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The Unicode Code Points and Internationalized Domain Names for Applications (IDNA)

Abstract

This document specifies rules for deciding whether a code point, considered in isolation or in context, is a candidate for inclusion in an Internationalized Domain Name (IDN).

It is part of the specification of Internationalizing Domain Names in Applications 2008 (IDNA2008).

Status of This Memo

This is an Internet Standards Track document.

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1. Introduction

RFC 4690 [RFC4690] suggests an inclusion-based approach for selecting the code points from The Unicode Standard [Unicode52] that should be included in the list of code points that may be used in Internationalized Domain Names.

Specifically, RFC 4690 [RFC4690] says the following:

The IAB has concluded that there is a consensus within the broader community that lists of code points should be specified by the use of an inclusion-based mechanism (i.e., identifying the characters that are permitted), rather than by excluding a small number of characters from the total Unicode set as Stringprep [RFC3454] and Nameprep [RFC3491] do today. That conclusion should be reviewed by the IETF community and action taken as appropriate.

This document reviews and classifies the collections of code points in the Unicode character set by examining various properties of the code points. It then defines an algorithm for determining a derived property value. It specifies a procedure, and not a table, of code points so that the algorithm can be used to determine code point sets independent of the version of Unicode that is in use.

This document is not intended to specify precisely how these property values are to be applied in IDN labels. That information appears in the Protocol document [RFC5891], but it is important to understand that the assignment of a value of this property to a particular character is not sufficient to determine whether it can be used in a given label. In particular, some combinations of allowed code points are not advisable for use in IDNs due to rules specific to a script or class of characters. The requirement for such rules is linked to the operations in the Protocol document and especially to the characters designated as requiring contextual rules.

The value of the property is to be interpreted as follows.

o PROTOCOL VALID: Those that are allowed to be used in IDNs. Code points with this property value are permitted for general use in IDNs. However, that a label consists only of code points that have this property value does not imply that the label can be used in DNS. See the Protocol document for algorithms to make decisions about labels in domain names. The abbreviated term PVALID is used to refer to this value in the rest of this document.

- O CONTEXTUAL RULE REQUIRED: Some characteristics of the character, such as it being invisible in certain contexts or problematic in others, require that it not be used in labels unless specific other characters or properties are present. The abbreviated term CONTEXT is used to refer to this value in the rest of this document. There are two subdivisions of CONTEXTUAL RULE REQUIRED, one for Join controls (called CONTEXTJ) and for other characters (called CONTEXTO). These are discussed in more detail below and in the Protocol document.
- o DISALLOWED: Those that should clearly not be included in IDNs. Code points with this property value are not permitted in IDNs.
- o UNASSIGNED: Those code points that are not designated (i.e., are unassigned) in the Unicode Standard.

The mechanisms described here allow determination of the value of the property for future versions of Unicode (including characters added after Unicode 5.2). Changes in Unicode properties that do not affect the outcome of this process do not affect IDN. For example, a character can have its Unicode General_Category value (see [Unicode52]) change from So to Sm or from Lo to Ll, without affecting the algorithm results. Moreover, even if such changes were the result, the BackwardCompatible list (Section 2.7) can be adjusted to ensure the stability of the results.

Some code points need to be allowed in exceptional circumstances but should be excluded in all other cases; these rules are also described in other documents. The most notable of these are the Join Control characters, U+200D ZERO WIDTH JOINER and U+200C ZERO WIDTH NON-JOINER. Both of them have the derived property value CONTEXTJ. A character with the derived property value CONTEXTJ or CONTEXTO (CONTEXTUAL RULE REQUIRED) is not to be used unless an appropriate rule has been established and the context of the character is consistent with that rule. It is invalid to either register a string containing these characters or even to look one up unless such a contextual rule is found and satisfied. Please see Appendix A, "The Contextual Rules Registry", for more information.

This document is part of a series that, together, constitute a proposal for updating the IDNA standards to resolve issues uncovered in recent years, cover a broader range of scripts, and provide for migration to newer versions of Unicode. See the Rationale document [RFC5894] for a broader discussion.

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [RFC2119].

2. Category Definitions Used to Calculate Derived Property Value

The derived property obtains its value based on a two-step procedure. First, characters are placed in one or more character categories based on either core properties defined by the Unicode Standard or by treating the code point as an exception and addressing the code point by its code point value. These categories are not mutually exclusive.

In the second step, set operations are used with these categories to determine the values for an IDN-specific property. Those operations are specified in Section 3.

Unicode property names and property value names may have short abbreviations, such as gc for the General_Category property, and Ll for the Lowercase_Letter property value of the gc property.

In the following specification of categories, the operation that returns the value of a particular Unicode character property for a code point is designated by using the formal name of that property (from PropertyAliases.txt) followed by '(cp)'. For example, the value of the General_Category property for a code point is indicated by General_Category(cp).

2.1. LetterDigits (A)

A: General_Category(cp) is in {Ll, Lu, Lo, Nd, Lm, Mn, Mc}

These rules identify characters commonly used in mnemonics and often informally described as "language characters". In general, only code points assigned to this category are suitable for use in IDN.

For more information, see Section 4.5 of The Unicode Standard [Unicode].

The categories used in this rule are:

- o Ll Lowercase Letter
- o Lu Uppercase_Letter
- o Lo Other Letter
- o Nd Decimal Number
- o Lm Modifier Letter

- o Mn Nonspacing_Mark
- o Mc Spacing_Mark

2.2. Unstable (B)

B: toNFKC(toCaseFold(toNFKC(cp))) != cp

This category is used to group the characters that are not stable under Normalization Form K (NFKC) and case folding. In general, these code points are not suitable for use for IDN.

The toCaseFold() operation is defined in Section 3.13 of The Unicode Standard [Unicode].

The toNFKC() operation returns the code point in normalization form KC. For more information, see Section 5 of Unicode Standard Annex #15 [TR15].

It should be noted that NFKC is used, although Normalization Form C (NFC) is used in the "IDNA Protocol" document [RFC5891].

2.3. IgnorableProperties (C)

C: Default_Ignorable_Code_Point(cp) = True or White_Space(cp) = True or Noncharacter Code Point(cp) = True

This category is used to group code points that are not recommended for use in identifiers. In general, these code points are not suitable for use in an IDN.

The definition for Default_Ignorable_Code_Point can be found in DerivedCoreProperties.txt [DerivedCoreProperties] and is at the time of Unicode 5.2:

Other_Default_Ignorable_Code_Point + Cf (Format characters) + Variation_Selector - White_Space - FFF9..FFFB (Annotation Characters) - 0600..0603, 06DD, 070F (exceptional Cf characters that should be visible)

2.4. IgnorableBlocks (D)

D: Block(cp) is in {Combining Diacritical Marks for Symbols, Musical Symbols, Ancient Greek Musical Notation}

This category is used to identify code points that are not useful in mnemonics or that are otherwise impractical for IDN use. In general, these code points are not suitable for use for IDN.

The definition of blocks can be found in Blocks.txt [BlockNames].

2.5. LDH (E)

E: cp is in {002D, 0030..0039, 0061..007A}

This category is used in the second step to preserve the traditional "hostname" (LDH -- as described in the Definitions document [RFC5890]) characters ('-', 0-9, and a-z). In general, these code points are suitable for use for IDN. Note that there are other rules regarding the code point U+002D HYPHEN-MINUS that are specified in the IDNA Protocol Specification [RFC5891].

2.6. Exceptions (F)

```
F: cp is in {00B7, 00DF, 0375, 03C2, 05F3, 05F4, 0640, 0660, 0661, 0662, 0663, 0664, 0665, 0666, 0667, 0668, 0669, 06F0, 06F1, 06F2, 06F3, 06F4, 06F5, 06F6, 06F7, 06F8, 06F9, 06FD, 06FE, 07FA, 0F0B, 3007, 302E, 302F, 3031, 3032, 3033, 3034, 3035, 303B, 30FB}
```

This category explicitly lists code points for which the category cannot be assigned using only the core property values that exist in the Unicode standard. The values are according to the table below:

PVALID -- Would otherwise have been DISALLOWED

```
00DF; PVALID # LATIN SMALL LETTER SHARP S
03C2; PVALID # GREEK SMALL LETTER FINAL SIGMA
06FD; PVALID # ARABIC SIGN SINDHI AMPERSAND
06FE; PVALID # ARABIC SIGN SINDHI POSTPOSITION MEN
0F0B; PVALID # TIBETAN MARK INTERSYLLABIC TSHEG
3007; PVALID # IDEOGRAPHIC NUMBER ZERO
```

CONTEXTO -- Would otherwise have been DISALLOWED 00B7; CONTEXTO # MIDDLE DOT 0375; CONTEXTO # GREEK LOWER NUMERAL SIGN (KERAIA) 05F3; **CONTEXTO** # HEBREW PUNCTUATION GERESH 05F4: CONTEXTO # HEBREW PUNCTUATION GERSHAYIM **# KATAKANA MIDDLE DOT** 30FB: CONTEXTO CONTEXTO -- Would otherwise have been PVALID # ARABIC-INDIC DIGIT ZERO 0660; CONTEXTO 0661; CONTEXTO # ARABIC-INDIC DIGIT ONE 0662; # ARABIC-INDIC DIGIT TWO **CONTEXTO** 0663; # ARABIC-INDIC DIGIT THREE # ARABIC-INDIC DIGIT FOUR **CONTEXTO** 0664; CONTEXTO 0665; **CONTEXTO** # ARABIC-INDIC DIGIT FIVE 0666; CONTEXTO # ARABIC-INDIC DIGIT SIX 0667; CONTEXTO # ARABIC-INDIC DIGIT SEVEN **0668: CONTEXTO** # ARABIC-INDIC DIGIT EIGHT 0669; CONTEXTO # ARABIC-INDIC DIGIT NINE # EXTENDED ARABIC-INDIC DIGIT ZERO # EXTENDED ARABIC-INDIC DIGIT ONE 06F0; CONTEXTO 06F1; CONTEXTO 06F2; CONTEXTO # EXTENDED ARABIC-INDIC DIGIT TWO # EXTENDED ARABIC-INDIC DIGIT THREE 06F3; CONTEXTO 06F4: CONTEXTO # EXTENDED ARABIC-INDIC DIGIT FOUR 06F5: # EXTENDED ARABIC-INDIC DIGIT FIVE CONTEXTO 06F6; # EXTENDED ARABIC-INDIC DIGIT SIX **CONTEXTO** # EXTENDED ARABIC-INDIC DIGIT SEVEN # EXTENDED ARABIC-INDIC DIGIT EIGHT 06F7; CONTEXTO 06F8; CONTEXTO # EXTENDED ARABIC-INDIC DIGIT NINE 06F9: CONTEXTO DISALLOWED -- Would otherwise have been PVALID 0640; DISALLOWED # ARABIC TATWEEL 07FA; DISALLOWED # NKO LAJANYALAN **302E**; DISALLOWED # HANGUL SINGLE DOT TONE MARK 302F; DISALLOWED # HANGUL DOUBLE DOT TONE MARK 3031; DISALLOWED # VERTICAL KANA REPEAT MARK 3032; DISALLOWED # VERTICAL KANA REPEAT WITH VOICED SOUND MARK 3033; DISALLOWED # VERTICAL KANA REPEAT MARK UPPER HALF 3034; DISALLOWED # VERTICAL KANA REPEAT WITH VOICED SOUND MARK UPPER HA

3035; DISALLOWED # VERTICAL KANA REPEAT MARK LOWER HALF 303B; DISALLOWED # VERTICAL IDEOGRAPHIC ITERATION MARK

2.7. BackwardCompatible (G)

G: cp is in {}

This category includes the code points that property values in versions of Unicode after 5.2 have changed in such a way that the derived property value would no longer be PVALID or DISALLOWED. If changes are made to future versions of Unicode so that code points might change the property value from PVALID or DISALLOWED, then this table can be updated and keep special exception values so that the property values for code points stay stable.

