### THE EFFECT OF THE WISATA ALAM INDONESIA APPLICATION ON USER'S EXPERIENCE USING USABILITY TESTING AND QUESTIONNAIRE

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#### **ABSTRACT**

This research aims to find out the effect of Wisata Alam Indonesia application on user experience using Usability Testing and the User Experience Questionnaire (UEQ) method. The study focuses on 6th semester students of class A from the English Education Study Program at Universitas Nias. Data were collected using a questionnaire that measures six scale: attractiveness, efficiency, perspicuity, dependability, stimulation, and novelty and five components of usability testing: learnability, efficiency, memorability, errors, satisfaction. The research findings show that the Wisata Alam Indonesia application has a positive effect on user experience, with the highest scores in attractiveness (mean score = 4.73) and novelty (mean score = 10.15). However, areas such as efficiency (mean score = 3.65) and perspicuity (mean score = 3.19) present opportunities for improvement. The overall average score for user experience was 46.42, while the usability testing of the application revealed a mean score of 45.00. The correlation coefficient (r = 0.896) indicates a very strong positive relationship between the usability of the application (Wisata Alam Indonesia) and user experience. The hypothesis testing results support this conclusion, with the t-test showing thitung = 9.911 > ttabel = 2.063 and the F-test indicating Fhitung = 98.228 > Ftabel = 4.259, both of which confirm the rejection of H0 and acceptance of Ha. These results suggest that the Wisata Alam Indonesia application can enhance user satisfaction, but adjustments in certain usability components could further improve the experience.

Keywords: User Experience, Usability Testing, Wisata Alam Indonesia, Tourism Application, UX Evaluation

### 1. INTRODUCTION

Indonesia has a vast territory and a very diverse type of culture. Natural beauty and cultural diversity make Indonesia attractive as a tourist destination. Information technology is expected to be the most effective medium for finding and disseminating information. The development of information and communication technology has had a major impact on various aspects of life, including the

tourism industry. Tourism applications are becoming increasingly important in providing information and guiding users in exploring tourist destinations.

However, currently, information on tourist destinations is not evenly distributed among local tourists, which affects them to prefer a vacation around the area or location where they live. Then, the Lingkungan Hidup dan Kehutanan (LHK) released the Wisata Alam Indonesia application with various features that can guide and provide easy access to information about tourist destinations in all regions in Indonesia. By utilizing information technology that is well known among the public today or commonly referred to as android, you can access the Wisata Alam Indonesia application by downloading it for free.

The use of information technology or android is now a necessity that can facilitate and access anything and this is inseparable from students who are generations who have grown up in the era of technology. Integration of technology in education can provide a more interesting and contextual learning experience.

English Education 6th semester class A students involved in this research may be agents of change in increasing interest and participation in local tourism and to see the extent to which the quality of user experience can affect satisfaction, interest and effectiveness of an application, especially in the context of tourism. The Wisata Alam Indonesia application can be a tool to increase student engagement in exploring tourism

destinations. Based on the initial survey/research conducted by researchers, it was found that up to this point, the average 6th semester class A has known and used the Wisata Alam Indonesia application. The use of the application is due to the lack of information about natural tourist destinations outside the area where they only know information on local destinations around them. However, until now there has been no research or evaluation of the extent of the influence the Wisata Alam Indonesia of application on user experience or interest, especially 6th semester class A in using all the features contained in the application.

Wisata Alam Indonesiais one of the tourism applications that focus on Indonesia's natural beauty. Applications such as Wisata Alam Indonesia provide easy access to information about tourist destinations ranging from natural tourism maps, tourist attraction information, to guidelines and ethics for activities in nature. Given Indonesia's natural wealth, this application has great potential to become a valuable guide for users who want to explore the natural beauty of this country.

Related research which is entitled "Usability Evaluation and Recommendations for Improving the Display of the IBI Library Application using the Usability Testing Method" was conducted by Rifqi et al (2019), in the study stated that the use of usability testing methods researchers can communicate directly with users and get more accurate feedback regarding design flaws and other problems. Then Buana et

al (2022), conducted a study entitled "User Interface Analysis Improves User Experience Using Usability Testing on Android Course Applications" the results state that Usability testing can be used as a system for analyzing application evaluations in a measurable, structured, and accurate way. Similar research related to the user experience felt by millennials and Z generations towards the Gojek application was conducted by Abdillah using the User Experience Questionnaire (UEQ) method. results of this study indicate that in general the user experience is very good because all UEQ categories have a positive score, only improvement is needed on the novelty side of the application.

