A Minimalist Approach to Passives with Complementizers, ʔan, inna and kana in Standard Arabic
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ABSTRACT

In this paper, we argue that the three complementizers ʔan, inna and kana come with passive constructions in Standard Arabic (SA henceforth). ʔan comes in embedded clauses and is followed with a VS order, whereas inna and kana come in main clauses and are followed with an SV order. We assume that verbs enter the derivation with an unvalued (passive) feature. Also, we assume that a Voice°head with an unvalued (passive) feature and the passive infix as its specifier should be introduced to the derivation of the passive construction in which a probe-goal syntactic relationship is established between the verb and the Voice° head. This relation triggers the move of the verb from V to Voice° head for two reasons, to value its unvalued (passive) feature and to pick up the passive infix. Further we assume that T in main clauses with inna and kana carry [+V] feature which triggers the move of the verb not the DP to T. Unlike main clauses, the embedded clause with ʔan carries no [+V] feature and thus the DP moves from VP complement to [Spec, TP]. Finally, we claim that the complementizers ʔan, inna and kana assign case to the elements that directly follow them.

KEYWORDS
Complementizers, Minimalist Approach, Passives, Standard Arabic

1. INTRODUCTION

Being considered as the formal language in many countries in the Middle East, Arabian Peninsula, and the north of Africa, SA has been the core of many linguistic studies due to its rich phonological, morphological, syntactic and semantic system (Ryding, 2005). Moreover, SA gains its importance from its descentness from Classical Arabic (CA henceforth), the language of Qur’an. CA and SA differ in their lexicon, style and many things that we will not dwell on in this paper. One of the most important characteristics that SA is distinguished with is that voice is morphologically expressed in the prosodic tier of a perfective verb in which the melody tier changes to {u,i} in the passive form. On the other hand, in an imperfective verb, the melody tier changes to {u,a}. The following two examples illustrate the morphological changes occur on the verb when passivized:

1- Perfective: qatala : qutila
    kill          was-killed

2- Imperfective: yaqtil : yuqtal
    To kill      to be killed

Maalej (1999) calls this process infixation in which the passive morphemes {u,i} and {u,a} are superimposed to the root of the verb/ q t l /to change it to passive form. Thus, we can conclude that part of the passivization process in SA is morphological.

On the syntactic level, the process of passivization is defined by early Arab grammarians as the nomination of the object of the active sentence to the surface subject position in the passive sentence where the surface subject gains a default nominative case and the verb loses its ability to assign accusative case. Moreover, a very important point to mention is that early Arab grammarians claim that the real subject of the active sentence is not lexicalized at all in the passive sentence. This definition goes in line with Chomsky (1986) in which he claims that passive in SA is a morphosyntactic process that changes occur on both the morphology of the verb and the structure of the sentence. The following example shows the process of passivization in SA:
(1) saraqa al-liSS-u al-bayt-a
    robbed-sg m the-thief –Nom m the-house-Acc m

The thief robbed the house.

(2) suriqa al-bayt-u
    robbed-passive sg m the-house-Nom m

The house was robbed.

Sentence (2) is considered a short passive sentence since the surface object ?al-liSS is NOT lexicalized in the passive sentence. This kind of sentence is the goal of this study.

To summarize this section, the process of passivization in SA is a morphosyntactic process in which the verb is morphologically changed by inserting a passive infix to its stem or root along with nominating the object to the subject position and carrying a default nominative case.

2. PREVIOUS ANALYSES

Gehrke and Grillo (2009) introduce a new approach to deal with passivization phenomenon in English in which they pay their attention on the predicate structure rather than the arguments. To them, a predicate is a complex event which composes the core of passive constructions. They maintain that such an assumption can simply help determine which kind of a predicate is allowed to passivize. Consequently, passivization is an operation on an event-predicate structure- rather than argument structure.