2.8. JoinControl (H)

H: Join_Control(cp) = True

This category consists of Join Control characters (i.e., they are not in LetterDigits (Section 2.1) but are still required in IDN labels under some circumstances).

2.9. OldHangulJamo (I)

I: Hangul_Syllable_Type(cp) is in {L, V, T}

This category consists of all conjoining Hangul Jamo (Leading Jamo, Vowel Jamo, and Trailing Jamo).

Elimination of conjoining Hangul Jamo from the set of PVALID characters results in restricting the set of Korean PVALID characters just to preformed, modern Hangul syllable characters. Old Hangul syllables, which must be spelled with sequences of conjoining Hangul Jamo, are not PVALID for IDNs.

2.10. Unassigned (J)

J: General_Category(cp) is in {Cn} and Noncharacter_Code_Point(cp) = False

This category consists of code points in the Unicode character set that are not (yet) assigned. It should be noted that Unicode distinguishes between "unassigned code points" and "unassigned characters". The unassigned code points are all but (Cn - Noncharacters), while the unassigned *characters* are all but (Cn + Cs).

3. Calculation of the Derived Property

As described above (Section 1) and in more detail in the IDNA Protocol document [RFC5891], possible values of the IDN property are:

- o PVALID
- o CONTEXTJ
- o CONTEXTO
- o DISALLOWED
- o UNASSIGNED

The algorithm to calculate the value of the derived property is as follows. If the name of a rule (such as Exception) is used, that implies the set of code points that the rule defines, while the same name as a function call (such as Exception(cp)) implies the value cp has in the Exceptions table.

```
If .cp. .in.
                  Exceptions Then Exceptions(cp);
Else If .cp. .in.
                         BackwardCompatible Then BackwardCompatible(cp);
Else If .cp. .in.
                         Unassigned Then UNASSIGNED;
Else If .cp. .in.
                         LDH Then PVALID;
Else If .cp. .in.
Else If .cp. .in.
Else If .cp. .in.
Else If .cp. .in.
                         JoinControl Then CONTEXTJ;
                        Unstable Then DISALLOWED;
IgnorableProperties Then DISALLOWED;
IgnorableBlocks Then DISALLOWED;
Else If .cp. .in.
                         OldHangulJamo Then DISALLOWED;
Else If .cp. .in.
                         LetterDigits Then PVALID;
Else DISALLOWED;
```

4. Code Points

The categories and rules defined in Sections 2 and 3 apply to all Unicode code points. The table in Appendix B shows, for illustrative purposes, the consequences of the categories and classification rules, and the resulting property values.

The list of code points that can be found in Appendix B is non-normative. Sections 2 and 3 are normative.

5. IANA Considerations

5.1. IDNA-Derived Property Value Registry

IANA has created a registry with the derived properties for the versions of Unicode released after (and including) version 5.2. The derived property value is to be calculated in cooperation with a designated expert [RFC5226] according to the specifications in Sections 2 and 3 and not by copying the non-normative table found in Appendix B.

If non-backward-compatible changes or other problems arise during the creation or designated expert review of the table of derived property values, they should be flagged for the IESG. Changes to the rules (as specified in Sections 2 and 3), including BackwardCompatible (Section 2.7) (a set that is at release of this document is empty) require IETF Review, as described in RFC 5226 [RFC5226].

5.2. IDNA Context Registry

For characters that are defined in the IDNA derived property value registry (Section 5.1) as CONTEXTO or CONTEXTJ and that therefore require a contextual rule, IANA has created and now maintains a list of approved contextual rules. Additions or changes to these rules require IETF Review, as described in [RFC5226].

Appendix A contains further discussion and a table from which that registry can be initialized.

5.2.1. Template for Context Registry

The following information is to be given when a new rule is created.

Name: Unique name of the rule

Code point: Rule that should be applied when this code point exists in the label

Overview: Description in plain English on what the rule verifies

Lookup: Should the rule be applied at time of lookup?

Rule Set: The set of rules, with a reference to the defining document.

6. Security Considerations

Security Considerations for this version of IDNA, except for the special issues associated with right-to-left scripts and characters, are described in the Definitions document [RFC5890]. Specific issues for labels containing characters associated with scripts written right to left appear in the Bidi document [RFC5893].

7. Acknowledgements

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Appendix A. Contextual Rules Registry

As discussed in Section 5.2 and in the IANA Considerations section of the Rationale document [RFC5894], a registry of rules that define the contexts in which particular PROTOCOL-VALID characters, characters associated with a requirement for Contextual Information, are permitted. These rules are expressed as tests on the label in which the characters appear (all, or any part of, the label may be tested).

The grammatical rules are expressed in pseudo-code. The conventions used for that pseudo-code are explained here.

Each rule is constructed as a Boolean expression that evaluates to either True or False. A simple "True;" or "False;" rule sets the default result value for the rule set. Subsequent conditional rules that evaluate to True or False may re-set the result value.

A special value "Undefined" is used to deal with any error conditions, such as an attempt to test a character before the start of a label or after the end of a label. If any term of a rule evaluates to Undefined, further evaluation of the rule immediately terminates, as the result value of the rule will itself be Undefined.

cp represents the code point to be tested.

FirstChar is a special term that denotes the first code point in a label.

LastChar is a special term that denotes the last code point in a label.

- .eq. represents the equality relation.
 - A .eq. B evaluates to True if A equals B.
- .is. represents checking the position in a label.
 - A .is. B evaluates to True if A and B have same position in the same label.
- .ne. represents the non-equality relation.
 - A .ne. B evaluates to True if A is not equal to B.
- .in. represents the set inclusion relation.
 - A .in. B evaluates to True if A is a member of the set B.

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A functional notation, Function_Name(cp), is used to express either string positions within a label, Boolean character property tests of a code point, or a regular expression match. When such function names refer to Boolean character property tests, the function names use the exact Unicode character property name for the property in question, and "cp" is evaluated as the Unicode value of the code point to be tested, rather than as its position in the label. When such function names refer to string positions within a label, "cp" is evaluated as its position in the label.

RegExpMatch(X) takes as its parameter X a schematic regular expression consisting of a mix of Unicode character property values and literal Unicode code points.

Script(cp) returns the value of the Unicode Script property, as defined in Scripts.txt in the Unicode Character Database.

Canonical_Combining_Class(cp) returns the value of the Unicode Canonical_Combining_Class property, as defined in UnicodeData.txt in the Unicode Character Database.

Before(cp) returns the code point of the character immediately preceding cp in logical order in the string representing the label. Before(FirstChar) evaluates to Undefined.

After(cp) returns the code point of the character immediately following cp in logical order in the string representing the label. After(LastChar) evaluates to Undefined.

Note that "Before" and "After" do not refer to the visual display order of the character in a label, which may be reversed or otherwise modified by the bidirectional algorithm for labels including characters from scripts written right to left. Instead, "Before" and "After" refer to the network order of the character in the label.

The clauses "Then True" and "Then False" imply exit from the pseudo-code routine with the corresponding result.

Repeated evaluation for all characters in a label makes use of the special construct:

For All Characters:

Expression:

End For;

This construct requires repeated evaluation of "Expression" for each code point in the label, starting from FirstChar and proceeding to LastChar.

The different fields in the rules are to be interpreted as follows:

Code point:

The code point, or code points, to which this rule is to be applied. Normally, this implies that if any of the code points in a label is as defined, then the rules should be applied. If evaluated to True, the code point is OK as used; if evaluated to False, it is not OK.

Overview:

A description of the goal with the rule, in plain English.

Lookup:

True if application of this rule is recommended at lookup time; False otherwise.

Rule Set:

The rule set itself, as described above.

Appendix A.1. ZERO WIDTH NON-JOINER

Code point: U+200C

Overview:

This may occur in a formally cursive script (such as Arabic) in a context where it breaks a cursive connection as required for orthographic rules, as in the Persian language, for example. It also may occur in Indic scripts in a consonant-conjunct context (immediately following a virama), to control required display of such conjuncts.

Lookup:

True

Rule Set:

False:

```
If Canonical Combining Class(Before(cp)) .eq. Virama Then True;
```

If RegExpMatch((Joining_Type:{L,D})(Joining_Type:T)*\u200C

(Joining Type:T)*(Joining Type:{R,D})) Then True;

```
Appendix A.2. ZERO WIDTH JOINER
   Code point:
       U+200D
   Overview:
       This may occur in Indic scripts in a consonant-conjunct context (immediately following a virama), to control required display of such conjuncts.
   Lookup:
       True
   Rule Set:
       False;
       If Canonical_Combining_Class(Before(cp)) .eq. Virama Then True;
Appendix A.3. MIDDLE DOT
   Code point:
       U+00B7
   Overview:
       Between 'l' (U+006C) characters only, used to permit the Catalan
       character ela geminada to be expressed.
   Lookup:
       False
   Rule Set:
       False;
       If Before(cp) .eq. U+006C And
          After(cp) .eq. U+006C Then True;
```

```
Appendix A.4. GREEK LOWER NUMERAL SIGN (KERAIA)
   Code point:
      U+0375
   Overview:
      The script of the following character MUST be Greek.
   Lookup:
      False
   Rule Set:
      False;
      If Script(After(cp)) .eq. Greek Then True;
Appendix A.5. HEBREW PUNCTUATION GERESH
   Code point:
U+05F3
   Overview:
      The script of the preceding character MUST be Hebrew.
   Lookup:
      False
   Rule Set:
      False;
      If Script(Before(cp)) .eq. Hebrew Then True;
```

```
Appendix A.6. HEBREW PUNCTUATION GERSHAYIM
   Code point:
       U+05F4
   Overview:
       The script of the preceding character MUST be Hebrew.
   Lookup:
       False
   Rule Set:
       False;
       If Script(Before(cp)) .eq. Hebrew Then True;
Appendix A.7. KATAKANA MIDDLE DOT
   Code point:
U+30FB
   Overview:
       Note that the Script of Katakana Middle Dot is not any of "Hiragana", "Katakana", or "Han". The effect of this rule is to require at least one character in the label to be in one of those
       scripts.
   Lookup:
       False
   Rule Set:
       False:
       For All Characters:
           If Script(cp) .in. {Hiragana, Katakana, Han} Then True;
       End For;
```

```
Appendix A.8. ARABIC-INDIC DIGITS
   Code point:
      0660..0669
   Overview:
      Can not be mixed with Extended Arabic-Indic Digits.
   Lookup:
      False
   Rule Set:
      True;
      For All Characters:
         If cp .in. 06F0..06F9 Then False;
      End For;
Appendix A.9. EXTENDED ARABIC-INDIC DIGITS
   Code point: 06F0..06F9
   Overview:
      Can not be mixed with Arabic-Indic Digits.
   Lookup:
      False
   Rule Set:
      True;
      For All Characters:
         If cp .in. 0660..0669 Then False;
      End For;
```

Appendix B. Code Points 0x0000 - 0x10FFFF

If one applies the rules (Section 3) to the code points 0x0000 to 0x10FFFF to Unicode 5.2, the result is as follows.

This list is non-normative, and only included for illustrative purposes. Specifically, what is displayed in the third column is not the formal name of the code point (as defined in Section 4.8 of The Unicode Standard [Unicode52]). The differences exist, for example, for the code points that have the code point value as part of the name (for example, CJK UNIFIED IDEOGRAPH-4E00) and the naming of Hangul syllables. For many code points, what you see is the official name.

