

# A Grammatical and Linguistic Analysis of Noun Declension in Pashto Language: Systematic Rules Beyond Temporal Influence

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## ABSTRACT

This research investigates the grammatical mechanisms underlying noun declension (inflection) in Pashto, an Eastern Iranian language with distinctive ergative-absolutive alignment. In Pashto morphosyntax, proper nouns and common nouns undergo systematic case marking that has historically posed pedagogical and analytical challenges for both native and non-native learners. This study addresses a critical gap in Pashto grammatical scholarship by demonstrating that temporal categories (tense) do not directly govern noun case assignment. Rather, noun declension is triggered by two principal factors: (1) the presence of adpositions (prepositions and postpositions) that establish syntactic relationships, and (2) the ergative case marking required for subjects of transitive verbs in past perfective constructions. Through a library-based descriptive-analytical methodology drawing on classical and contemporary Pashto grammatical literature, this paper synthesizes existing theoretical frameworks and proposes three operational rules consolidated into a comprehensive 'Golden Rule' for noun declension. The findings reveal that morphological changes in Pashto nouns represent obligatory grammatical requirements rooted in the language's ergative typology, serving to maintain semantic clarity and syntactic coherence. Specifically, feminine nouns ending in /a/ (هـ) shift to /e/ (ې), while masculine nouns ending in /ay/ (ای) shift to /i/ (ی) when entering the oblique case. The study acknowledges that additional noun classes exist in Pashto whose case behavior requires separate investigation; the scope of this analysis is deliberately limited to the two most pedagogically prominent alternation classes. This analysis provides accessible models for accurate Pashto usage and contributes to broader linguistic typology by offering empirical evidence of ergativity in contemporary Indo-Aryan and Eastern Iranian languages, with significant implications for language education and computational linguistics.

**Keywords:** Pashto grammar, noun declension, case marking, ergative-absolutive alignment, oblique case, adpositional phrases, transitive past perfective, morphosyntax, Indo-Iranian languages, language pedagogy.

## INTRODUCTION

Pashto (also spelled Pakhto or Pushto) is an Eastern Iranian language within the Indo-Iranian branch of the Indo-European language family, spoken by approximately 40–60 million people primarily in Afghanistan and Pakistan (Tegey & Robson, 1996). As one of the two official languages of Afghanistan and a recognized regional language in Pakistan, Pashto exhibits several typologically significant grammatical features that distinguish it from neighboring languages. Among these distinctive characteristics, the system of noun declension presents both theoretical and practical challenges for linguists, language educators, and learners alike.

Noun declension in Pashto refers to the systematic morphological changes that nouns undergo based on their grammatical function within a sentence. This phenomenon is particularly salient in two categories of nouns that constitute the primary focus of the present study: (1) feminine nouns terminating in the vowel /a/ represented by the letter هـ (hā), and (2) masculine nouns ending in the diphthong /ay/ represented by the letter ای (yā). When these nouns appear in specific grammatical contexts, they transition from their direct (nominative/absolutive) case to their oblique case through predictable phonological transformations: feminine /a/ shifts to /e/ (هـ → ې), while masculine /ay/ shifts to /i/ (ای → ی). For instance, the proper name 'Palwasha' (پلوشه) becomes 'Palwashē' (پلوشې), and 'Zalmay' (زلمی) becomes 'Zalmī' (زلمې) in oblique contexts. It should be

noted at the outset that Pashto contains additional noun classes whose morphological behavior under case alternation may differ; these classes are beyond the current scope and constitute a direction for future inquiry.

The theoretical question underlying this morphological behavior centers on causation: what grammatical mechanism triggers these case transformations? Traditional accounts in Pashto grammar pedagogy have often conflated case marking with temporal categories, suggesting that tense directly influences noun morphology (Rishtin, 1962; Sherzad, 2019). This perspective has created conceptual difficulties for both language learners and instructors, particularly when confronting apparent contradictions: nouns may remain in direct case despite occurring in past tense, or shift to oblique case in non-past contexts. Such inconsistencies signal a fundamental misunderstanding of the underlying grammatical principles and motivate the present re-analysis.