As known, Usability is a value to measure the extent to which an application can be used by certain users to achieve certain goals with effectiveness, efficiency, and satisfaction in a specific context of use. Usability has an important role because it is related to user satisfaction. The easier the system is to use, the higher the level of user satisfaction.

Based on related research, the researchers conducted usability testing completed a user experience questionnaire on the Wisata Alam Indonesia application to determine the to which the application extent influenced the user experience of English education students in the 6th semester, class A, and to identify recommendations that could be made to improve the quality of the Wisata Alam Indonesia application. According to

Nielson (2003) in (Hijriah, Irawan, 2023, Jurnal sistem Informasi), usability testing is based on five components, namely learning (learnability), efficiency (efficiency), easy to remember (memorability), safe to use or reduce the error rate (errors) and have a level of satisfaction (satisfaction).

Usability testing is one method to find out and get information about activities that users have done in real life by observing the process that users do when using the application (Situmorang, Az-Zahra, 2019).

User experience analysis carried out using the User Experience Questionnaire (UEQ) applicationroach. User experience was introduced by Norman (2003) in Kushendriawan et al. (2021), a user experience architect in the mid-1990s. "User experience (abbreviated as UX) is how a person feels when interfacing with a system. The system could be a website, a web application or desktop software and, in modern contexts, is generally denoted by some form human-computer of interaction (HCI)". There are 6 (six) variables that will be used in accordance with the User Experience Questionnaire (UEO) applicationroach, namely: attractiveness, efficiency, perspicuity, dependability, stimulation, and novelty.

The results of testing using this method were expected to provide a more in-depth view and recommendations on the extent to which the Wisata Alam Indonesia application met expectations, identifying areas that could be improved and offering encouragement to continue

enhancing the application in terms of features and information content, to ensure that it remained relevant and met user needs.

Based on the description of the research objective above, the intends researchers to conducted research centered on 6th semester class A of the English Education Study Program at Universitas Nias, entitled —The Effect of the Wisata Alam Indonesia Application on User Experience using Usability Testing and Questionnaire.

### 2. LITERATURE REVIEW 2.1 Definition of Effect

Effect is a condition due to an influence that occurs, in short the result of an effect that occurs. According to Defrisal et al (2024), the problem is called the effect. Then, from KBBI effect is the result; influence, ex: the increase in gasoline prices has an influence on the price of daily necessities. According to the Cambridge dictionary effect is the result of a particular influence.

### 2.2 Wisata Alam Indonesia Application

### a. Indonesian Nature Tourism

Indonesian nature tourism is a place to enjoy the beauty of Indonesia's natural resources, both natural and processed. Because of its extraordinary natural wealth, Indonesian nature tourism has enormous potential. Visitors can enjoy the beauty of nature, learn about various species of flora and fauna, and enjoy various outdoor

activities such as hiking and diving, among others.

According to Andika and Subanu (2023) that nature tourism is a tourism sector that utilizes the potential of nature to enjoy the beauty of nature, both natural and cultivated. Then, according to Devy and Soemanto (2017) the definition of nature tourism is a recreational and tourism activity that utilizes the potential of nature to enjoy the beauty of nature, either natural or cultivated, so that there is a tourist attraction to the place.

### b. User Experience

User Experience (UX) is defined as —the user's perceptions and responses to a system or application (Bevan et al., 2015 in Oliveira et al., 2023). According to Saad et al. (2021), UX methods play an important role in ensuring the development phase of a system is in the right way.

Meanwhile, ISO (International Organization for Standardization) 9241-110:2010 in (Oliveira et al., 2023), stated UX is defined as: —a person's perceptions and responses that result from the use and/or anticipated use of a product, system or service. UX considers pragmatic aspects, such as traditional usability features focusing on task completion, and hedonic aspects, such as emotional responses to using a product (Hassenzahl, 2018).