Appendix B.1. Code Points in Unicode Character Database (UCD) Format

```
0000..002C
                DISALLOWED # <control>..COMMA
                              # HYPHEN-MINUS
002D
                PVALID
002E..002F
                DISALLOWED # FULL STOP..SOLIDUS
                             # DIGIT ZERO..DIGIT NINE
0030..0039
                PVALID
                DISALLOWED # COLON..GRAVE ACCENT
003A..0060
                             # LATIN SMALL LETTER A..LATIN SMALL LETTER Z
               PVALID
0061..007A
007B..00B6
                DISALLOWED # LEFT CURLY BRACKET..PILCROW SIGN
                             # MIDDLE DOT
00B7
                CONTEXTO
                DISALLOWED # CEDILLA..LATIN CAPITAL LETTER THORN
00B8..00DE
00DF..00F6
                PVALID
                             # LATIN SMALL LETTER SHARP S..LATIN SMALL LETT
                DISALLOWED # DIVISION SIGN
00F7
                             # LATIN SMALL LETTER O WITH STROKE..LATIN SMAL
00F8..00FF
                PVALID
                DISALLOWED # LATIN CAPITAL LETTER A WITH MACRON
0100
0101
                PVALID
                             # LATIN SMALL LETTER A WITH MACRON
                DISALLOWED # LATIN CAPITAL LETTER A WITH BREVE
0102
                             # LATIN SMALL LETTER A WITH BREVE
0103
                PVALID
                DISALLOWED # LATIN CAPITAL LETTER A WITH OGONEK
0104
                             # LATIN SMALL LETTER A WITH OGONEK
0105
                PVALID
                DISALLOWED # LATIN CAPITAL LETTER C WITH ACUTE
0106
             ; PVALID
                             # LATIN SMALL LETTER C WITH ACUTE
0107
0108
                DISALLOWED # LATIN CAPITAL LETTER C WITH CIRCUMFLEX
             ; DISALLO
; PVALID
                             # LATIN SMALL LETTER C WITH CIRCUMFLEX
0109
010A
               DISALLOWED # LATIN CAPITAL LETTER C WITH DOT ABOVE
                              # LATIN SMALL LETTER C WITH DOT ABOVE
010B
                PVALID
               DISALLOWED # LATIN CAPITAL LETTER C WITH CARON PVALID # LATIN SMALL LETTER C WITH CARON
010C
010D
            ; DISALLOWED # LATIN CAPITAL LETTER D WITH CARON
010E
            PVALID # LATIN CAPITAL LETTER D WITH CARON
DISALLOWED # LATIN CAPITAL LETTER D WITH STROKE
PVALID # LATIN SMALL LETTER D WITH STROKE
DISALLOWED # LATIN CAPITAL LETTER E WITH MACRON
PVALID # LATIN SMALL LETTER E WITH MACRON
010F
0110
0111
0112
0113
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0149..014A ; DISALLOWED # LATIN SMALL LETTER N PRECEDED BY APOSTROPHE.
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; DISALLOWED # LATIN CAPITAL LETTER Z WITH DOT ABOVE
  017B
0186..0187 ; DISALLOWED # LATIN CAPITAL LETTER OPEN O..LATIN CAPITAL L 0188 ; PVALID # LATIN SMALL LETTER C WITH HOOK 0189..018B ; DISALLOWED # LATIN CAPITAL LETTER AFRICAN D..LATIN CAPITA 018C..018D ; PVALID # LATIN SMALL LETTER D WITH TOPBAR..LATIN SMAL 018E..0191 ; DISALLOWED # LATIN CAPITAL LETTER REVERSED E..LATIN CAPIT 0192 ; PVALID # LATIN SMALL LETTER F WITH HOOK 0193..0194 ; DISALLOWED # LATIN CAPITAL LETTER G WITH HOOK..LATIN CAPIT 0195 ; PVALID # LATIN SMALL LETTER HV 0196..0198 ; DISALLOWED # LATIN CAPITAL LETTER IOTA..LATIN CAPITAL LET 0199..019B ; PVALID # LATIN SMALL LETTER K WITH HOOK..LATIN SMALL 019C..019D ; DISALLOWED # LATIN CAPITAL LETTER TURNED M..LATIN CAPITAL 019E ; PVALID # LATIN SMALL LETTER N WITH LONG RIGHT LEG 019F..01A0 ; DISALLOWED # LATIN CAPITAL LETTER O WITH MIDDLE TILDE..LA 01A1 ; PVALID # LATIN SMALL LETTER O WITH HORN
019F..01A0 ; DISALLOWED # LATIN CAPITAL LETTER O WITH MIDDLE TILDE..LA
01A1 ; PVALID # LATIN SMALL LETTER O WITH HORN
01A2 ; DISALLOWED # LATIN CAPITAL LETTER OI
01A3 ; PVALID # LATIN SMALL LETTER OI
01A4 ; DISALLOWED # LATIN CAPITAL LETTER P WITH HOOK
01A5 ; PVALID # LATIN SMALL LETTER P WITH HOOK
01A6..01A7 ; DISALLOWED # LATIN LETTER YR..LATIN CAPITAL LETTER TONE T
01A8 ; PVALID # LATIN SMALL LETTER TONE TWO
01A9 ; DISALLOWED # LATIN CAPITAL LETTER ESH
01AA..01AB ; PVALID # LATIN LETTER REVERSED ESH LOOP..LATIN SMALL
01AC ; DISALLOWED # LATIN CAPITAL LETTER T WITH HOOK
 01B4 ; PVALID # LATIN CAPITAL LETTER Y WITH HOOK
01B5 ; DISALLOWED # LATIN SMALL LETTER Z WITH STROKE
01B6 ; PVALID # LATIN SMALL LETTER Z WITH STROKE
01B7..01B8 ; DISALLOWED # LATIN CAPITAL LETTER EZH..LATIN CAPITAL LETT
01B9..01BB ; PVALID # LATIN SMALL LETTER EZH REVERSED..LATIN LETTE
01BC ; DISALLOWED # LATIN CAPITAL LETTER TONE FIVE
 01BD..01C3 ; PVALID # LATIN CAPITAL LETTER TONE FIVE .LATIN LETTER R 01C4..01CD ; DISALLOWED # LATIN CAPITAL LETTER DZ WITH CARON..LATIN CA 01CE ; PVALID # LATIN SMALL LETTER A WITH CARON 01CF ; DISALLOWED # LATIN CAPITAL LETTER I WITH CARON 01D0 ; PVALID # LATIN SMALL LETTER I WITH CARON
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IDNA Code Points

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01D1

O1D2

PVALID

DISALLOWED

LATIN CAPITAL LETTER O WITH CARON

1DD3

DISALLOWED

LATIN SMALL LETTER U WITH CARON

1DD5

DISALLOWED

LATIN CAPITAL LETTER U WITH CARON

1DD5

DISALLOWED

LATIN CAPITAL LETTER U WITH CARON

1DD7

DISALLOWED

DISALLOWED

LATIN CAPITAL LETTER U WITH DIARRESIS AND MACR

1DD7

DISALLOWED

DISALLOWED

DISALLOWED

DISALLOWED

LATIN CAPITAL LETTER U WITH DIARRESIS AND CARO

1DD9

DISALLOWED

DISALLOWED

LATIN CAPITAL LETTER U WITH DIARRESIS AND CARO

1DD9

DISALLOWED

PVALID

DISALLOWED

LATIN CAPITAL LETTER U WITH DIARRESIS AND CARO

1DD6

PVALID

DISALLOWED

LATIN CAPITAL LETTER U WITH DIARRESIS AND CARO

1DD6

PVALID

DISALLOWED

LATIN CAPITAL LETTER U WITH DIARRESIS AND CARO

1DD6

PVALID

DISALLOWED

LATIN CAPITAL LETTER U WITH DIARRESIS AND CARO

1DD6

PVALID

DISALLOWED

LATIN CAPITAL LETTER A WITH DIARRESIS AND MACR

1DD6

DISALLOWED

LATIN CAPITAL LETTER A WITH DOT ABOVE AND MACR

1DD7

DISALLOWED

LATIN CAPITAL LETTER A WITH DOT ABOVE AND MACR

1DD7

DISALLOWED

LATIN CAPITAL LETTER A WITH DOT ABOVE AND MACR

1DD7

DISALLOWED

LATIN CAPITAL LETTER A WITH DOT ABOVE AND MACR

1DD7

D1SALLOWED

LATIN CAPITAL LETTER A WITH DOT ABOVE AND MACR

1DD7

D1SALLOWED

LATIN CAPITAL LETTER A WITH DOT ABOVE AND MACR

1DD7

D1SALLOWED

LATIN CAPITAL LETTER CAPITH CARON

1DD7

LATIN SMALL LETTER CAPITH CAPITH CAPITH LETTER

1DD7

LATIN SMALL LETTER CAPITH CAPITH LETTER

1DD7

LATIN SMALL LETTER CAPITH CAPITH CAPITH LETTER

1DD7

LATIN SMALL LETTER CAPIT
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DISALLOWED # LATIN CAPITAL LETTER I WITH DOUBLE GRAVE
DOUB PVALID # LATIN SMALL LETTER I WITH DOUBLE GRAVE
DOUB PVALID # LATIN CAPITAL LETTER I WITH INVERTED BREVE
DOUB PVALID # LATIN CAPITAL LETTER I WITH DOUBLE GRAVE
DOUB PVALID # LATIN SMALL LETTER I WITH INVERTED BREVE
DOUB PVALID # LATIN SMALL LETTER OWITH DOUBLE GRAVE
DOUB PVALID # LATIN SMALL LETTER OWITH DOUBLE GRAVE
DOUB DISALLOWED # LATIN CAPITAL LETTER OWITH DOUBLE GRAVE
DOUB DISALLOWED # LATIN SMALL LETTER OWITH INVERTED BREVE
DOUB DISALLOWED # LATIN CAPITAL LETTER WITH DOUBLE GRAVE
DOUB DISALLOWED # LATIN CAPITAL LETTER WITH DOUBLE GRAVE
DOUB DISALLOWED # LATIN CAPITAL LETTER WITH DOUBLE GRAVE
DOUB DISALLOWED # LATIN CAPITAL LETTER WITH DOUBLE GRAVE
DOUB DISALLOWED # LATIN CAPITAL LETTER WITH DOUBLE GRAVE
DOUB DISALLOWED # LATIN CAPITAL LETTER WITH INVERTED BREVE
DOUB # DISALLOWED # LATIN CAPITAL LETTER WITH DOUBLE GRAVE
DOUB # DISALLOWED # LATIN CAPITAL LETTER WITH DOUBLE GRAVE
DOUB # LATIN CAPITAL LETTER WITH SOURCE GRAVE
DOUB # LATIN CAPITAL LETTER WITH COMMA BELOW
DOUB # LATIN SMALL LETTER WITH LONG RIGHT LEG
DOUB # LATIN SMALL LETTER WITH LONG RIGHT LEG
DOUB # LATIN CAPITAL LETTER WITH LONG RIGHT LEG
DOUB # LATIN CAPITAL LETTER WITH HOOK
DOUB # LATIN SMALL LETTER WITH HOOK
DOUB # LATIN SMALL LETTER WITH HOOK
DOUB # LATIN SMALL LETTER WITH HOOK
DOUB # LATIN CAPITAL LET
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; DISALLOWED # LATIN CAPITAL LETTER GLOTTAL STOP
0241 ; DISALLOWED # LATIN CAPITAL LETTER GLOTTAL STOP
0242 ; PVALID # LATIN SMALL LETTER GLOTTAL STOP
0243..0246 ; DISALLOWED # LATIN CAPITAL LETTER B WITH STROKE..LATIN CA
0247 ; PVALID # LATIN SMALL LETTER E WITH STROKE
0248 ; DISALLOWED # LATIN CAPITAL LETTER J WITH STROKE
0249 ; PVALID # LATIN SMALL LETTER J WITH STROKE
024A ; DISALLOWED # LATIN CAPITAL LETTER SMALL Q WITH HOOK TAIL
024B ; PVALID # LATIN SMALL LETTER Q WITH HOOK TAIL
024C ; DISALLOWED # LATIN CAPITAL LETTER R WITH STROKE
024D ; PVALID # LATIN SMALL LETTER R WITH STROKE
024F..02AF ; PVALID # LATIN CAPITAL LETTER Y WITH STROKE
024F..02AF ; PVALID # LATIN SMALL LETTER Y WITH STROKE..LATIN SMAL
02BO..02B8 ; DISALLOWED # MODIFIER LETTER SMALL H..MODIFIER LETTER SMA
02B9..02C1 ; PVALID # MODIFIER LETTER PRIME..MODIFIER LETTER REVER
 0241
                                    ; DISALLOWED # MODIFIER LETTER SMALL H..MODIFIER LETTER SMA
; PVALID # MODIFIER LETTER PRIME..MODIFIER LETTER REVER
; DISALLOWED # MODIFIER LETTER LEFT ARROWHEAD..MODIFIER LET
 02B9..02C1
 02C2..02C5
; PVALID # MODIFIER LETTER CIRCUMFLEX ACCENT..MODIFIER
037A ; DISALLOWED # GREEK YPOGEGRAMMENI
037B..037D ; PVALID # GREEK SMALL REVERSED LUNATE SIGMA SYMBOL..GR
037B..037D ; PVALID # GREEK SMALL REVERSED LUNATE SIGMA SYMBOL..GR
037E ; DISALLOWED # GREEK QUESTION MARK
037F..0383 ; UNASSIGNED # <reserved>..<reserved>
0384..038A ; DISALLOWED # GREEK TONOS..GREEK CAPITAL LETTER IOTA WITH
038B ; UNASSIGNED # <reserved>
038C ; DISALLOWED # GREEK CAPITAL LETTER OMICRON WITH TONOS
038D ; UNASSIGNED # <reserved>
038E..038F ; DISALLOWED # GREEK CAPITAL LETTER UPSILON WITH TONOS..GRE
0390 ; PVALID # GREEK SMALL LETTER IOTA WITH DIALYTIKA AND T
0391..03A1 ; DISALLOWED # GREEK CAPITAL LETTER ALPHA..GREEK CAPITAL LE
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03A2 ; UNASSIGNED # <reserved>