Contemporary linguistic typology provides a more principled framework for understanding Pashto noun declension through the lens of split-ergative alignment. Pashto exhibits ergative-absolutive case marking selectively conditioned by tense and aspect: in past perfective constructions with transitive verbs, the agent (A) argument receives ergative case marking (oblique case), while the patient (P) argument maintains absolutive (direct) case (Mirdehghan & Jahangiri, 2005; Rahman & Bukhari, 2014). This split-ergative system coexists with nominative-accusative alignment in non-past tenses, creating a complex but rule-governed morphosyntactic pattern. Additionally, the presence of adpositions uniformly triggers oblique case marking on their nominal complements, independent of tense.

This study addresses the persistent pedagogical and theoretical challenges surrounding Pashto noun declension by systematically analyzing the grammatical conditions that govern case assignment. Drawing on classical and contemporary Pashto grammatical literature and cross-linguistic typological frameworks, this research demonstrates that temporal categories do not directly determine noun case. Instead, two primary factors trigger oblique case marking: (1) syntactic government by adpositions, and (2) ergative case assignment to transitive subjects in past perfective aspect. By clarifying these principles and formulating explicit operational rules, this study contributes to both the theoretical understanding of Pashto grammar and practical language pedagogy.

## LITERATURE REVIEW

Scholarly investigation of Pashto grammar extends back over a century, with foundational descriptive works produced by both Afghan and international linguists. The specific question of noun case marking and its triggering conditions, however, has received uneven treatment across different grammatical traditions, and a coherent, unified account has remained elusive.

Early descriptive grammars established the basic paradigm of noun declension but offered limited theoretical explanation for the conditions governing case alternations. Rishtin's (1962) *Zhābpokhduna* identified that masculine nouns ending in /ay/ shift to /i/ in what he termed the 'agentive case' (فاعلي حالت) and 'relational case' (ارتباطي حالت), while feminine nouns ending in /a/ shift to /e/ in these contexts. However, Rishtin's framework conflated multiple triggering conditions—adposition government and ergative alignment—under the single label of 'agentive case,' a conflation that generated lasting pedagogical confusion.

Subsequent grammatical works by Ziar (1983) and Sherzad (2019) refined these descriptions while maintaining similar analytical approaches. Sherzad provided more extensive paradigmatic examples and explicitly recognized the role of adpositions in triggering case changes, yet these works continued to reference

'agentive case' in ways that implied tense-based determination. Khoeshki (2001) contributed valuable phonological and morphological analysis, documenting the systematic sound changes in case alternations, but did not provide a comprehensive account of the syntactic conditions triggering those changes.

More recent linguistic research has approached Pashto case marking through the framework of split-ergativity, situating Pashto within a broader typological context. Mirdehghan and Jahangiri (2005) conducted comparative analysis of split-ergative systems in Hindi/Urdu, Pashto, and Balochi, demonstrating that Pashto exhibits tense-aspect conditioned ergativity restricted to past perfective transitive constructions. Their research clarified that ergative case marking is not uniformly triggered by past tense but requires the specific combination of past perfective aspect and transitivity.

Rahman and Bukhari (2014) provided detailed morphosyntactic analysis of the Pashto case system, identifying distinctions including nominative, ergative, accusative, oblique, and genitive. Their work demonstrated that structural case assignment follows principled patterns related to verb transitivity, tense-aspect features, and syntactic position. Masood (2022) further investigated genitive case assignment in determiner phrases, showing how the adposition /də/ (د) systematically governs oblique case on its nominal complement. Rehman, Ahmad, and Shah (2024) applied the Word and Paradigm approach to Pashto noun case marking, providing additional descriptive coverage of the paradigmatic patterns involved. These studies collectively establish that Pashto case marking responds to syntactic configuration rather than temporal reference alone.

Contemporary formal analyses have examined Pashto case phenomena within minimalist and Lexical Functional Grammar frameworks. Masood and Rahman (2013) analyzed structural case assignment in unergative constructions, while Khan and Iqbal (2021) investigated agreement patterns and their interaction with case marking. Kowalik (2015) provided comparative coverage of case alignment in languages of the Greater Hindukush region, situating Pashto within a wider areal typological context. These formal approaches have confirmed the systematic nature of Pashto case assignment but have primarily addressed theoretical linguistics audiences.