Therefore, the idea that user experience goals and usability goals can be used to measure user experience (UX) is what the User Experience Questionnaire (UEQ) is based on (Kushendriawan et. al., 2021). The survey was constructed empirically and had six scales that represent the most important user experience elements for a bigger set of products and applications that resulted from the construction (Laugwitz al. 2008) in et Kushendriawan et. al., 2021.

- 1. The six scales and the corresponding items are: Attractiveness: Users' overview of the application, whether they like not. Items: it or annoying/enjoyable, good/bad, unlikable/pleasing, unpleasant/pleasant, attractive/unattractive, friendly/unfriendly
- 2. Efficiency: The user feels that the application is fast and quick to use, and that the user impression is well organized. Items: fast/slow, inefficient/efficient, impracti-cal/practical, organized/cluttered
- 3. Perspicuity: The user feels that the application is fast and quick to use, and that the user impression is well organized. Items: not understandable/understandable, easy to learn/difficult to learn, complicated/easy, clear/confusing

- 4. Dependability: User perceptions of the application's controllability and safety throughout use. Items: unpredictable/predictable, obstructive/supportive, secure/not secure, meets expectations/does not meet expectations
- 5. Stimulation: User perception that the application is engaging and enjoyable to use. Items: valuable/inferior, boring/exiting, not interesting/interesting, motivating/demo-tivating
- 6. Novelty: User perception that the application's design is original, eye-catching, and inventive. Items: creative/dull, inventive/conventional, usual/leading edge, conservative/innovative.

### c. Usability Testing

According to Hijriah & Irawan (2023), Usability testing is a method of evaluating usability that involves observing users of a design, followed by collecting and analysing the data obtained.

One method for assessing items is usability testing, which involves putting them to the test on actual consumers. Testing a website's usability is one way to determine how user-friendly its interface is (Yumarlin, 2016). Research from Hijriah & Irawan, (2023), describes the five components as follows:

a. Learnability. It refers to the question, How easy is it for

users to learn to use the application? In this case, there are indicators or standards that can show that an application has fulfilled the learnability aspect as one of the components of successful performance of the usability aspect. These indicators are as follows:

- Easy to understand.
- Easy to look for specific information
- Easy to identify navigational mechanism
- b. Efficiency. Efficiency, after design, is the answer to the query, "How quickly is a task done?" This element includes metrics or indicators that demonstrate how well an application performs in terms of the usability aspect when the efficiency factor is met. The indicators are as follows:
  - Easy to reach quickly
  - Easy to navigate
- c. Memorability. This examines how quickly users can relearn to use the design after some time, addressing the question, "How well does the user retain their knowledge after a certain period?" This factor includes indicators or criteria that demonstrate whether the application meets the memorability aspect, which is one of the key components of successful usability performance. The indicators are as follows:
  - Easy to remember
  - Easy to reestablish

- d. Errors. The number of errors users make, their severity, and how easily they can be resolved are assessed through faults. This relates to the question, "How many and what types of mistakes do users make?" Within this component, there are indicators or standards that demonstrate whether an application has met the fault factor, one of the key components of successful usability performance. These indicators include:
  - Few numbers of errors
  - Easy to fix
- e. User's Satisfaction. Measuring the level of satisfaction in using the design involves questions like, "Are users satisfied with the application?", "Do users gain significant benefits from application?", and "How long have users relied on the application to assist in decisionmaking?" This factor includes indicators or criteria that demonstrate whether the application has the met satisfaction factor, one of the key components in usability evaluation. These indicators are as follows:
  - System pleasant to use
  - Comfort to use

Based on the theory above, the usability testing method is useful for this research, namely to evaluate an application where how easily users can use an application effectively and

well and ensure that users can easily learn, remember, and feel satisfied in using the application.

### d. Questionnaire

According to Rowley (2014), Questionnaires are among the most commonly used tools for data collection, leading many novice researchers in business, management, and other fields of social sciences to associate research primarily with the use of questionnaires. Aryal (2023) adds, A questionnaire is a research tool that consists of a list of and questions answer options, presented in a sequence on a printed or typed form to gather specific information from respondents. According to Krishan Kumar (1992), —a questionnaire is a written document listing a series of questions related to the problem under study, to which the investigator seeks answers.

### 2.3 Hypothesis of the Research

In this research, the researchers formulated two hypotheses that aim to test the effect of the \_Wisata Alam Indonesia' application on user experience, namely:

H<sub>0</sub>: There is no significant effect of the Wisata Alam Indonesia application on User Experience.