03A3..03AB ; DISALLOWED # GREEK CAPITAL LETTER SIGMA..GREEK CAPITAL LE
03AC..03CE ; PVALID # GREEK SMALL LETTER ALPHA WITH TONOS..GREEK S
03CF..03D6 ; DISALLOWED # GREEK CAPITAL KAI SYMBOL..GREEK PI SYMBOL
03A3. 03AB | DISALLOWED | # GREEK CAPITAL LETTER SIGMA. GREEK CAPITAL LE ONCE. | OSCIE. 03D6 | DISALLOWED | # GREEK CAPITAL KAI SYMBOL. GREEK PI SYMBOL | 03D7 | OSCIE. 03D8 | DISALLOWED | # GREEK CAPITAL KAI SYMBOL. GREEK PI SYMBOL | 03D8 | DISALLOWED | # GREEK KAI SYMBOL. GREEK PI SYMBOL | 03D8 | DISALLOWED | # GREEK KETTER ARCHAIC KOPPA | 03D8 | OSSILLOWED | # GREEK SMALL LETTER SIGMA | 03D8 | OSSILLOWED | # GREEK SMALL LETTER SIGMA | 03D0 | OSSILLOWED | # GREEK SMALL LETTER SIGMA | 03D0 | OSSILLOWED | # GREEK SMALL LETTER SIGMA | 03D0 | OSSILLOWED | # GREEK SMALL LETTER SIGMA | 03D0 | OSSILLOWED | # GREEK SMALL LETTER SIGMA | 03D0 | OSSILLOWED | # GREEK SMALL LETTER SIGMA | 03D6 | OSSILLOWED | # GREEK SMALL LETTER KOPPA | 03E0 | DISALLOWED | # GREEK SMALL LETTER SHIPI | 03E2 | DISALLOWED | # GREEK SMALL LETTER SHIPI | 03E2 | DISALLOWED | # COPTIC CAPITAL LETTER SHEI | 03E4 | DISALLOWED | # COPTIC CAPITAL LETTER FEI | 03E6 | DISALLOWED | # COPTIC CAPITAL LETTER KHEI | 03E7 | OVALID | # COPTIC CAPITAL LETTER KHEI | 03E8 | DISALLOWED | # COPTIC CAPITAL LETTER HORI | 03E8 | DISALLOWED | # COPTIC CAPITAL LETTER HORI | 03E8 | DISALLOWED | # COPTIC CAPITAL LETTER GANGIA | 03E8 | DISALLOWED | # COPTIC CAPITAL LETTER GANGIA | 03E8 | DISALLOWED | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E8 | DISALLOWED | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E6 | DISALLOWED | # COPTIC CAPITAL LETTER BITMA | 03E6 | DISALLOWED | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E8 | DISALLOWED | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | # COPTIC CAPITAL LETTER BITMA | 03E9 | PVALID | #
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IDNA Code Points

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046B

PVALID

O46C

DISALLOWED

O46C

DISALLOWED

O46E

PVALID

O46F

PVALID

O470

O470

O470

O471

PVALID

O471

PVALID

O472

DISALLOWED

O473

PVALID

O473

PVALID

O474

O475

PVALID

O475

PVALID

O476

O476

O15ALLOWED

O477

PVALID

O477

PVALID

O478

O478

O479

PVALID

O479

O479

O470

O
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RFC 5892

IDNA Code Points

August 2010

04A1

O4A2

DISALLOWED

O4A3

PVALID

# CYRILLIC SMALL LETTER BASHKIR KA

04A3

PVALID

# CYRILLIC SMALL LETTER EN WITH DESCENDER

04A5

O4A6

DISALLOWED

04A7

PVALID

# CYRILLIC SMALL LETTER EN WITH DESCENDER

04A6

OAA7

OAA7

OAA1D

# CYRILLIC SMALL LETTER EN WITH DESCENDER

04A7

OAA8

OAA9

OAA9

OAA9

OAA9

OAA9

OAA04

OAA9

OAA04

OAA9

OAA04

OAA04
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IDNA Code Points

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04D3

OHD4

ODISALLOWED

OHD5

OHD7

OHD7

OHD7

OHD7

OHD7

OHD7

OHD7

OHD9

OHD8

OHD9

OHD8

OHD9

OHD9
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DISALLOWED

OSOF PVALID # CYRILLIC SMALL LETTER KOMI DJE

OSOB PVALID # CYRILLIC SMALL LETTER KOMI ZJE

OSOF PVALID # CYRILLIC SMALL LETTER KOMI ZJE

OSOF PVALID # CYRILLIC SMALL LETTER KOMI DZJE

OSOF PVALID # CYRILLIC SMALL LETTER KOMI DZJE

OSOF PVALID # CYRILLIC SMALL LETTER KOMI DZJE

OSOF PVALID # CYRILLIC CAPITAL LETTER KOMI DZJE

OSOB PVALID # CYRILLIC SMALL LETTER KOMI DZJE

OSOB PVALID # CYRILLIC CAPITAL LETTER KOMI DZJE

OSOB PVALID # CYRILLIC CAPITAL LETTER KOMI NJE

OSOB PVALID # CYRILLIC SMALL LETTER KOMI NJE

OSOB PVALID # CYRILLIC SMALL LETTER KOMI SJE

OSOF PVALID # CYRILLIC SMALL LETTER KOMI TJE

OSOF PVALID # CYRILLIC SMALL LETTER REVERSED ZE

OSOF PVALID # CYRILLIC SMALL LETTER REVERSED ZE

OSOF PVALID # CYRILLIC SMALL LETTER EL WITH HOOK

OSOS PVALID # CYRILLIC CAPITAL LETTER REVERSED ZE

OSOS PVALID # CYRILLIC SMALL LETTER REVERSED ZE

OSOS PVALID # CYRILLIC CAPITAL LETTER REVERSED ZE

OSOS PVALID # CYRILLIC SMALL LETTER REVERSED ZE

OSOS PVALID # CYRILLIC CAPITAL LETTER RHA

OSOS PVALID # CYRILLIC CAPITAL LETTER RHA

OSOS PVALID # CYRILLIC SMALL LETTER RHA

OSOS PVALID # CYRILLIC CAPITAL LETTER REPROMICE HOOK

OSOS PVALID # CYRILLIC C
            0557..0558 ; UNASSIGNED # <reserved>..<reserved>
         0557..0558 ; UNASSIGNED # <reserved>...<reserved>
0559 ; PVALID # ARMENIAN MODIFIER LETTER LEFT HALF RING
055A..055F ; DISALLOWED # ARMENIAN APOSTROPHE..ARMENIAN ABBREVIATION M
0560 ; UNASSIGNED # <reserved>
0561..0586 ; PVALID # ARMENIAN SMALL LETTER AYB..ARMENIAN SMALL LE
0587 ; DISALLOWED # ARMENIAN SMALL LIGATURE ECH YIWN
0588 ; UNASSIGNED # <reserved>
0589..058A ; DISALLOWED # ARMENIAN FULL STOP..ARMENIAN HYPHEN
058B..0590 ; UNASSIGNED # <reserved>..<reserved>
0591..05BD ; PVALID # HEBREW ACCENT ETNAHTA..HEBREW POINT METEG
05BE ; DISALLOWED # HEBREW PUNCTUATION MAQAF
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; PVALID
05BF
                            # HEBREW POINT RAFE
05C0
               DISALLOWED # HEBREW PUNCTUATION PASEQ
                            # HEBREW POINT SHIN DOT...HEBREW POINT SIN DOT
05C1..05C2
               PVALID
             DISALLOWED # HEBREW PUNCTUATION SOF PASUQ
05C3
05C4..05C5
              PVALID
                            # HEBREW MARK UPPER DOT..HEBREW MARK LOWER DOT
               DISALLOWED # HEBREW PUNCTUATION NUN HAFUKHA
05C6
05C7
               PVALID
                            # HEBREW POINT QAMATS QATAN
               UNASSIGNED # <reserved>...<reserved>
05C8..05CF
                            # HEBREW LETTER ALEF..HEBREW LETTER TAV
05D0..05EA
               PVALID
05EB..05EF
               UNASSIGNED # <reserved>..<reserved>
05F0..05F2
               PVALID
                            # HEBREW LIGATURE YIDDISH DOUBLE VAV..HEBREW L
05F3..05F4
               CONTEXTO
                            # HEBREW PUNCTUATION GERESH..HEBREW PUNCTUATIO
05F5..05FF
               UNASSIGNED # <reserved>..<reserved>
                            # ARABIC NUMBER SIGN..ARABIC SIGN SAFHA
               DISALLOWED
0600..0603
                           # <reserved>..<reserved>
# ARABIC-INDIC CUBE ROOT..ARABIC SIGN MISRA
0604..0605
               UNASSIGNED
0606..060F
               DISALLOWED
0610..061A
                            # ARABIC SIGN SALLALLAHOU ALAYHE WASSALLAM..AR
               PVALID
                            # ARABIC SEMICOLON
               DISALLOWED
061B
061C..061D
             ; UNASSIGNED # <reserved>..<reserved>
               DISALLOWED # ARABIC TRIPLE DOT PUNCTUATION MARK..ARABIC Q
061E..061F
               UNASSIGNED # <reserved>
0620
0621..063F
             ; PVALID
                            # ARABIC LETTER HAMZA..ARABIC LETTER FARSI YEH
               DISALLOWED # ARABIC TATWEEL
0640
0641..065E
                            # ARABIC LETTER FEH..ARABIC FATHA WITH TWO DOT
              PVALID
065F
               UNASSIGNED # <reserved>
0660..0669
               CONTEXTO
                            # ARABIC-INDIC DIGIT ZERO..ARABIC-INDIC DIGIT
               DISALLOWED # ARABIC PERCENT SIGN..ARABIC FIVE POINTED STA
PVALID # ARABIC LETTER DOTLESS BEH..ARABIC LETTER HIG
DISALLOWED # ARABIC LETTER HIGH HAMZA ALEF..ARABIC LETTER
066A..066D
066E..0674
0675..0678
0679..06D3
               PVALID
                            # ARABIC LETTER TTEH..ARABIC LETTER YEH BARREE
               DISALLOWED # ARABIC FULL STOP
06D4
                            # ARABIC LETTER AE..ARABIC SMALL HIGH SEEN
06D5..06DC
               PVALID
               DISALLOWED # ARABIC END OF AYAH..ARABIC START OF RUB EL H
06DD..06DE
               PVALID # ARABIC SMALL HIGH ROUNDED ZERO..ARABIC SMALL DISALLOWED # ARABIC PLACE OF SAJDAH
06DF..06E8
06E9
06EA..06EF
                            # ARABIC EMPTY CENTRE LOW STOP..ARABIC LETTER
             PVALID
               CONTEXTO
06F0..06F9
                            # EXTENDED ARABIC-INDIC DIGIT ZERO..EXTENDED A
06FA..06FF
               PVALID
                            # ARABIC LETTER SHEEN WITH DOT BELOW..ARABIC L
0700..070D
               DISALLOWED # SYRIAC END OF PARAGRAPH..SYRIAC HARKLEAN AST
070E
               UNASSIGNED
                           # <reserved>
               DISALLOWED # SYRIAC ABBREVIATION MARK
PVALID # SYRIAC LETTER ALAPH..SYRIAC BARREKH
070F
0710..074A
074B..074C
               UNASSIGNED # <reserved>..<reserved>
074D..07B1
               PVALID
                            # SYRIAC LETTER SOGDIAN ZHAIN..THAANA LETTER N
               UNASSIGNED # <reserved>..<reserved>
07B2..07BF
                        # NKO DIGIT ZERO..NKO LOW TONE APOSTROPHE
07C0..07F5
              PVALID
           DISALLOWED # NKO SYMBOL OO DENNEN..NKO LAJANYALAN
UNASSIGNED # <reserved>..<
07F6..07FA
07FB..07FF
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0800..082D
              PVALID
                           # SAMARITAN LETTER ALAF..SAMARITAN MARK NEQUDA
082E..082F
              UNASSIGNED
                           # <reserved>..<reserved>
0830..083E
              DISALLOWED
                           # SAMARITAN PUNCTUATION NEQUDAA..SAMARITAN PUN
083F..08FF
              UNASSIGNED
                           # <reserved>..<reserved>
                           # DEVANAGARI SIGN INVERTED CANDRABINDU..DEVANA
0900..0939
              PVALID
                           # <reserved>..<reserved>
# DEVANAGARI SIGN NUKTA..DEVANAGARI VOWEL SIGN
093A..093B
              UNASSIGNED
093C..094E
              PVALID
094F
              UNASSIGNED
                           # <reserved>
0950..0955
                           # DEVANAGARI OM..DEVANAGARI VOWEL SIGN CANDRA
              PVALID
0956..0957
                           # <reserved>..<reserved>
              UNASSIGNED
0958..095F
              DISALLOWED