Despite these advances, significant gaps remain. Existing grammatical descriptions have not sufficiently disambiguated the multiple triggers of oblique case marking, leading to continued pedagogical difficulties. Furthermore, few studies have formulated explicit, accessible rules that language learners can apply to determine correct case forms. The present study addresses these gaps by synthesizing theoretical insights with practical pedagogical needs and by providing systematic, explicit rules for noun case assignment—rules applicable specifically to the /a/-final feminine and /ay/-final masculine noun classes, which together account for a substantial portion of Pashto's most common proper and common nouns.

## METHODOLOGY

This research employs a library-based descriptive-analytical methodology combining traditional grammatical analysis with contemporary linguistic frameworks. The methodological design reflects the nature of the research questions, which concern the structural conditioning of case marking rather than frequency or sociolinguistic variation.

Primary data derive from three main sources. First, classical Pashto grammatical literature, including works by Rishtin (1962, 1993), Ziar (1983), Khoeshki (2001), and Sherzad (2019), provides the foundational descriptive accounts and established paradigmatic examples. Second, contemporary linguistic research on Pashto morphosyntax and case systems—particularly typological studies addressing ergativity (Mirdehghan & Jahangiri, 2005; Rahman & Bukhari, 2014; Masood & Rahman, 2013; Rehman et al., 2024)—furnishes the theoretical frameworks applied in the analysis. Third, illustrative examples were selected from written Pashto literary texts, pedagogical materials, and attested spoken language records available in published grammars and scholarly works. Examples were chosen to represent the full range of syntactic contexts in which oblique case alternation is observed or categorically absent, enabling systematic comparison across tense-aspect transitivity combinations.

The analytical approach proceeded through four sequential stages. First, a systematic review and comparison of existing grammatical accounts identified points of consensus and contradiction regarding conditions triggering noun case changes, revealing that traditional grammars conflated distinct phenomena under umbrella terms. Second, examination of paradigmatic examples tested the predictive accuracy of traditional accounts, identifying cases where past tense alone failed to predict case marking and where non-past contexts triggered oblique case. Third, linguistic typology frameworks—particularly theories of ergativity and adposition government—provided explanatory models for the observed patterns. Fourth, synthesis of these insights yielded operational rules formulated for maximum pedagogical accessibility.

The scope of the analysis is explicitly restricted to two noun classes: feminine nouns ending in /a/ (ا) and masculine nouns ending in /ay/ (ای). These classes were selected because they exhibit the most transparent and morphologically visible case alternations in Pashto and because they encompass a large proportion of common and proper nouns encountered in everyday usage. Pashto possesses additional noun classes—including nouns ending in consonants, monosyllabic nouns, and loanword classes—whose declension patterns may differ in

important ways. The generalizability of the proposed rules to these additional classes is not assumed; addressing them constitutes an important avenue for future research. This scope limitation does not diminish the validity of the present findings, which are framed as applying to the specified noun classes and not as universal claims about Pashto noun morphology as a whole.

Methodological constraints include reliance on published grammatical sources and selected illustrative examples rather than a systematic, annotated corpus. A large-scale corpus analysis would permit quantitative confirmation of case distribution patterns across genres and registers and would provide frequency data unavailable from the descriptive-analytical approach alone. The present study should therefore be understood as establishing the structural rules that a future corpus investigation can empirically test and refine. Additionally, the analysis addresses standard varieties of Pashto; dialectal variation—particularly differences between Northern (Yusufzai) and Southern (Kandahari) varieties—is acknowledged but not systematically investigated here.

## FINDINGS AND ANALYSIS

Analysis of Pashto grammatical structures reveals that noun declension operates according to systematic morphosyntactic principles formulated as explicit operational rules. The findings establish that oblique case marking results from two primary grammatical phenomena: adposition government and ergative case assignment in transitive past perfective constructions. A key theoretical claim emerging from this analysis—supported descriptively throughout—is that temporal reference (tense) operates independently of case assignment; the two dimensions are governed by distinct grammatical mechanisms. This descriptive theoretical distinction is elaborated below.

### Rule 1: Adpositional Government of Oblique Case

When a noun serves as the complement of an adposition (preposition or postposition), that noun obligatorily appears in oblique case regardless of tense, aspect, or other temporal features. Pashto adpositions include *də* (د 'of, from'), *tə* (ته 'to'), *lə* (له 'from'), *pə* (په 'in, on, with'), *par* (پر 'on'), *sara* (سره 'with'), *ghwandē* (غوندي 'like'), and others. These adpositions govern the oblique case on their nominal complements through syntactic subcategorization, entirely independent of the tense of the clause in which they appear.