Ha: There is a significant effect of the Wisata Alam Indonesia application on User Experience.

### 3. METHODS

### a. Type of the Reseach

In conducting this research, the researchers used a quantitative research method, as the data was in numerical managed form, specifically employing a correlation design. According research (2020).Sinambela quantitative research is a type of research that utilizes numerical data in processing to generate structured information. According to Gay et al. (2012:204), correlational research gathering data to assess whether a relationship exists between two or more measurable variables, and if so, to what extent.

### b. Variable of the Research

In this research, the researchers identified two variables: the Wisata Alam Indonesia application as the independent variable (X) and user experience as the dependent variable (Y).

### c. Population and Sample

The population for this research consisted of 6th semester students from the English Education Study Program at Universitas Nias. in this research, the researchers selected 26 respondents from class A of 6th semester students from the English Education Study Program at Universitas Nias as the sample.

### d. Instrument of the Research

In this research, the researchers used a questionnaire to collect data

from users. The researchers used two questionnaires: the Usability Testing and User Experience Questionnaire. The Usability Testing questionnaire included a 5-point Likert scale for alternative answer options, while the User Experience Ouestionnaire consisted of 26 items based on a 7-point Semantic Differential Scale, both of which were distributed to all respondents.

### e. Instrument of the Research

The researchers used both primary and secondary data collection techniques. Primary data was gathered through initial research or surveys, while secondary data was obtained from various references and applied according to the guidelines provided in those sources for use in this research. In this case, the researchers collected data using a questionnaire.

## 4. RESULTS AND DISCUSSION1. Validity Test

To determine whether an item in the instrument is valid, the method used is to compare the value of rhitung with rtabel, at a significance level of 5%. If rhitung > rtabel, then the instrument is considered valid. Based on the results of the output using IBM SPSS Statistics 25, it was found that the rtabel value was 0.374. The validity test results showed that each item measuring variable X (Wisata Alam Indonesia application) and variable Y (User Experience) was

valid or accurate, as indicated by each rhitung value greater than rtable.

### 2. Reliability Test

The calculations performed by the researchers for the reliability test were conducted using SPSS 25 as follows:

Reliability Statistics			
Cronbach's Alpha	N of Items		
.931	11		

Reliability Statistics			
Cronbach's Alpha	N of Items		
.931	11		

Based on the results of the reliability test conducted using IBM SPSS 25, the Cronbach's alpha value obtained for variable X was 0.931, and the Cronbach's alpha reliability value for variable Y was 0.963. When viewed from the reliability level table, the value of 0.931> 0.60 and the value of 0.963> 0.60 indicated that both variables could be categorized as reliable. This shows that the values for variables X and Y fall within the highly reliable category.

### 3. Mean Score

The mean value was identified using the formula from Gay et al. (2012: 323) as follows

$$X = \frac{\Sigma X}{n} = X = \frac{1.170}{26} = X = 45$$

$$Y = \frac{\sum F}{n} = Y = \frac{1.207}{26} = Y = 46,42$$

Based on the data processing above, the average (mean) value of variables X (Wisata Alam Indonesia app-lication) was 45.00 and Y was (User Experience) 46.42.

### 4. Variance

The researchers identified the variance value of variable X (Wisata Alam Indonesia application) and variable Y (User Experience) using the formula from Jackson (2008: 117) as follows:

$$S^2 = \frac{Z(x-\bar{X})^2}{n-1} = \frac{64}{26-1} = 2.560$$

$$S^2 = \frac{Z(Y-\bar{X})^2}{n-1} = \frac{72,34}{26-1} = 2.894$$

Model	R	R square	Adjusted r	Std. Error	
			square	Of The	
				Estimate	
1	.896a	.804	.795	.769	

Based on the above calculations, the variance of variable X (Wisata Alam Indonesia application) was 2.560 and the variance of variable Y (User Experience) was 2.894.