                           # DEVANAGARI LETTER QA..DEVANAGARI LETTER YYA
0960..0963
              PVALID
                           # DEVANAGARI LETTER VOCALIC RR..DEVANAGARI VOW
                           # DEVANAGARI DANDA..DEVANAGARI DOUBLE DANDA
# DEVANAGARI DIGIT ZERO..DEVANAGARI DIGIT NINE
# DEVANAGARI ABBREVIATION SIGN
0964..0965
              DISALLOWED
0966..096F
              PVALID
0970
              DISALLOWED
0971..0972
              PVALID
                           # DEVANAGARI SIGN HIGH SPACING DOT..DEVANAGARI
0973..0978
              UNASSIGNED
                           # <reserved>..<reserved>
0979..097F
                           # DEVANAGARI LETTER ZHA..DEVANAGARI LETTER BBA
              PVALID
0980
              UNASSIGNED
                           # <reserved>
0981..0983
              PVALID
                           # BENGALI SIGN CANDRABINDU..BENGALI SIGN VISAR
                           # <reserved>
0984
              UNASSIGNED
0985..098C
                           # BENGALI LETTER A..BENGALI LETTER VOCALIC L
              PVALID
098D..098E
              UNASSIGNED
                           # <reserved>..<reserved>
098F..0990
                           # BENGALI LETTER E..BENGALI LETTER AI
              PVALID
0991..0992
              UNASSIGNED
                           # <reserved>..<reserved>
0993..09A8
              PVALID
                           # BENGALI LETTER O..BENGALI LETTER NA
              UNASSIGNED
                           # <reserved>
09A9
09AA..09B0
                           # BENGALI LETTER PA..BENGALI LETTER RA
              PVALID
              UNASSIGNED
09B1
                           # <reserved>
              PVALID
                           # BENGALI LETTER LA
09B2
09B3..09B5
                           # <reserved>..<reserved>
              UNASSIGNED
                           # BENGALI LETTER SHA..BENGALI LETTER HA
09B6..09B9
              PVALID
09BA..09BB
              UNASSIGNED
                           # <reserved>..<reserved>
09BC..09C4
                           # BENGALI SIGN NUKTA..BENGALI VOWEL SIGN VOCAL
              PVALID
09C5..09C6
              UNASSIGNED
                           # <reserved>..<reserved>
09C7..09C8
                           # BENGALI VOWEL SIGN E..BENGALI VOWEL SIGN AI
              PVALID
09C9..09CA
              UNASSIGNED
                           # <reserved>..<reserved>
09CB..09CE
                           # BENGALI VOWEL SIGN O..BENGALI LETTER KHANDA
              PVALID
09CF..09D6
              UNASSIGNED # <reserved>..<reserved>
                           # BENGALI AU LENGTH MARK
09D7
              PVALID
09D8..09DB
              UNASSIGNED
                           # <reserved>..<reserved>
                           # BENGALI LETTER RRA..BENGALI LETTER RHA
09DC..09DD
              DISALLOWED
09DE
              UNASSIGNED
                           # <reserved>
09DF
              DISALLOWED
                           # BENGALI LETTER YYA
                           # BENGALI LETTER VOCALIC RR..BENGALI VOWEL SIG
09E0..09E3
              PVALID
09E4..09E5
              UNASSIGNED
                           # <reserved>..<reserved>
                           # BENGALI DIGIT ZERO..BENGALI LETTER RA WITH L
09E6..09F1
              PVALID
              DISALLOWED # BENGALI RUPEE MARK..BENGALI GANDA MARK
09F2..09FB
```

```
09FC..0A00
              UNASSIGNED
                          # <reserved>..<reserved>
                          # GURMUKHI SIGN ADAK BINDI..GURMUKHI SIGN VISA
              PVALID
0A01..0A03
0A04
              UNASSIGNED # <reserved>
                          # GURMUKHI LETTER A..GURMUKHI LETTER UU
0A05..0A0A
              PVALID
0A0B..0A0E
              UNASSIGNED # <reserved>..<reserved>
                          # GURMUKHI LETTER EE..GURMUKHI LETTER AI
0A0F..0A10
              PVALID
                          # <reserved>..<reserved>
# GURMUKHI LETTER 00..GURMUKHI LETTER NA
0A11..0A12
              UNASSIGNED
0A13..0A28
              PVALID
              UNASSIGNED # <reserved>
0A29
0A2A..0A30
                          # GURMUKHI LETTER PA..GURMUKHI LETTER RA
              PVALID
              UNASSIGNED # <reserved>
0A31
0A32
              PVALID
                          # GURMUKHI LETTER LA
0A33
              DISALLOWED # GURMUKHI LETTER LLA
0A34
              UNASSIGNED
                          # <reserved>
0A35
              PVALID
                          # GURMUKHI LETTER VA
0A36
              DISALLOWED
                          # GURMUKHI LETTER SHA
              UNASSIGNED
                          # <reserved>
0A37
0A38..0A39
                          # GURMUKHI LETTER SA..GURMUKHI LETTER HA
              PVALID
                         # <reserved>..<reserved>
0A3A..0A3B
              UNASSIGNED
0A3C
              PVALID
                          # GURMUKHI SIGN NUKTA
0A3D
              UNASSIGNED # <reserved>
0A3E..0A42
                          # GURMUKHI VOWEL SIGN AA..GURMUKHI VOWEL SIGN
              PVALID
0A43..0A46
              UNASSIGNED # <reserved>..<reserved>
                          # GURMUKHI VOWEL SIGN EE..GURMUKHI VOWEL SIGN
0A47..0A48
              PVALID
0A49..0A4A
              UNASSIGNED # <reserved>..<reserved>
0A4B..0A4D
              PVALID
                          # GURMUKHI VOWEL SIGN 00..GURMUKHI SIGN VIRAMA
0A4E..0A50
              UNASSIGNED # <reserved>..<reserved>
                          # GURMUKHI SIGN UDAAT
0A51
              PVALID
0A52..0A58
              UNASSIGNED
                          # <reserved>..<reserved>
0A59..0A5B
              DISALLOWED
                          # GURMUKHI LETTER KHHA..GURMUKHI LETTER ZA
OA5C
              PVALID
                          # GURMUKHI LETTER RRA
0A5D
              UNASSIGNED
                          # <reserved>
                          # GURMUKHI LETTER FA
0A5E
              DISALLOWED
0A5F..0A65
                          # <reserved>..<reserved>
              UNASSIGNED
                          # GURMUKHI DIGIT ZERO..GURMUKHI SIGN YAKASH
0A66..0A75
              PVALID
              UNASSIGNED
                          # <reserved>..<reserved>
0A76..0A80
0A81..0A83
                          # GUJARATI SIGN CANDRABINDU..GUJARATI SIGN VIS
              PVALID
              UNASSIGNED # <reserved>
0A84
0A85..0A8D
              PVALID
                          # GUJARATI LETTER A..GUJARATI VOWEL CANDRA E
0A8E
              UNASSIGNED # <reserved>
0A8F..0A91
                          # GUJARATI LETTER E..GUJARATI VOWEL CANDRA O
              PVALID
0A92
              UNASSIGNED # <reserved>
                          # GUJARATI LETTER O..GUJARATI LETTER NA
0A93..0AA8
              PVALID
              UNASSIGNED # <reserved>
OAA9
OAAA..OABO
                          # GUJARATI LETTER PA..GUJARATI LETTER RA
              PVALID
              UNASSIGNED # <reserved>
0AB1
                     # GUJARATI LETTER LA..GUJARATI LETTER LLA
0AB2..0AB3
              PVALID
              UNASSIGNED # <reserved>
0AB4
```

```
# GUJARATI LETTER VA..GUJARATI LETTER HA
0AB5..0AB9
              PVALID
OABA..OABB
              UNASSIGNED
                          # <reserved>..<reserved>
                          # GUJARATI SIGN NUKTA..GUJARATI VOWEL SIGN CAN
0ABC..0AC5
              PVALID
              UNASSIGNED # <reserved>
0AC6
                          # GUJARATI VOWEL SIGN E..GUJARATI VOWEL SIGN C
0AC7..0AC9
              PVALID
0ACA
              UNASSIGNED # <reserved>
OACB..OACD
                          # GUJARATI VOWEL SIGN O..GUJARATI SIGN VIRAMA
              PVALID
OACE..OACF
              UNASSIGNED # <reserved>..<reserved>
                          # GUJARATI OM
0AD0
              PVALID
              UNASSIGNED # <reserved>..<reserved>
0AD1..0ADF
OAEO..OAE3
                          # GUJARATI LETTER VOCALIC RR..GUJARATI VOWEL S
              PVALID
0AE4..0AE5
              UNASSIGNED # <reserved>..<reserved>
0AE6..0AEF
              PVALID
                          # GUJARATI DIGIT ZERO...GUJARATI DIGIT NINE
0AF0
              UNASSIGNED
                          # <reserved>
                          # GUJARATI RUPEE SIGN
0AF1
              DISALLOWED
0AF2..0B00
              UNASSIGNED
                          # <reserved>..<reserved>
                          # ORIYA SIGN CANDRABINDU..ORIYA SIGN VISARGA
0B01..0B03
              PVALID
0B04
              UNASSIGNED
                          # <reserved>
0B05..0B0C
                          # ORIYA LETTER A..ORIYA LETTER VOCALIC L
              PVALID
0B0D..0B0E
              UNASSIGNED # <reserved>..<reserved>
0B0F..0B10
                          # ORIYA LETTER E..ORIYA LETTER AI
              PVALID
              UNASSIGNED # <reserved>..<reserved>
0B11..0B12
              PVALID
0B13..0B28
                          # ORIYA LETTER O..ORIYA LETTER NA
              UNASSIGNED # <reserved>
0B29
0B2A..0B30
                          # ORIYA LETTER PA..ORIYA LETTER RA
              PVALID
              UNASSIGNED # <reserved>
0B31
0B32..0B33
                          # ORIYA LETTER LA..ORIYA LETTER LLA
              PVALID
0B34
              UNASSIGNED # <reserved>
                          # ORIYA LETTER VA..ORIYA LETTER HA
0B35..0B39
              PVALID
0B3A..0B3B
              UNASSIGNED
                          # <reserved>..<reserved>
                          # ORIYA SIGN NUKTA..ORIYA VOWEL SIGN VOCALIC R
0B3C..0B44
              PVALID
0B45..0B46
              UNASSIGNED # <reserved>..<reserved>
0B47..0B48
                          # ORIYA VOWEL SIGN E..ORIYA VOWEL SIGN AI
              PVALID
              UNASSIGNED # <reserved>..<reserved>
PVALID # ORIYA VOWEL SIGN O..ORIYA SIGN VIRAMA