Original Noun (Direct)	Adposition (English)	Oblique Form	Example Sentence	English Translation
Palwasha (Fem)	to (tə)	Palwashē	Zə Palwashē tə wayəm.	I am telling Palwasha.
Zalmay (Masc)	to (tə)	Zalmī	Zə Zalmī tə wayəm.	I am telling Zalmay.
Wazhma (Fem)	of (də)	Wazhmē	Dā də Wazhmē kitāb day.	This is Wazhma's book.
Zmaray (Masc)	of (də)	Zmarī	Dā də Zmarī kitāb day.	This is Zmaray's book.
Šəja (Fem)	with (lə...sara)	Šəjē	Zə lə šəjē sara rāyləm.	I came with the woman.
Sarāy (Masc)	with (lə...sara)	Sarī	Lə sarī sara rāyləm.	I came with the man.
Shamsia (Fem)	at/about (pə...pōrē)	Shamsiē	Pə Shamsiē pōrē ma xānda.	Don't laugh at Shamsia.
Gulalai (Masc)	at/about (pə...pōrē)	Gulalī	Pə Gulalī pōrē ma xānda.	Don't laugh at Gulalai.

Shayista (Fem)	on/with (pər...bāndē)	Shayistē	Pər Shayistē bāndē mayan yam.	I am in love with Shayista.
Zāzai (Masc)	on/with (pər...bāndē)	Zāzī	Pər Zāzī bāndē mayan yam.	I am in love with Zazi.
Gulbashtra (Fem)	like (də...yundē)	Gulbashrē	Də Gulbashrē yundē ma kēža.	Don't be like Gulbashtra.
Kābalay (Masc)	like (də...yundē)	Kābalī	Də Kābalī yundē ma kēža.	Don't be like the Kabuli.

Table 1. Adpositional Government of Oblique Case Across Tenses

This pattern remains constant across all tenses. The sentence "Zə Palwashē tə wāyəm" (زه پلوشي ته وایم) 'I say to Palwasha' demonstrates oblique case triggered by the postposition tə in present tense, while "Ma Palwashē tə wāyal" (ما پلوشي ته ویل) 'I was saying to Palwasha' shows identical oblique case in past progressive. The invariance of case across tenses constitutes decisive descriptive evidence that adposition government, not temporal reference, determines case form.

### Rule 2: Ergative Case in Transitive Past Perfective Constructions

When a verb is transitive (selecting both agent and patient arguments) and inflected in past perfective aspect, the agent argument receives ergative case marking, which is morphologically identical to oblique case. Intransitive verbs in past perfective maintain nominative-absolutive alignment with subjects in direct case. This aspectual conditioning of ergativity—rather than tense conditioning—represents a cross-linguistically common pattern of split-ergative alignment (Dixon, 1994). The following examples illustrate the transitivity based split:

Sentence Type	Agent/Subject (Case)	Patient/Object (Case)	Pashto Example	English Translation
Transitive Past (F)	Palwashē (Oblique)	ḍōḍəy (Direct)	پلوشي ډوډی وخوره	Palwasha ate bread
Transitive Past (M)	Zalmī (Oblique)	līk (Direct)	زلمي ليک وليکه	Zalmay wrote a letter
Intransitive Past (F)	Palwasha (Direct)	—	پلوشه راغل ه	Palwasha came
Intransitive Past (M)	Zalmay (Direct)	—	زلمي لار	Zalmay went

Table 2. Ergative Case Assignment in Transitive vs. Intransitive Past Perfective

These contrasts demonstrate that past tense alone does not trigger case marking. Rather, the combination of past perfective aspect and transitivity creates the conditions for ergative alignment. Non-perfective past forms (progressive, habitual) maintain nominative-accusative alignment with direct case subjects, further confirming that it is the perfective aspect combined with transitivity—not tense per se—that activates the ergative pattern.