Gehrke and Grillo (2009) criticize three important previous analyses which dealt with the same phenomenon. These analyses, according to them, consider passivization as a transition on the structure of DPs. For instance, Baker et al. (1989) propose that the –en morpheme is attached to IP/TP and gets lowered to V to “absorb” case assignment. Thus, the internal argument raises to get its theta role according to UTAH. Gehrke and Grillo claim that Baker et al.’s analysis is inadequate since it does not distinguish between active participle morphemes and passive ones. Moreover, they argue against Jaeggli (1986) who posits a “fairly complex” process of theta assignment in passive constructions. This assumption has two different ways in active and passive sentences making it unsuitable to adopt with regard to this phenomenon, according to Gehrke and Grillo. In addition to the previous analyses, Gehrke and Grillo find that Collins’ (2005) smuggling approach which fronts a vp with an internal argument inside to get it closer to [Spec, T] and thus can satisfy the EPP feature rather problematic. Following Baker’s UTAH, Collins claims that the by phrase of the passive sentence originates in [Spec, v] and the surface subject originates in [Spec, V]. Gehrke and Grillo raise doubts about the ability of this approach to derive existential passive constructions such as “There was a Saubian killed.” Also, they maintain that Collins does not give a straightforward definition to the nature of smuggling in syntax.

Their proposed analysis is based on the fact that predicates which are able to successfully passivize have a complex structure of two sub events. The first one they call the CAUSE sub event and carries the external DP. The second one they call the BECOME sub event and carries the internal DP. Additionally they assume a VoiceP carrying two features; the first feature is discourse-related which chooses the suitable sub event to be fronted and the second feature is “quantificational” making the next phase more readable. These two features trigger the movement of the BECOME VP to its specifier and thus internal DP has its freedom to remain in situ in existential passive constructions or raise to [Spec, T] to check the EPP feature. Moreover, Gehrke and Grillo (2009) describe VoiceP as “responsible for grounding the event time in a particular way”. They also maintain that the presence of this VoiceP is obligatory in active sentences. Yet, they do not show whether should it have the same features or it should have new ones to make it more suitable to active sentences.

Empirical evidence to their approach is brought up to validate its adequacy. For example, they maintain that only transitive predicates that contain BECOME sub event can passivize such as:

1- The antelope was killed by the lion.
2- * Two kilos were weighed by this lap top.
Also, their evidence is drawn from the ungrammaticality of preposition stranding in constructions such as:

1. * The argument was summed by the coach up.
2. The argument was summed up by the coach

This shows that the whole VP is fronted to [Spec, Voic]. Additionally, their approach gives an empirical evidence to Stative verbs which can passivize such as know and surprise because they do contain BECOME sub event, whereas Stative verbs such as appeal cannot passivize because no BECOME sub event is involved.

To conclude, although what Gehrke and Grillo (2009) have done is valid, their approach gives a rather complicated analysis to passivization phenomenon. It actually increases the number of VPs in a theory which calls for economy. We might find verbs with more than two sub events in a language and thus intricate analysis is needed. For instance, the semantics of Arabic verbs are really complicated so making it very difficult to adopt this approach. What we are looking for is a more adequate, economical and simpler analysis that can account for deriving short passives in SA.

Ahn and Sailor (2010) offer an important Minimalist syntactic analysis to canonical middle constructions “Bureaucrats bribe easily.” They maintain that there are also two middle constructions which can be treated within their analysis and which were not considered as middles in previous analyses. They call these constructions: make constructions “Clowns make good fathers.” and accommodation constructions “My car seats four people.” They claim that although these three types of middles share different “superficial differences”, but they have to be treated syntactically similar. They adopt two previous analyses. The first one is Kratzer’s (1996) VoiceP which they extend to be the core of all active, middle and passive constructions. The second one is Collins’ (2005) smuggling approach to passive constructions in which a vp smuggling the internal argument to be closer to [Spec, T] than the external argument.

Before introducing their proposed analysis, they proved that make and accommodation constructions are types of middles. They maintain that although these two constructions differ in their surface structure, they have many things in common which make them offered the same analysis. For instance, the surface object in make constructions cannot be referential whereas the surface object in accommodation constructions can be referential. However, they share the fact that they seriously violate Baker’s (1988) UTAH in which” their surface subjects bear theta roles typical of objects, and vice-versa.” Also, they are not allowed to passivize and their subjects “behave alike thematically”.