### 5. Standard Deviation

Based on the formula from Jackson (2008:117), the standard deviation was calculated as follows:

$$S = \sqrt{\frac{Z(x - \bar{X})^2}{n - 1}} = \sqrt{2,560} = 1.600$$

$$S = \sqrt{\frac{Z(x-\bar{X})^2}{n-1}} = \sqrt{2,894} = 1.701$$

From the results of the above calculations, the researchers found that the standard deviation

value of variable X (Wisata Alam Indonesia application) was 1.600, while the standard deviation value for variable Y (User Experience) was 1.701. These values indicated the degree of variability or dispersion in the scores for each variable 1.

### 6. Correlation Coefficient Test

After calculating with IBM SPSS Statistics 25, the following data output was obtained:

Correlation					
		Wisata Alam Indonesia	User Experience		
Wisata Alam Indonesia	Pearson Correlation	1	.896**		
	N	26	26		
User Experience	Pearson Correlation	.896**	1		
Experience	N	26			

Based on the rxy value obtained, 0.896, it could be concluded that the relationship or correlation between variable X (Wisata Alam Indonesia application) and variable Y (User Experience) had a very strong relationship level

# 7. Simple Linear Regression Analysis

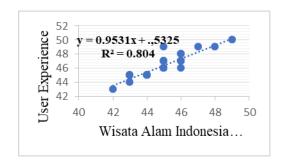
To test the magnitude of the influence of the Wisata Alam Indonesia application on user experience, IBM SPSS Statistics 25 used the following data:

**Model Summary** 

Correlation					
Model	Unstand	dardized	Standardized		
	Coefficients		Coefficients		
	В	Std.	Beta		
		Error			

	Constant	3.532	4.330	.423
1	Wisata Alam Indonesia	.953	.096	.000

In the output table above, it was known that the constant value (a) was 3.532, while the regression coefficient for the Wisata Alam Indonesia application was 0.953. Therefore, the regression equation, according to Supranto (2016: 185) in Saragih & Munthe (2018), could be written as follows:



Y = a + bX

Picture 4.1 Regression equation line Wisata Alam Indonesia application on User Experience.

From the output results above, the simple linear regression equation (Y = 3.532 + 0.953X) This indicated that as variable X (Wisata Alam Indonesia) increased, dependent variable (user experience) also improved. The table also showed that the correlation coefficient (R) was 0.896. From this output, the coefficient of determination (R square) was 0.804.

This meant that approximately 80.4% of the

variability in user experience could be explained by the Wisata Alam Indonesia application. Since the regression coefficient was positive, it could be concluded that the effect of variable X on Y was positive, indicating a direct relationship between the two variables.

### 8. Hyphothesis Test (T)

		COE	FFICIENT	$\Gamma S^{A}$		
Mo	odel	Unstand Coeffi		Standardiz ed Coefficient s	t	SI G.
		В	Std. Erro r	Beta		
1	(Const ant)	3.53	4.33 0	.423	.816	.42
	Wisata Alam Indone sia	.953	.096	.000	9.91 1	.00 0

From the results of the above calculations, since the value of thitung = 9.911 >ttable = 2.063, it could be concluded that H0 would be rejected while Ha would be accepted. Therefore, it could be stated that there was a positive and significant effect of the influence of the Wisata Alam Indonesia application on the user experience of 6th semester students in class A of the English Education Study Program at Universitas Nias.

### 9. Hypothesis Test (F)

			ANOVA	1		
Mo	odel	Sum of Squares	Df	Mean Square	f	SIG.
1	Regre ssion	58.141	1	58.141	98. 22 8	.000 <sup>B</sup>
	Resid ual	14.206	24	.592		
	Total	72.346	25			

From the results of the above calculations, since the value of

fhitung = 98.228 > ftabel = 4.259, We could conclude that H0 would be rejected while Ha would be accepted. Therefore, it could be stated that there was a positive and significant effect of the influence of Wisata Alam Indonesia the application on the user experience of 6th-semester students in Class A of the **English** Education Study Program at Universitas Nias.

Based on the results of this research, the average score of variable X (Wisata Alam Indonesia) application was 45, while the average score of variable Y (User Experience) was 46.42. Based on this calculation, it could be seen that respondents gave a fairly good assessment of the Wisata Alam Indonesia application. User experience is a key element in determining the success of an application. According to Hassenzahl (2010), user experience is defined as how someone feels and interacts with digital products based on their needs, emotions, expectations. If the application can meet user expectations and provide pleasant interactions, it will be rated positively by its users. This aligns with the results of this research, where the Attractiveness, Efficiency, Dependability, Perspicuity, Stimulation, and Novelty scales received average scores that fell within the —Excellent category. This was evident from the results of distributing questionnaires that contained content related to the User

Experience Questionnaire scale, so that when the results were collected and processed, they showed an average in the positive category.