### Rule 3: Vocative and Plural Formation

Nouns in vocative constructions (direct address) undergo case alternation formally similar to oblique forms, while plural formation of animate nouns involves parallel phonological changes. These morphological changes serve different grammatical functions than oblique case proper—and should be clearly distinguished from oblique case assignment—but involve formally identical phonological transformations. The coincidence of form across three distinct grammatical functions (oblique case, vocative, plural) underscores the productivity of the /a/ → /e/ and /ay/ → /i/ alternations in Pashto morphology.

Category	Gender	Singular (Direct)	Modified Form	English Translation
Vocative	Feminine	Palwasha (پلوشه)	ē Palwashē! ( ای پلوشی!)	O Palwasha!
Vocative	Masculine	Zalmay (زلمی)	ē Zalmīa! ( ای زلمیه!)	O Zalmay!
Plural	Feminine	Palwasha (پلوشه)	Palwashē ( پلوشی )	Palwashas
Plural	Masculine	Zalmay (زلمی)	Zalmī (زلمی)	Zalmays

Table 3. Vocative and Plural Formation in Pashto Nouns

Plural constructions further illustrate these patterns:

— Prūn dērē Palwashē škārēdē (پرون دېرې پلوشې بنسکارېدې) 'Yesterday many Palwashas appeared' — Prūn dēr Zalmī škārēdəl (پرون دېر زلمې بنسکارېدل) 'Yesterday many Zalmays appeared'

### The Golden Rule: Syntactic Configuration, Not Tense

The synthesis of the preceding findings yields a comprehensive principle for determining noun case in Pashto, formulated as the 'Golden Rule': When determining whether a noun should appear in oblique case, examine the syntactic configuration and verbal features, not the tense category. Specifically, apply oblique case when (1) the noun is governed by an adposition, or (2) the noun is the subject of a transitive verb in past perfective aspect. In all other contexts, use direct case.

Table 4 below provides a direct comparison between the traditional tense-based account and the syntactic account proposed in this study, illustrating both their descriptive predictions and the contexts in which they diverge:

Table 4. Traditional Tense-Based Account vs. Proposed Syntactic Account of Oblique Case

Context	Tense-Based Prediction	Syntactic Account Prediction	Attested Form	Verdict
Present tense + adposition (Zə Palwashē tə wāyəm)	Direct (present tense → no case change)	Oblique (adposition tə governs noun)	Palwashē (Oblique)	Syntactic ✓
Past tense + intransitive verb (Palwasha rāyla)	Oblique (past tense → case change)	Direct (no adposition, no transitive past perfective)	Palwasha (Direct)	Syntactic ✓
Past perfective + transitive verb (Palwashē dōdāy wəxōra)	→ case change)	Oblique (ergative: transitive past perfective)	Palwashē (Oblique)	Both ✓*
Past progressive + adposition (Palwashē tə mē wāyal)	Oblique (past tense → case change)	Oblique (adposition tə governs noun)	Palwashē (Oblique)	Both ✓*

Present tense, no adposition (Palwasha xaṭ līkī)	Direct (present tense → no change)	Direct adposition, transitive perfective)	(no not past	Palwasha (Direct)	Both ✓
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\* Both accounts predict correctly in these rows, but for different reasons; the syntactic account provides the correct causal explanation.

As Table 4 shows, the tense-based account makes incorrect predictions in rows 1 and 2, precisely the contexts that most clearly distinguish the two analyses. The syntactic account correctly predicts case in all five contexts, demonstrating its superior empirical coverage and explanatory adequacy.

The Golden Rule resolves the pedagogical confusion created by tense-based accounts by providing a simple decision procedure: identify whether the noun is governed by an adposition or serves as the subject of a transitive verb in past perfective aspect. If either condition obtains, use oblique case; otherwise use direct case. This approach eliminates the need for learners to memorize apparent exceptions, replacing problematic tense based heuristics with principled grammatical knowledge grounded in the actual morphosyntactic structure of the language.

## DISCUSSION

The findings of this study demonstrate that Pashto noun declension constitutes a systematic morphosyntactic phenomenon governed by principled grammatical rules. By distinguishing adposition-governed oblique case from ergative case assignment in transitive past perfective constructions, the analysis resolves long-standing pedagogical difficulties and aligns Pashto grammatical description with contemporary linguistic typology. The critical theoretical point—that tense and case operate as independent grammatical dimensions—is supported by the full range of syntactic contexts examined in Section 4, where adpositions trigger oblique case in present tense and intransitive past perfective verbs leave subjects in direct case.