Introducing the main properties of middles syntax in general, Ahn and Sailor (2010) prove that make and accommodation constructions should be treated as canonical middles. For example, one of the most important characteristic of middles is the notion of object promotion to serve as a surface subject:

1. Mobsters bribe bureaucrats easily. (Active)
2. Bureaucrats bribe easily. (Middle)

Additionally, another characteristic which is derived from Permuter and Postal’s (1984) “1- Advancement Exclusiveness Law” (1AEX) which states that a promoted argument cannot be promoted again. Thus a passivized sentence cannot undergo passivization again since its object has been promoted to the subject position and though cannot be repromoted. Ahn and Sailor apply this 1AEX on the three types on middles and find it perfect in catching the same notion and thus the ungrammaticality of passivized middle constructions:

1. * Bureaucrats are bribed easily.
2. * Clowns are made good fathers.
3. * My car is seated four people.

Given the above properties, Ahn and Sailor (2010) conclude that middles’ surface subjects originate internally within VP, and then get moved to a [Spec, T] to serve as surface subjects of their constructions. However, they do not explain how surface subjects move in constructions like make and accommodation which have external DPs.
Ahn and Sailor (2010) answer the above question by introducing a VoiceP with three “flavours” namely: active, passive, and middle. These types are in a complementary distribution and carry different features enabling them to derive each voice. For instance, the Voice° of middles has a feature requiring a fronted vp with its internal DP to [spec,Voice] and thus allowing the internal DP to be close to [spec, T] to move to it and satisfy the EPP feature carried by T°.

Finally, by introducing a VoiceP, Ahn and sailor (2010) manage to derive all types of middles by this amazing VoiceP. However, it is clear that this approach violates one of the most important as well as valid conditions which Chomsky (2005) calls the Impenetrability Condition stating that the domain of a phase vp cannot be involved in further syntactic operations since it has been sent to the interfaces and though cannot participate in the derivation of the sentence. We think that with some more modifications to this approach proposed here, we can introduce a VoiceP to SA passive constructions.

As can be seen, there is no straightforward approach to follow to derive passive sentences within the Minimalist Approach. For instance, in SA, there is only one study introduced by Soltan (2007) in which he claims that SA has no A-movement at all. We have argued that A-movement is a crucial characteristic of Minimalism that DPs need to get their thematic roles and then to satisfy the EPP feature in T° in SV orders. As for English, we have seen that the approaches followed above are NOT suitable to SA since they have some problems. For example, Collin’s smuggling approach does not explain the nature of smuggling in syntax. Moreover, Collins (2005) does not explain what the feature that triggers the smuggling of vP to VoiceP is. Also, Gehrek and Grillo (2009) focus on the nature of the predicate structure rather than the DP structure. Moreover, their analysis is also not suitable to SA since it increases the number of VPs in a theory that calls for economy. For Radford (2009), we believe that it is suitable for English short passive. However, as has been said, the nature of passivization in SA is different from the nature of passivization in English. Finally, For Ahn and Sailor’s (2010) approach, we think that their VoiveP needs some modifications to make it fit the nature of passivization.

3. THE ADOPTED APPROACH

In this section, we introduce our proposal to derive passives in SA within the Minimalist Approach. Then, we use this proposal to derive passive constructions with ʔan, inna and kana sentence in SA in both orders VS and SV. The following points explain the features of our approach:

1- A voice° will be introduced similar to the one introduced by Ahn and Sailor (2010) which they use to derive Middles in English. However, some important modifications should be made in order to make this voice head fit SA passive sentences.

2- Following Gehrek and Grillo (2009) that this Voice° carries valued features, we claim that this voice° head enters the derivation with an unvalued voice feature (passive). In other words, if the sentence is active the voice° which carries the (active) feature will be introduced. On the other hand, if the sentence is non-active, a voice° with a (passive) voice feature will be introduced.