0B49..0B4A
0B4B..0B4D
0B4E..0B55
              UNASSIGNED # <reserved>..<reserved>
0B56..0B57
                          # ORIYA AI LENGTH MARK..ORIYA AU LENGTH MARK
              PVALID
0B58..0B5B
              UNASSIGNED
                          # <reserved>..<reserved>
0B5C..0B5D
              DISALLOWED
                          # ORIYA LETTER RRA..ORIYA LETTER RHA
0B5E
              UNASSIGNED # <reserved>
0B5F..0B63
                          # ORIYA LETTER YYA..ORIYA VOWEL SIGN VOCALIC L
              PVALID
0B64..0B65
              UNASSIGNED
                          # <reserved>..<reserved>
                          # ORIYA DIGIT ZERO..ORIYA DIGIT NINE
0B66..0B6F
              PVALID
0B70
              DISALLOWED # ORIYA ISSHAR
                          # ORIYA LETTER WA
0B71
              PVALID
0B72..0B81
              UNASSIGNED # <reserved>..<reserved>
              PVALID # TAMIL SIGN ANUSVARA..TAMIL SIGN VISARGA
0B82..0B83
              UNASSIGNED # <reserved>
0B84
```

```
# TAMIL LETTER A..TAMIL LETTER UU
0B85..0B8A
              PVALID
0B8B..0B8D
              UNASSIGNED
                          # <reserved>..<reserved>
0B8E..0B90
              PVALID
                          # TAMIL LETTER E..TAMIL LETTER AI
              UNASSIGNED # <reserved>
0B91
                          # TAMIL LETTER O..TAMIL LETTER KA
0B92..0B95
              PVALID
0B96..0B98
              UNASSIGNED # <reserved>..<reserved>
0B99..0B9A
                          # TAMIL LETTER NGA..TAMIL LETTER CA
              PVALID
              UNASSIGNED # <reserved>
0B9B
                          # TAMIL LETTER JA
0B9C
              PVALID
              UNASSIGNED # <reserved>
0B9D
0B9E..0B9F
                          # TAMIL LETTER NYA..TAMIL LETTER TTA
              PVALID
OBAO..OBA2
              UNASSIGNED # <reserved>..<reserved>
0BA3..0BA4
              PVALID
                          # TAMIL LETTER NNA..TAMIL LETTER TA
0BA5..0BA7
              UNASSIGNED # <reserved>..<reserved>
OBA8..OBAA
              PVALID
                          # TAMIL LETTER NA..TAMIL LETTER PA
OBAB..OBAD
              UNASSIGNED # <reserved>..<reserved>
                          # TAMIL LETTER MA..TAMIL LETTER HA
OBAE..OBB9
              PVALID
OBBA..OBBD
              UNASSIGNED # <reserved>..<reserved>
                          # TAMIL VOWEL SIGN AA..TAMIL VOWEL SIGN UU
OBBE..OBC2
              PVALID
              UNASSIGNED # <reserved>..<reserved>
0BC3..0BC5
                          # TAMIL VOWEL SIGN E..TAMIL VOWEL SIGN AI
OBC6..OBC8
              PVALID
0BC9
              UNASSIGNED # <reserved>
OBCA..OBCD
              PVALID
                          # TAMIL VOWEL SIGN O..TAMIL SIGN VIRAMA
OBCE..OBCF
              UNASSIGNED # <reserved>..<reserved>
OBD0
              PVALID
                          # TAMIL OM
0BD1..0BD6
              UNASSIGNED # <reserved>..<reserved>
                          # TAMIL AU LENGTH MARK
              PVALID
0BD7
0BD8..0BE5
              UNASSIGNED # <reserved>..<reserved>
PVALID # TAMIL DIGIT ZERO..TAMIL DIGIT NINE
0BE6..0BEF
OBFO..OBFA
              DISALLOWED
                          # TAMIL NUMBER TEN..TAMIL NUMBER SIGN
              UNASSIGNED # <reserved>..<reserved>
OBFB..OC00
                          # TELUGU SIGN CANDRABINDU..TELUGU SIGN VISARGA
0C01..0C03
              PVALID
0C04
              UNASSIGNED # <reserved>
                          # TELUGU LETTER A..TELUGU LETTER VOCALIC L
0C05..0C0C
              PVALID
              UNASSIGNED # <reserved>
OCOD.
                          # TELUGU LETTER E..TELUGU LETTER AI
OCOE..OC10
              PVALID
              UNASSIGNED # <reserved>
0C11
                          # TELUGU LETTER O..TELUGU LETTER NA
0C12..0C28
              PVALID
0C29
              UNASSIGNED # <reserved>
0C2A..0C33
                          # TELUGU LETTER PA..TELUGU LETTER LLA
              PVALID
0C34
              UNASSIGNED # <reserved>
                          # TELUGU LETTER VA..TELUGU LETTER HA
0C35..0C39
              PVALID
OC3A..OC3C
              UNASSIGNED # <reserved>..<reserved>
0C3D..0C44
              PVALID
                          # TELUGU SIGN AVAGRAHA..TELUGU VOWEL SIGN VOCA
              UNASSIGNED # <reserved>
0C45
                          # TELUGU VOWEL SIGN E..TELUGU VOWEL SIGN AI
0C46..0C48
              PVALID
0C49
              UNASSIGNED # <reserved>
0C4A..0C4D
                          # TELUGU VOWEL SIGN O..TELUGU SIGN VIRAMA
            ; PVALID
```

```
0C4E..0C54
              UNASSIGNED
                          # <reserved>..<reserved>
                          # TELUGU LENGTH MARK..TELUGU AI LENGTH MARK
              PVALID
0C55..0C56
0C57
              UNASSIGNED
                          # <reserved>
                          # TELUGU LETTER TSA..TELUGU LETTER DZA
0C58..0C59
              PVALID
0C5A..0C5F
              UNASSIGNED # <reserved>..<reserved>
0C60..0C63
              PVALID
                          # TELUGU LETTER VOCALIC RR..TELUGU VOWEL SIGN
                          # <reserved>..<reserved>
# TELUGU DIGIT ZERO..TELUGU DIGIT NINE
              UNASSIGNED
0C64..0C65
0C66..0C6F
              PVALID
OC70..OC77
              UNASSIGNED
                          # <reserved>..<reserved>
0C78..0C7F
                          # TELUGU FRACTION DIGIT ZERO FOR ODD POWERS OF
              DISALLOWED
OC80..OC81
              UNASSIGNED
                          # <reserved>..<reserved>
0C82..0C83
              PVALID
                          # KANNADA SIGN ANUSVARA..KANNADA SIGN VISARGA
0C84
              UNASSIGNED
                          # <reserved>
0C85..0C8C
                          # KANNADA LETTER A..KANNADA LETTER VOCALIC L
              PVALID
0C8D
              UNASSIGNED
                          # <reserved>
OC8E..OC90
              PVALID
                          # KANNADA LETTER E..KANNADA LETTER AI
                          # <reserved>
0C91
              UNASSIGNED
                          # KANNADA LETTER O..KANNADA LETTER NA
0C92..0CA8
              PVALID
              UNASSIGNED
OCA9
                          # <reserved>
OCAA..OCB3
              PVALID
                          # KANNADA LETTER PA..KANNADA LETTER LLA
              UNASSIGNED # <reserved>
0CB4
OCB5..OCB9
                          # KANNADA LETTER VA..KANNADA LETTER HA
              PVALID
OCBA..OCBB
              UNASSIGNED # <reserved>..<reserved>
                          # KANNADA SIGN NUKTA..KANNADA VOWEL SIGN VOCAL
OCBC..OCC4
              PVALID
0CC5
              UNASSIGNED # <reserved>
0CC6..0CC8
                          # KANNADA VOWEL SIGN E..KANNADA VOWEL SIGN AI
              PVALID
0CC9
              UNASSIGNED # <reserved>
                          # KANNADA VOWEL SIGN O..KANNADA SIGN VIRAMA
OCCA..OCCD
              PVALID
OCCE..OCD4
              UNASSIGNED
                          # <reserved>..<reserved>
OCD5..OCD6
                          # KANNADA LENGTH MARK..KANNADA AI LENGTH MARK
              PVALID
OCD7..OCDD
              UNASSIGNED
                          # <reserved>..<reserved>
                          # KANNADA LETTER FA
0CDE
              PVALID
0CDF
              UNASSIGNED # <reserved>
                          # KANNADA LETTER VOCALIC RR..KANNADA VOWEL SIG
OCEO..OCE3
              PVALID
OCE4..OCE5
              UNASSIGNED
                          # <reserved>..<reserved>
0CE6..0CEF
                          # KANNADA DIGIT ZERO..KANNADA DIGIT NINE
              PVALID
                          # <reserved>
0CF0
              UNASSIGNED
                          # KANNADA SIGN JIHVAMULIYA..KANNADA SIGN UPADH
OCF1..OCF2
              DISALLOWED
OCF3..0D01
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MALAYALAM SIGN ANUSVARA..MALAYALAM SIGN VISA
0D02..0D03
              PVALID
                          # <reserved>
              UNASSIGNED
0D04
                          # MALAYALAM LETTER A..MALAYALAM LETTER VOCALIC
0D05..0D0C
              PVALID
ODOD
              UNASSIGNED
                          # <reserved>
ODOE..OD10
              PVALID
                          # MALAYALAM LETTER E..MALAYALAM LETTER AI
0D11
              UNASSIGNED
                          # <reserved>
0D12..0D28
              PVALID
                          # MALAYALAM LETTER O..MALAYALAM LETTER NA
0D29
              UNASSIGNED # <reserved>
                          # MALAYALAM LETTER PA..MALAYALAM LETTER HA
0D2A..0D39
            ; PVALID
```

```
OD3A..OD3C
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MALAYALAM SIGN AVAGRAHA..MALAYALAM VOWEL SIG
0D3D..0D44
              PVALID
0D45
              UNASSIGNED
                          # <reserved>
0D46..0D48
                          # MALAYALAM VOWEL SIGN E..MALAYALAM VOWEL SIGN
              PVALID
0D49
              UNASSIGNED
                          # <reserved>
0D4A..0D4D
              PVALID
                          # MALAYALAM VOWEL SIGN O..MALAYALAM SIGN VIRAM
0D4E..0D56
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MALAYALAM AU LENGTH MARK
0D57
              PVALID
0D58..0D5F
              UNASSIGNED
                          # <reserved>..<reserved>
0D60..0D63
                          # MALAYALAM LETTER VOCALIC RR..MALAYALAM VOWEL
              PVALID
0D64..0D65
              UNASSIGNED
                          # <reserved>..<reserved>
0D66..0D6F
              PVALID
                          # MALAYALAM DIGIT ZERO..MALAYALAM DIGIT NINE
0D70..0D75
              DISALLOWED
                          # MALAYALAM NUMBER TEN..MALAYALAM FRACTION THR
0D76..0D78
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MALAYALAM DATE MARK
0D79
              DISALLOWED
0D7A..0D7F
