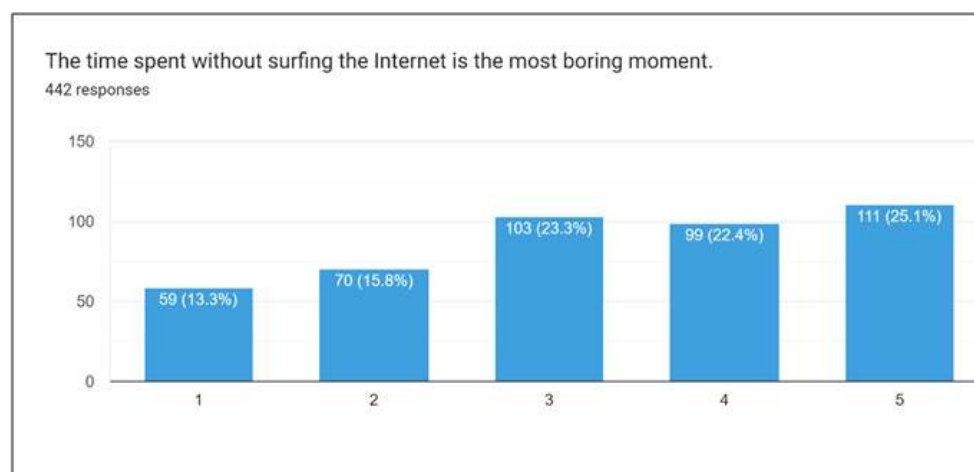


Figure 5 Q2

Q3. Without the internet, there is nothing I can do.

The result exceptionally shows that students can be engaged in other activities if there is no internet, as the results show that (N=122, 27.9%) and (93, 21.1%) disagree with the statement that they cannot do anything without the internet, while a small percentage, or 29.9%, have supported the questions and another 21.1% are

neutral to the statement. The final question asked students to indicate whether they prefer outdoor activities or simply spending time on the internet at home. Looking at the feedback from Q1 and Q2, which indicated how happy they are when using the internet, but also demonstrates that students can still engage in other activities if there is no internet as Figure 5 shows.

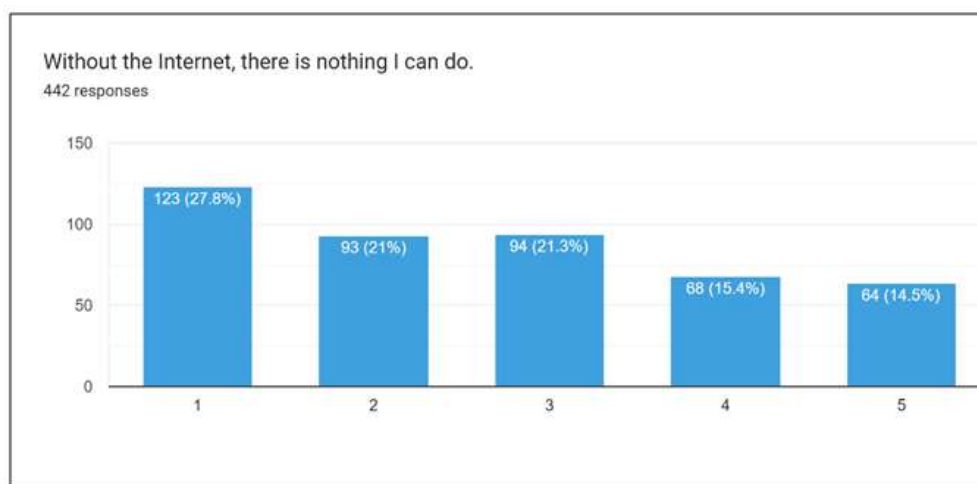


Figure 6 Q3

Q4 I would spend more time on social media than having outdoor activities.

The result unexpectedly shows 27.2% of respondents (N=120) were neutral, indicating that the majority can engage in both internet and outdoor activities. Overall, 37% agreed with the statement, which is higher than neutral respondents. However, a small segment (35.1%)

disagreed with the questions. The agreed portion received the highest response (37%), indicating that many students can participate in various outdoor activities as figure 7 shows. These charts illustrate the relationship between each question and its relevance in determining students' internet addiction.