This opinion was reinforced by Nielsen (2012), who explains that the main components of user experience are usability, utility, and desirability. In the context of this research, the Wisata Alam Indonesia application was rated very positively in the aspect of "Attractiveness" with an average score of 4.73 and "Novelty" 10.15 which were far above the minimum limit of the Excellent category (≥1.75). This indicated that the Wisata Alam Indonesia application provided a satisfying user experience.

Additionally, the results of this research were further supported by the findings of the Pearson correlation test, which indicated a very strong relationship between the Wisata Alam Indonesia application (variable X) and user experience (variable Y), with a correlation coefficient value of 0.896. This high correlation coefficient reinforced the positive effect of the application on enhancing the user experience for students. With a significant value of 0.000 (<0.05), it could be concluded that there was significant relationship between the two variables. Schrepp et al. (2017) importance emphasize the of application innovation and attractiveness in improving user

experience. A positive experience is created when the application not only functions properly but also provided more value in terms of innovation and personalization. This aligned with the results of the research, which demonstrated that the Wisata Alam Indonesia application had a significant effect on user experience.

The regression analysis showed that the Wisata Alam Indonesia application had a positive influence on user experience. This could be seen from the regression equation obtained, which was Y = 3.532 + 0.953X, which indicated that increased use of the Wisata Alam Indonesia application contributed positively to experience. This was supported by Grossman (1998) in Wongso (2020), the better the experience felt by users or students, the better the level of user trust in the application, otherwise if the user experience is less satisfying, the level of trust will decrease. From the results of this research, it was found that the more the Wisata Alam Indonesia application increased, the better the level of trust and experience of users, specifically for 6th semester students in class A of the English Education Study Program Universitas Nias.

Based on the analysis of this research, it could be concluded that the Wisata Alam Indonesia application had a positive and significant effect on user experience,

particularly for 6th semester students in class A of the English Education Study **Program** Universitas Nias. The hypothesis testing results support conclusion, with the t-test showing thitung = 9.911 > ttabel = 2.063 and the F-test indicating Fhitung = 98.228 > Ftabel = 4.259, both of which confirm the rejection of H0 of This and acceptance Ha. application was considered attractive, efficient, reliable, and innovative, which contributed to an increase in overall user satisfaction and experience. These results provided empirical evidence that nature tourism-based applications could serve as an effective medium for improving user experience. especially in an educational environment.

### 5. CONCLUSION

This research aims to assess the user experience of the Wisata Alam Indonesia application among 6th semester students of class A of the English Education Study Program at Universitas Nias. The results showed that the average score for the application was 45, while the user experience received an average score of 46.42, indicating a fairly positive assessment from the respondents.

This research demonstrated that user experience is crucial to the success of the application. The Wisata Alam Indonesia application scored high across various scales of user experience, including Attractiveness, Efficiency,

Perspective, Dependability, Stimulation, and Novelty, with all scores falling into the —Excellent category.

Additionally, the results indicated a very strong correlation between the Wisata Alam Indonesia application and user experience. Regression analysis also revealed that as the quality of the Wisata Alam Indonesia application increased, user experience also improved.

The correlation coefficient r =0.896 indicated a very strong positive relationship between the usability of the Wisata Alam Indonesia application and user experience, suggesting that as usability improved, user experience was significantly enhanced. This strong correlation was further supported by hypothesis testing, where the thitung = 9.911 > ttabel = 2.063 and the F-test outcome Fhitung = 98.228 > Ftabel = 4.259, both showed that H0 was rejected in favor of Ha. These results confirmed that the application's usability has a statistically significant and positive effect on user experience, reinforcing its effectiveness as a tool that met user expectations and promoted satisfaction.

In conclusion, the Wisata Alam Indonesia application significantly improved the user experience for 6th semester students in class A of the English Education Study Program at Universitas Nias. The application was recognized as attractive, efficient, reliable, and innovative, contributing to overall user satisfaction. This research underscores the effectiveness of nature

tourism-based applications in enhancing user experience.

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