              PVALID
                          # MALAYALAM LETTER CHILLU NN..MALAYALAM LETTER
OD80..OD81
              UNASSIGNED
                          # <reserved>..<reserved>
0D82..0D83
                          # SINHALA SIGN ANUSVARAYA..SINHALA SIGN VISARG
              PVALID
0D84
              UNASSIGNED
                          # <reserved>
0D85..0D96
              PVALID
                          # SINHALA LETTER AYANNA..SINHALA LETTER AUYANN
                          # <reserved>..<reserved>
0D97..0D99
              UNASSIGNED
                          # SINHALA LETTER ALPAPRAANA KAYANNA..SINHALA L
              PVALID
0D9A..0DB1
0DB2
              UNASSIGNED
                          # <reserved>
0DB3..0DBB
                          # SINHALA LETTER SANYAKA DAYANNA..SINHALA LETT
              PVALID
ODBC
              UNASSIGNED
                          # <reserved>
              PVALID
                          # SINHALA LETTER DANTAJA LAYANNA
0DBD
ODBE..ODBF
              UNASSIGNED
                          # <reserved>..<reserved>
                          # SINHALA LETTER VAYANNA..SINHALA LETTER FAYAN
ODCO..ODC6
              PVALID
                          # <reserved>..<reserved>
ODC7..ODC9
              UNASSIGNED
ODCA
              PVALID
                          # SINHALA SIGN AL-LAKUNA
ODCB..ODCE
              UNASSIGNED
                          # <reserved>..<reserved>
                          # SINHALA VOWEL SIGN AELA-PILLA..SINHALA VOWEL
ODCF..ODD4
              PVALID
0DD5
              UNASSIGNED
                          # <reserved>
                          # SINHALA VOWEL SIGN DIGA PAA-PILLA
0DD6
              PVALID
0DD7
              UNASSIGNED
                          # <reserved>
0DD8..0DDF
                          # SINHALA VOWEL SIGN GAETTA-PILLA..SINHALA VOW
              PVALID
0DE0..0DF1
              UNASSIGNED
                          # <reserved>..<reserved>
                          # SINHALA VOWEL SIGN DIGA GAETTA-PILLA..SINHAL
0DF2..0DF3
              PVALID
0DF4
              DISALLOWED
                          # SINHALA PUNCTUATION KUNDDALIYA
ODF5..0E00
              UNASSIGNED
                          # <reserved>..<reserved>
0E01..0E32
                          # THAI CHARACTER KO KAI..THAI CHARACTER SARA A
              PVALID
                          # THAI CHARACTER SARA AM
0E33
              DISALLOWED
0E34..0E3A
                          # THAI CHARACTER SARA I..THAI CHARACTER PHINTH
              PVALID
0E3B..0E3E
              UNASSIGNED
                          # <reserved>..<reserved>
                          # THAI CURRENCY SYMBOL BAHT
0E3F
              DISALLOWED
0E40..0E4E
              PVALID
                          # THAI CHARACTER SARA E..THAI CHARACTER YAMAKK
              DISALLOWED # THAI CHARACTER FONGMAN
0E4F
                          # THAI DIGIT ZERO..THAI DIGIT NINE
0E50..0E59
            ; PVALID
```

```
# THAI CHARACTER ANGKHANKHU..THAI CHARACTER KH
0E5A..0E5B
              DISALLOWED
0E5C..0E80
              UNASSIGNED
                          # <reserved>..<reserved>
0E81..0E82
              PVALID
                          # LAO LETTER KO..LAO LETTER KHO SUNG
              UNASSIGNED # <reserved>
0E83
0E84
              PVALID
                          # LAO LETTER KHO TAM
              UNASSIGNED # <reserved>..<reserved>
0E85..0E86
                          # LAO LETTER NGO..LAO LETTER CO
0E87..0E88
              PVALID
              UNASSIGNED # <reserved>
0E89
                          # LAO LETTER SO TAM
0E8A
              PVALID
              UNASSIGNED # <reserved>..<reserved>
0E8B..0E8C
                          # LAO LETTER NYO
0E8D
              PVALID
              UNASSIGNED # <reserved>..<reserved>
0E8E..0E93
0E94..0E97
              PVALID
                          # LAO LETTER DO..LAO LETTER THO TAM
0E98
              UNASSIGNED # <reserved>
0E99..0E9F
                          # LAO LETTER NO..LAO LETTER FO SUNG
              PVALID
0EA0
              UNASSIGNED # <reserved>
                          # LAO LETTER MO..LAO LETTER LO LING
0EA1..0EA3
              PVALID
              UNASSIGNED # <reserved>
0EA4
                          # LAO LETTER LO LOOT
0EA5
              PVALID
0EA6
              UNASSIGNED # <reserved>
                          # LAO LETTER WO
0EA7
              PVALID
0EA8..0EA9
              UNASSIGNED # <reserved>..<reserved>
OEAA..OEAB
              PVALID
                          # LAO LETTER SO SUNG..LAO LETTER HO SUNG
              UNASSIGNED # <reserved>
0EAC
                          # LAO LETTER O..LAO VOWEL SIGN AA
0EAD..0EB2
              PVALID
              DISALLOWED # LAO VOWEL SIGN AM
0EB3
0EB4..0EB9
                          # LAO VOWEL SIGN I..LAO VOWEL SIGN UU
              PVALID
0EBA
              UNASSIGNED # <reserved>
                          # LAO VOWEL SIGN MAI KON..LAO SEMIVOWEL SIGN N
OEBB..OEBD
              PVALID
OEBE..OEBF
              UNASSIGNED # <reserved>..<reserved>
0EC0..0EC4
                          # LAO VOWEL SIGN E..LAO VOWEL SIGN AI
              PVALID
0EC5
              UNASSIGNED # <reserved>
0EC6
                          # LAO KO LA
              PVALID
              UNASSIGNED # <reserved>
0EC7
0EC8..0ECD
                          # LAO TONE MAI EK..LAO NIGGAHITA
              PVALID
OECE..OECF
              UNASSIGNED # <reserved>..<reserved>
                          # LAO DIGIT ZERO..LAO DIGIT NINE
0ED0..0ED9
              PVALID
OEDA..OEDB
              UNASSIGNED
                          # <reserved>..<reserved>
OEDC..OEDD
              DISALLOWED # LAO HO NO..LAO HO MO
OEDE..OEFF
              UNASSIGNED # <reserved>..<reserved>
                          # TIBETAN SYLLABLE OM
0F00
              PVALID
              DISALLOWED # TIBETAN MARK GTER YIG MGO TRUNCATED A..TIBET PVALID # TIBETAN MARK INTERSYLLABIC TSHEG
0F01..0F0A
0F0B
0F0C..0F17
              DISALLOWED # TIBETAN MARK DELIMITER TSHEG BSTAR..TIBETAN
                          # TIBETAN ASTROLOGICAL SIGN -KHYUD PA..TIBETAN
0F18..0F19
              PVALID
              DISALLOWED # TIBETAN SIGN RDEL DKAR GCIG..TIBETAN SIGN RD
0F1A..0F1F
                     # TIBETAN DIGIT ZERO..TIBETAN DIGIT NINE
0F20..0F29
             PVALID
            ; DISALLOWED # TIBETAN DIGIT HALF ONE..TIBETAN MARK BSDUS R
0F2A..0F34
```

```
; PVALID
                             # TIBETAN MARK NGAS BZUNG NYI ZLA
0F35
            ; DISALLOWED # TIBETAN MARK CARET -DZUD RTAGS BZHI MIG CAN
            # ILBETAN MARK CARET -I
PVALID # TIBETAN MARK NGAS BZU
DISALLOWED # TIBETAN MARK CHE MGO
PVALID # TIBETAN MARK TSA -PHI
DISALLOWED # TIBETAN MARK GIIG RTAG
0F36
0F37
                             # TIBETAN MARK NGAS BZUNG SGOR RTAGS
0F38
                        # TIBETAN MARK TSA -PHRU
0F39
              É DISALLOWED # TIBETAN MARK GUG RTAGS GYON..TIBETAN MARK AN
0F3A..0F3D
               PVALID # TIBETAN SIGN YAR TO
DISALLOWED # TIBETAN LETTER GHA
                             # TIBETAN SIGN YAR TSHES..TIBETAN LETTER GA
0F3E..0F42
0F43
0F44..0F47
              ; PVALID # TIBETAN LETTER NGA..TIBETAN LETTER JA
            ; UNASSIGNED # <reserved>
; PVALID # TIBFTAN IF
0F48
0F49..0F4C
                         # TIBETAN LETTER NYA..TIBETAN LETTER DDA
                DISALLOWED # TIBETAN LETTER DDHA
0F4D
                PVALID # TIBETAN LETTER NNA..TIBETAN LETTER DA
0F4E..0F51
                DISALLOWED # TIBETAN LETTER DHA
0F52
0F53..0F56
                        # TIBETAN LETTER NA..TIBETAN LETTER BA
                PVALID
0F57
                DISALLOWED # TIBETAN LETTER BHA
OF58..OF5B ; PVALID
                        # TIBETAN LETTER MA..TIBETAN LETTER DZA
UF5C ; DISALLOWED # TIBETAN LETTER DZHA
0F5D..0F68 ; PVALID # TIBETAN LETTER WA...
                        # TIBETAN LETTER WA..TIBETAN LETTER A
             ; DISALLOWED # TIBETAN LETTER KSSA
0F69
            ; PVALID # TIBETAN LETTER FIXED-FORM RA..TIBETAN LETTER ; UNASSIGNED # <reserved>...<
0F6A..0F6C
0F6D..0F70
            ; PVALID # TIBETAN VOWEL SIGN AA..TIBETAN VOWEL SIGN I
0F71..0F72
               DISALLOWED # TIBETAN VOWEL SIGN II
0F73
                        # TIBETAN VOWEL SIGN U
0F74
             ; PVALID # TIBETAN VOWEL SIGN U
; DISALLOWED # TIBETAN VOWEL SIGN UU..TIBETAN VOWEL SIGN VO
                PVALID
0F75..0F79
               PVALID # TIBETAN VOWEL SIGN E..TIBETAN VOWEL SIGN REV DISALLOWED # TIBETAN VOWEL SIGN REVERSED II
0F7A..0F80
0F81
0F82..0F84
            ; PVALID # TIBETAN SIGN NYI ZLA NAA DA..TIBETAN MARK HA
            # IIBETAN MARK PALUTA
; PVALID # TIBETAN SIGN LCI RTAGS
; UNASSIGNED # <reserved>..<reserved>
; PVALID # TIRETAN SUBJECTION
0F85
0F86..0F8B
                        # TIBETAN SIGN LCI RTAGS..TIBETAN SIGN GRU MED
0F8C..0F8F
0F90..0F92
              , PVALID # TIBETAN SUBJOINED LETTER KA..TIBETAN SUBJOIN
               DISALLOWED # TIBETAN SUBJOINED LETTER GHA
0F93
            ; PVALID
                        # TIBETAN SUBJOINED LETTER NGA..TIBETAN SUBJOI
0F94..0F97
               UNASSIGNED # <reserved>
0F98
              ; PVALID
0F99..0F9C
                        # TIBETAN SUBJOINED LETTER NYA..TIBETAN SUBJOI
                DISALLOWED # TIBETAN SUBJOINED LETTER DDHA
0F9D
0F9E..0FA1
                PVALID
                         # TIBETAN SUBJOINED LETTER NNA..TIBETAN SUBJOI
0FA2
                DISALLOWED # TIBETAN SUBJOINED LETTER DHA
0FA3..0FA6
                        # TIBETAN SUBJOINED LETTER NA..TIBETAN SUBJOIN
                PVALID
                DISALLOWED # TIBETAN SUBJOINED LETTER BHA
0FA7
OFA8..OFAB
                PVALID
                        # TIBETAN SUBJOINED LETTER MA..TIBETAN SUBJOIN
0FAC
                DISALLOWED # TIBETAN SUBJOINED LETTER DZHA