3- Since the process of passivization in SA is, as mentioned earlier, a morphosyntactic process in which changes occur on both the morphology of the verb and the structure of the sentence, this voice° has a particle carrying the passive morpheme as its specifier. This particle is picked up by the verb which it moves up to voice°.

4- Why should verbs move? Verbs are assumed to carry an unvalued voice feature (UV) that has to be valued. They are valued by moving up from V to voice° and picking up the passive morpheme. In other words, verbs move because they enter in a probe-goal relationship with the Voice° which carries a valued voice feature (-active).

5- Moreover, the voice° head is affixal by nature in which it triggers the move of the verb to it.

6- Verbs enter the derivation with their base form and their unvalued voice features.

7- The surface subject originates in the [spec, V] and remains in situ in VS sentences, but in SV sentences, it moves up from [Spec, V] to [Spec, T] to satisfy the EPP feature in T°.

8- In VS sentences, the verb moves up from voice° to T° to satisfy the EPP feature in T°.

9- Finally CP enters the derivation with force features that determine whether the sentence is declarative, interrogative or exclamation.

10- Then, the derivation is sent to LF and PF simultaneously and separately to get its both logic and phonetic forms

11- Finally, the derivation is spelt out.

A very important point that should be drawn is that: what are the differences between the voice° we are introducing and the voice° introduced by Ahn and Sailor (2010)? As mentioned previously, they introduce a voice° with three
flavors: active, passive, and middle. Moreover, they adopt the smuggling approach introduced by Collins (2005) which seriously violates Chomsky’s (2001, 2005) theory of phases. Moreover, the nature of smuggling is not clear in the syntax, whereas the head which we introduce does not depend on smuggling or any other processes which are not clear in the syntax. Additionally, our voice° has a valued feature of active or non-active which means that it has two flavors only not four. Therefore, in a theory that calls for economy, it is better to have fewer types of rules, heads and principles to derive sentences. Therefore, a voice° with two flavors is enough at least for SA from our point of view.

Another difference that this voice° introduced in this proposal has a particle on its specifier carrying the passive morpheme and this is not available in Ahn and Sailor (2010). This is because, as mentioned previously, the process of passivization in SA is different from the process of passivization in English. For instance, SA does not allow the surface object in a passive sentence to be lexicalized, whereas English which certainly allows this kind of lexicalization.

The following syntactic tree will show how our proposal will work:

```
CP
  ├── Force feature
  │    ├── TP
  │    │    └── T
  │    └── φ Features & [EPP]
  │        └── VoiceP
  │            ├── particle
  │            │    └── voice
  │            └── (= active)
  │                └── VP
  │                    └── DP
  │                        └── V (UV)
```

4. ANALYSIS
There are three main Complementizers that assign case to the verb or DP that is following them in SA which are generated in [Spec,CP]. This is why they are also called Case assigners. The three complementizers are: ḥan “to”, inna “indeed” and kana “was/were”. These three complementizers are followed by DPs and VS. For instance ḥan occurs in embedded clauses and it should be followed by a VSO order. The verb which follows ḥan is assigned subjunctive mood. Whereas the subject is assigned nominative case and the object is assigned accusative case. On the other hand, inna and kana are followed by verbal sentences and verbless sentences. As our study is focusing on passives we are going to concentrate on verbal sentences that follow inna and kana. Moreover, the order of the verbal sentence that follows inna and kana is SVO order. Inna assigns accusative case to the DP that directly follows
it, whereas *kana* assigns nominative case for the DP that directly follows it. Unlike *ʔan, inna* and *kana* occur in main clauses. Table (5.11) below summarizes the features of the complementizers *ʔan, inna* and *kana*:

<table>
<thead>
<tr>
<th>Complementizer</th>
<th>The type of the sentence following it</th>
<th>The case or mood it assigns to the verb or DP that follows it</th>
<th>The type of clause that it occurs in</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʔan</td>
<td>Verbal sentences (VSO order)</td>
<td>Subjunctive mood to the following verb</td>
<td>Embedded clause</td>
</tr>
<tr>
<td>Inna</td>
<td>Verbal sentences (SVO) and verbless sentences</td>
<td>Accusative case to the following DP</td>
<td>Main clause</td>
</tr>
<tr>
<td>Kana</td>
<td>Verbal sentences (SVO order) and verbless sentences</td>
<td>Nominative case to the following DP</td>
<td>Main clause</td>
</tr>
</tbody>
</table>

Sentences (3a), (3b) and (3c) illustrate the table (3) above. Notice that the sentences are in the active form:

(3) a- ʔarada al-walad-u ʔan yaktub-a al-mudarres-u ar-resalat-a  
Wanted the-boy-Nom to write-subj the-teacher-Nom the-letter-Acc

The boy wanted the teacher to write the letter.

b- inna al-walad-a yaktub-u ar-resalt-a  
indeed the-boy-Acc is writing-indic the-letter-Acc

Indeed, the boy is writing the letter.

(3c) kana al-walad-u yaktub-u ar-resalat-a  
was the-boy-Nom is writing-indic the-letter-Acc

The boy was writing the letter.

Notice that the verb which follows these complementizers is in the imperfective form. Moreover, *ʔan* is used to express doubt and hope as it occurs after verbs that express these meanings like *ʔarada “want”, Danna “think’ and ʔamala “hope” Mohamed (2014)*. Also *inna* is used to indicate affirmativeness (Soltan 2006). Whereas, *kana* is used to express an action that was happening in the past.

Now let’s see if our approach is suitable to derive passive sentences that the above complementizers occur within. First we will start with *ʔan*. Sentence (4) below is the passive counterpart of the sentence (3a) above:

(4) ʔarada al-walad-u ʔan tuktab-a ar-resalat-u  
Wanted the-boy-Nom to is written-subj the-letter-Nom

The boy wanted the letter to be written.

Notice that we are concerned with the embedded clause as it is the one that concerns us. Moreover, notice that the DP in the embedded clause is assigned nominative case as it is nominated from the object position in sentence (3a) above to the surface subject in sentence (4) above.

Sentence (4) above is derived as follows. *Ar-resala-tu* enters the derivation and is merged with the root *k-t-b* which enters the derivation with unvalued (passive) feature to form a VP. Notice that passive constructions contain no vP shells as the actual subject of the active sentence is not lexicalized in the passive sentence and as Chomsky (2005) and Soltan (2006) claim. Therefore, and since the embedded clause is in the passive, a Voice° head with an unvalued (passive) feature enters the derivation and is merged with VP to form Voice°. Moreover, the Voice° head carries the passive infix {u,a} as its specifier. Therefore, a Voice°P is composed. Consequently, an Agree relation is established between the probe Voice° head and the goal root *k-t-b*. This relation triggers the verb to move from VP
to Voice° head for two reasons, to value its unvalued (passive) feature and to pick up the passive infix. Consequently, a T is introduced to the derivation. This T carries an EPP feature. The problem that we will face here is why only the verb is the one which moves to satisfy the EPP feature on T? That is why not the DP moves does to T to satisfy the EPP feature. If we say that the DP ar-resalat-u is the one which moves to [Spec, TP] to satisfy the EPP feature, we will not find an explanation why sentence (5) below is ungrammatical as the DP is the element which moves to [Spec,TP] to satisfy the EPP feature. Consider sentence (5) below:

(5) *ʔarada al-walad-u ʔan ar-resalat-u tuktab-a
   Wanted the-boy-Nom to the-letter-Nom is-written

The boy wanted the letter to be written.

To solve this problem, we will assume that T in embedded clauses with complementizer ʔan contain another feature which is [+V]. This feature triggers the move of the verb only from Voice° head to T. We will see shortly that Ts in main clauses that occur with the complementizers inna and kana do not contain this feature. This is why inna and kana are followed with DPs rather than verbs.