The confusion between tense and case marking in traditional Pashto grammars likely stems from a superficial correlation: because transitive actions in past perfective aspect constitute a large proportion of everyday discourse, learners encounter many tokens where past tense and oblique case co-occur. However, this correlation is not deterministic. Table 4 in the Findings section makes explicit the diagnostic contrast cases where the traditional and proposed accounts diverge, showing that the syntactic account consistently yields the correct prediction. Replacing the tense-based heuristic with the syntactic account represents not a minor refinement but a structural correction of the underlying pedagogical model.

From a typological perspective, Pashto's split-ergative system aligns with well-documented patterns in Indo Iranian languages. Hindi-Urdu exhibits comparable tense-aspect conditioned ergativity, with the postposition 'ne' marking ergative case on transitive subjects in perfective past constructions (Davison, 2004). Balochi shows a parallel split-ergative pattern conditioned by tense and aspect (Mirdehghan, 2013). Crucially, Pashto's realization of ergativity through direct morphological case marking on nouns—rather than through a separate postpositional element as in Hindi-Urdu—makes it especially well suited for illustrating the independence of case and tense, since the absence of a distinct ergative postposition forces analysts to confront the question of what triggers the morphological alternation directly.

The pedagogical implications are substantial. Instruction grounded in the Golden Rule and its two-condition decision procedure—adposition government or transitive past perfective subject—provides learners with a generative, predictive model rather than a list of exceptions. For computational linguistics applications, the systematic rules identified here can inform morphological analyzers and generators for Pashto, supporting machine translation, grammatical error correction, and text generation. Rule-based or statistical models incorporating adposition government and the transitivity-aspect configuration can achieve more accurate morphological analysis than approaches relying on tense features alone (cf. Khan & Iqbal, 2021).

Several important scope limitations should be acknowledged. The present analysis has focused on two morphologically prominent noun classes—feminine /a/-final and masculine /ay/-final nouns—and the proposed rules are validated for these classes. Whether the same conditioning environments (adposition government and transitive past perfective ergativity) apply uniformly to consonant-final nouns, monosyllabic

nouns, or loanword classes requires independent investigation. Similarly, dialectal variation in the Northern versus Southern Pashto varieties may produce differences in case marking, a topic that corpus-based dialectological research could profitably address. These limitations delimit the scope of the present claims without undermining their validity within that scope.

## CONCLUSION

This research has demonstrated that noun declension in Pashto operates according to systematic morphosyntactic principles independent of temporal categories. Through analysis of grammatical literature and examination of case marking patterns across diverse syntactic contexts, the study established that two primary factors trigger oblique case: adposition government and ergative case assignment to subjects of transitive verbs in past perfective aspect. This finding corrects the persistent pedagogical error of conflating case marking with tense, providing learners, instructors, and researchers with a structurally accurate grammatical model.

The Golden Rule—examine syntactic configuration and verbal features, not tense—offers a practical and theoretically principled decision procedure. Feminine nouns ending in /a/ shift to /e/, and masculine nouns ending in /ay/ shift to /i/, specifically in oblique case contexts, not uniformly in past tense. The comparison table (Table 4) makes this contrast analytically transparent, offering a reusable pedagogical resource for classroom instruction and self-directed learning alike.

From a linguistic typology perspective, the findings position Pashto as a split-ergative language exhibiting tense-aspect conditioned ergative alignment, aligning it with documented patterns in Hindi-Urdu and Balochi while highlighting Pashto's distinctive realization through direct morphological case marking. The theoretical contribution extends to case theory more broadly, supporting syntactic approaches that derive case from structural configurations and grammatical features—government by adpositions and transitivity-aspect specifications—rather than from temporal reference.

Future research directions include: corpus-based investigation of case marking frequencies across text genres and spoken registers; examination of case patterns in dialectal varieties; extension of the analysis to additional noun classes (consonant-final, monosyllabic, loanword classes); investigation of case marking in embedded clauses and non-finite constructions; and application of these findings to computational morphological analysis and machine translation for Pashto. The present study provides the structural foundation on which such quantitative and cross-dialectal work can build.

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