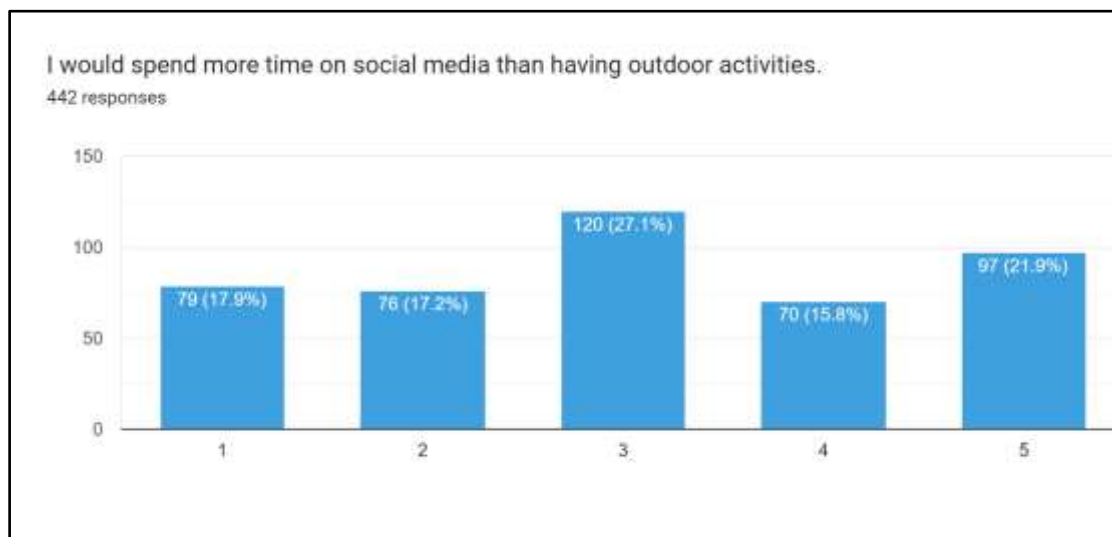


Figure 7Q4

Since many institutions now offer internet access subscriptions for research purposes, using the internet has gotten easier, particularly for students. However, a lot of students have a tendency to use social media more frequently. Based on the response, it appears that students are less dependent on the internet generally, with an average mean of (M=3). With Q3 having the only lower mean (M=2.68), it is clear that students can still be active in other ways when there is no

internet access. The item's result indicates that students' addiction is at an average level, but the standard deviation (SD) indicates that the findings are less concentrated than the mean, suggesting that most students chose the "Neutral" option. The neutral indicates that students may become dependent on some elements, as shown in Table 1. This outcome has also demonstrated the necessity for additional cybersecurity campaigns to teach pupils the fundamentals of cybersecurity.

Table 1 Summary of Internet Addiction Results

S/No	Item	N	Mean	SD
1	I will be extra excited when I use the internet	441	3.76	1.151
2	The time spent without surfing the internet is the most boring moment	441	3.30	1.356
3	Without the internet, there is nothing I can do	441	2.68	1.400
4	I would spend more time on social media than having outdoor activities	441	3.07	1.388

V. CONCLUSION

Given that so many tasks are now completed online, everyone, regardless of gender, education level, organization, or age group, needs to be aware of cybersecurity. Numerous wealthy nations have put policies in place to raise citizens' understanding of cybersecurity. Additionally, a lot of study was done to determine how knowledgeable employees of a firm were about cybersecurity. Everyone needs to be aware of cybersecurity issues, but university students in particular need to pay special attention to young children as they have access to the internet through both mobile and campus networks. To choose the best course of action for creating and implementing the cybersecurity awareness program, it is necessary to look into the existing state of cybersecurity awareness regarding internet addiction. According to this study, students who were surveyed had a moderate understanding of cybersecurity awareness and internet addiction. This indicates that in order to address those issues and prevent students—particularly female students—from becoming victims of cyberattacks, there is an urgent need for well-planned cybersecurity awareness program implementation. The research would make it easier for cybersecurity experts when designing cybersecurity awareness programs as current issues and where students are lacking have been identified.

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