Now, let’s go back to the derivation of sentence (3) above. T enters the derivation with two features. Namely, the EPP feature and the [+V] feature. An agree relation is established between the probe T and the goal tuktab-a in which it triggers to move the verb to T to satisfy both the EPP feature and the [+V] feature. Consequently, the complementizer ʔan is introduced to the derivation and is merged with T to form a CP. This CP is a phase which is sent to LF and PF to converge. Notice that the complementizer assigns subjunctive mood to the verb whereas T assigns nominative case to DP ar-resalat-u.

The tree structure (6) below illustrates the derivation of the embedded clause in sentence (3) above:

(6)

Notice that the verb in the embedded clause in sentence (3) above moves in a successive cyclic fashion from V to Voice° head to T to satisfy its unvalued (passive) feature and to satisfy the features of T as it is illustrated in the tree structure (6) above.

To conclude, we notice that our approach successfully derive passive constructions in embedded clauses with ʔan complementizer.
Now let us move to the second complementizer *inna*. Notice sentence (7) below which is the passive counterpart of sentence (3b) above:

(7) *inna* *ar-resaalt-a tuktab-u*  
    Indeed the-letter-Acc is written-indic

Indeed the letter is being written.

Sentence (7) above is derived as follows: the DP *ar-resaalt-a* enters the derivation and is merged with the root *k-t-b* which carries unvalued (passive) feature to form a VP. Since the sentence is passive, a Voice° head with an unvalued (passive) feature enters the derivation with the passive infix {u,a} as its specifier. An Agree relation is established between the probe Voice° head and the goal root *k-t-b* which triggers the verb to move up to Voice° head for two reasons, to satisfy its unvalued feature and to pick up the passive infix. Now, the problem that we will face is what prevents the verb from moving from Voice° head to T to satisfy the EPP feature? The answer is that T in *inna* complementizer contains no [+V] as the T in sentence (3a) above. Therefore, an Agree relation is established between the probe T and the goal *ar-resaalt-a* which triggers the move of the DP to [Spec, TP] to satisfy the EPP feature. Notice that the verb cannot move to T to satisfy the EPP feature as T does not contain [+V] feature. If we assume that T in sentence (7) above has a [+V] feature we will find no explanation to the ungrammaticality of sentence (8) below:

(8)* *inna tuktab-u ar-resaalt-a*  
    Indeed is written-subj the-letter-Acc

Indeed, the letter is being written.

The tree structure (80) below illustrates the derivation of sentence (7) above:

(8)
The letter was being written.

Sentence (9) above is derived as follows: the DP *ar-resalat-u* enters the derivation and is merged with the root *k-t-b* which carries an unvalued (passive) feature to form a VP. Since the sentence is in passive, a Voice° head with an unvalued (passive) feature is introduced to the derivation. This Voice° head carries the passive infix {u,a} as its specifier. Consequently the Voice° head is merged with VP to form a Voice P. An Agree relation is established between the probe Voice° head and the goal root *k-t-b*. This relation triggers the move of the verb to move up to Voice° for two reasons, to satisfy its unvalued (passive) feature and to pick up the passive infix. Consequently, a T with an EPP feature is introduced to the derivation. The problem which we will face now is what prevents the verb to move from Voice° head to T to satisfy its EPP feature. The answer is simply that T does not carry the [+V] feature which is similar to the one that T has embedded constructions with *ʔan*. If we say that T in sentence (9) above has a [+V] feature as the T in *ʔan* embedded clause, we will not find an explanation to the ungrammaticality of sentence (10) below:

(10) * kanat tuktab-u ar-resaalat-u

The letter was being written.

Therefore, an Agree relation is established between the probe T and the goal ar-resalat-u. this relation triggers the move of the DP to [Spec, TP] to satisfy the EPP feature. Thus, the complementizer *kanat* is introduced to the derivation and is merged with TP to form a CP. The derivation is sent to LF and PF to converge.

The tree structure in (11) below illustrates the derivation of sentence (9) above:

(11)

```
       CP
       |
      kaanat
       |
       {EPP} ar-resaalat-u
       |
       T
       |
       {u,a} T
       |
       VoiceP
       |
       {u,a} Voice°
       |
       k-t-b
       |
       {u passive} k-t-b
       |
       VP
       |
       DP
       |
       ar-resaalat-u {u case}
```

Notice that the DP *ar-resalat-u* is assigned nominative case by the complementizer *kanat*.

5. CONCLUSION

To conclude, the approach we adopt in this paper successfully derives passives with complementizers ʔan, inna and *kanat*. For embedded constructions with ʔan, T is assumed to carry a [+V] feature in addition to the EPP feature. This feature triggers the move of the verb (not the DP) to T to satisfy the two features. Whereas, T in constructions with inna and *kanat* have no [+V] features and therefore the DP (not the V) which moves to [Spec,TP] to satisfy the EPP feature.
Appendix:

**Symbols of Standard Arabic Sounds:**

1. Consonants:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>voiceless glottal stop</td>
</tr>
<tr>
<td>b</td>
<td>voiced bilabial stop</td>
</tr>
<tr>
<td>t</td>
<td>voiceless dental stop</td>
</tr>
<tr>
<td>θ</td>
<td>voiceless dental fricative</td>
</tr>
<tr>
<td>j</td>
<td>voiced alveolar affricate</td>
</tr>
<tr>
<td>H</td>
<td>voiceless pharyngeal fricative</td>
</tr>
<tr>
<td>x</td>
<td>voiceless velar fricative</td>
</tr>
<tr>
<td>d</td>
<td>voiced dental stop</td>
</tr>
<tr>
<td>δ</td>
<td>voiced dental fricative</td>
</tr>
<tr>
<td>r</td>
<td>voiced alveolar trill</td>
</tr>
<tr>
<td>z</td>
<td>voiced alveolar fricative</td>
</tr>
<tr>
<td>s</td>
<td>voiceless alveolar fricative</td>
</tr>
<tr>
<td>š</td>
<td>voiceless palato-alveolar fricative</td>
</tr>
<tr>
<td>S</td>
<td>voiceless emphatic alveolar fricative</td>
</tr>
<tr>
<td>D</td>
<td>voiced emphatic alveolar fricative</td>
</tr>
<tr>
<td>T</td>
<td>voiceless emphatic dental stop</td>
</tr>
<tr>
<td>Đ</td>
<td>voiced emphatic inerdental fricative</td>
</tr>
<tr>
<td>3</td>
<td>voiced pharyngeal fricative</td>
</tr>
<tr>
<td>ġ</td>
<td>voiced uvular fricative</td>
</tr>
<tr>
<td>f</td>
<td>voiceless labiodental fricative</td>
</tr>
<tr>
<td>q</td>
<td>voiceless uvular stop</td>
</tr>
<tr>
<td>k</td>
<td>voiceless velar stop</td>
</tr>
<tr>
<td>l</td>
<td>voiced alveolar lateral</td>
</tr>
<tr>
<td>m</td>
<td>voiced bilabial nasal</td>
</tr>
<tr>
<td>n</td>
<td>voiced alveolar nasal</td>
</tr>
<tr>
<td>h</td>
<td>voiceless glottal fricative</td>
</tr>
<tr>
<td>w</td>
<td>voiced labio-velar glide</td>
</tr>
<tr>
<td>y</td>
<td>voiced palatal glide</td>
</tr>
</tbody>
</table>
2- Vowels:
Short vowels: long vowels
i  high front unrounded     ii  high front unrounded
a  low unrounded            aa  low unrounded
u  high back unrounded      uu  high back unrounded
(a and aa are pronounced front or central according to their adjacent consonants)

3-Other Necessary Abbreviations:
1-Nominative: Nom  2-Accusative: Acc
3-Genitive: Gen   4-Dative: Dat
5-Singular: sg     6- Plural: pl
7- Masculine: mas  8- Feminine: fem

REFERENCES