                         # TIBETAN SUBJOINED LETTER WA..TIBETAN SUBJOIN
OFAD..OFB8 ; PVALID
0FB9 ; DISALLOWED # TIBETAN SUBJOINED LETTER KSSA
0FBA..0FBC ; PVALID # TIBETAN SUBJOINED LETTER FIXED-FORM WA..TIBE
0FBD ; UNASSIGNED # <reserved>
```

```
# TIBETAN KU RU KHA..TIBETAN SYMBOL RDO RJE
OFBE..OFC5
              DISALLOWED
              PVALID
                          # TIBETAN SYMBOL PADMA GDAN
0FC6
              DISALLOWED
0FC7..0FCC
                          # TIBETAN SYMBOL RDO RJE RGYA GRAM..TIBETAN SY
              UNASSIGNED
                          # <reserved>
0FCD
                         # TIBETAN SIGN RDEL NAG RDEL DKAR..LEFT-FACING
OFCE..OFD8
              DISALLOWED
0FD9..0FFF
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MYANMAR LETTER KA..MYANMAR DIGIT NINE
1000..1049
              PVALID
104A..104F
              DISALLOWED
                         # MYANMAR SIGN LITTLE SECTION..MYANMAR SYMBOL
1050..109D
                          # MYANMAR LETTER SHA..MYANMAR VOWEL SIGN AITON
              PVALID
109E..10C5
                         # MYANMAR SYMBOL SHAN ONE..GEORGIAN CAPITAL LE
              DISALLOWED
10C6..10CF
              UNASSIGNED # <reserved>..<reserved>
10D0..10FA
              PVALID
                          # GEORGIAN LETTER AN..GEORGIAN LETTER AIN
10FB..10FC
              DISALLOWED
                          # GEORGIAN PARAGRAPH SEPARATOR..MODIFIER LETTE
10FD..10FF
                          # <reserved>..<reserved>
              UNASSIGNED
1100..11FF
                          # HANGUL CHOSEONG KIYEOK..HANGUL JONGSEONG SSA
              DISALLOWED
1200..1248
              PVALID
                          # ETHIOPIC SYLLABLE HA..ETHIOPIC SYLLABLE QWA
1249
              UNASSIGNED
                         # <reserved>
                          # ETHIOPIC SYLLABLE QWI..ETHIOPIC SYLLABLE QWE
124A..124D
              PVALID
124E..124F
              UNASSIGNED # <reserved>..<reserved>
1250..1256
              PVALID
                          # ETHIOPIC SYLLABLE QHA..ETHIOPIC SYLLABLE QHO
1257
              UNASSIGNED # <reserved>
                          # ETHIOPIC SYLLABLE QHWA
1258
              PVALID
1259
              UNASSIGNED # <reserved>
125A..125D
                          # ETHIOPIC SYLLABLE OHWI..ETHIOPIC SYLLABLE OH
              PVALID
125E..125F
              UNASSIGNED # <reserved>..<reserved>
1260..1288
              PVALID
                          # ETHIOPIC SYLLABLE BA..ETHIOPIC SYLLABLE XWA
1289
              UNASSIGNED # <reserved>
128A..128D
                          # ETHIOPIC SYLLABLE XWI..ETHIOPIC SYLLABLE XWE
              PVALID
128E..128F
              UNASSIGNED # <reserved>..<reserved>
1290..12B0
              PVALID
                          # ETHIOPIC SYLLABLE NA..ETHIOPIC SYLLABLE KWA
12B1
              UNASSIGNED # <reserved>
                          # ETHIOPIC SYLLABLE KWI..ETHIOPIC SYLLABLE KWE
12B2..12B5
              PVALID
12B6..12B7
             UNASSIGNED # <reserved>..<reserved>
                          # ETHIOPIC SYLLABLE KXA..ETHIOPIC SYLLABLE KXO
12B8..12BE
             PVALID
              UNASSIGNED # <reserved>
12BF
12C0
                          # ETHIOPIC SYLLABLE KXWA
              PVALID
12C1
              UNASSIGNED # <reserved>
12C2..12C5
                          # ETHIOPIC SYLLABLE KXWI..ETHIOPIC SYLLABLE KX
              PVALID
12C6..12C7
              UNASSIGNED # <reserved>..<reserved>
                          # ETHIOPIC SYLLABLE WA..ETHIOPIC SYLLABLE PHAR
12C8..12D6
              PVALID
12D7
              UNASSIGNED # <reserved>
                          # ETHIOPIC SYLLABLE ZA..ETHIOPIC SYLLABLE GWA
12D8..1310
              PVALID
1311
              UNASSIGNED # <reserved>
1312..1315
              PVALID
                          # ETHIOPIC SYLLABLE GWI..ETHIOPIC SYLLABLE GWE
1316..1317
             UNASSIGNED # <reserved>..<reserved>
                         # ETHIOPIC SYLLABLE GGA..ETHIOPIC SYLLABLE FYA
1318..135A
              PVALID
             UNASSIGNED # <reserved>..<reserved>
135B..135E
                         # ETHIOPIC COMBINING GEMINATION MARK
135F
             PVALID
```

```
# ETHIOPIC SECTION MARK..ETHIOPIC NUMBER TEN T
1360..137C
              DISALLOWED
137D..137F
              UNASSIGNED
                          # <reserved>..<reserved>
1380..138F
                           # ETHIOPIC SYLLABLE SEBATBEIT MWA..ETHIOPIC SY
              PVALID
                          # ETHIOPIC TONAL MARK YIZET..ETHIOPIC TONAL MA
1390..1399
              DISALLOWED
139A..139F
              UNASSIGNED
                          # <reserved>..<reserved>
                           # CHEROKEE LETTER A..CHEROKEE LETTER YV
13A0..13F4
              PVALID
                          # <reserved>..<reserved>
# CANADIAN SYLLABICS HYPHEN
13F5..13FF
              UNASSIGNED
1400
              DISALLOWED
                          # CANADIAN SYLLABICS E..CANADIAN SYLLABICS CAR
1401..166C
              PVALID
166D..166E
                          # CANADIAN SYLLABICS CHI SIGN..CANADIAN SYLLAB
              DISALLOWED
166F..167F
                          # CANADIAN SYLLABICS QAI..CANADIAN SYLLABICS B
              PVALID
1680
              DISALLOWED
                          # OGHAM SPACE MARK
1681..169A
              PVALID
                          # OGHAM LETTER BEITH..OGHAM LETTER PEITH
169B..169C
                          # OGHAM FEATHER MARK..OGHAM REVERSED FEATHER M
              DISALLOWED
169D..169F
              UNASSIGNED
                          # <reserved>..<reserved>
16A0..16EA
                           # RUNIC LETTER FEHU FEOH FE F..RUNIC LETTER X
              PVALID
                           # RUNIC SINGLE PUNCTUATION..RUNIC BELGTHOR SYM
16EB..16F0
              DISALLOWED
16F1..16FF
              UNASSIGNED
                          # <reserved>..<reserved>
1700..170C
                           # TAGALOG LETTER A..TAGALOG LETTER YA
              PVALID
              UNASSIGNED
170D
                          # <reserved>
170E..1714
                          # TAGALOG LETTER LA..TAGALOG SIGN VIRAMA
              PVALID
1715..171F
              UNASSIGNED
                          # <reserved>..<reserved>
1720..1734
              PVALID
                          # HANUNOO LETTER A..HANUNOO SIGN PAMUDPOD
1735..1736
                          # PHILIPPINE SINGLE PUNCTUATION..PHILIPPINE DO
              DISALLOWED
1737..173F
              UNASSIGNED
                          # <reserved>..<reserved>
1740..1753
              PVALID
                          # BUHID LETTER A..BUHID VOWEL SIGN U
1754..175F
              UNASSIGNED
                          # <reserved>..<reserved>
                          # TAGBANWA LETTER A..TAGBANWA LETTER YA
1760..176C
              PVALID
176D
              UNASSIGNED
                          # <reserved>
176E..1770
                           # TAGBANWA LETTER LA..TAGBANWA LETTER SA
              PVALID
1771
              UNASSIGNED
                          # <reserved>
                          # TAGBANWA VOWEL SIGN I..TAGBANWA VOWEL SIGN U
1772..1773
              PVALID
1774..177F
                          # <reserved>..<reserved>
              UNASSIGNED
1780..17B3
                          # KHMER LETTER KA..KHMER INDEPENDENT VOWEL OAU
              PVALID
                          # KHMER VOWEL INHERENT AQ..KHMER VOWEL INHEREN
17B4..17B5
              DISALLOWED
17B6..17D3
                          # KHMER VOWEL SIGN AA..KHMER SIGN BATHAMASAT
              PVALID
17D4..17D6
              DISALLOWED
                          # KHMER SIGN KHAN..KHMER SIGN CAMNUC PII KUUH
17D7
              PVALID
                          # KHMER SIGN LEK TOO
17D8..17DB
              DISALLOWED
                          # KHMER SIGN BEYYAL..KHMER CURRENCY SYMBOL RIE
17DC..17DD
                          # KHMER SIGN AVAKRAHASANYA..KHMER SIGN ATTHACA
              PVALID
17DE..17DF
              UNASSIGNED
                          # <reserved>..<reserved>
17E0..17E9
                          # KHMER DIGIT ZERO..KHMER DIGIT NINE
              PVALID
17EA..17EF
              UNASSIGNED
                          # <reserved>..<reserved>
                          # KHMER SYMBOL LEK ATTAK SON..KHMER SYMBOL LEK
17F0..17F9
              DISALLOWED
17FA..17FF
              UNASSIGNED
                          # <reserved>..<reserved>
1800..180E
              DISALLOWED
                          # MONGOLIAN BIRGA..MONGOLIAN VOWEL SEPARATOR
180F
              UNASSIGNED
                          # <reserved>
                          # MONGOLIAN DIGIT ZERO..MONGOLIAN DIGIT NINE
1810..1819
              PVALID
```

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181A..181F
              UNASSIGNED
                          # <reserved>..<reserved>
1820..1877
              PVALID
                          # MONGOLIAN LETTER A..MONGOLIAN LETTER MANCHU
                          # <reserved>..<reserved>
1878..187F
              UNASSIGNED
                          # MONGOLIAN LETTER ALI GALI ANUSVARA ONE..MONG
1880..18AA
              PVALID
18AB..18AF
              UNASSIGNED
                          # <reserved>..<reserved>
                          # CANADIAN SYLLABICS OY...CANADIAN SYLLABICS CA
18B0..18F5
              PVALID
18F6..18FF
              UNASSIGNED
                          # <reserved>..<reserved>
1900..191C
                          # LIMBU VOWEL-CARRIER LETTER..LIMBU LETTER HA
              PVALID
191D..191F
              UNASSIGNED # <reserved>..<reserved>
1920..192B
                          # LIMBU VOWEL SIGN A..LIMBU SUBJOINED LETTER W
              PVALID
192C..192F
              UNASSIGNED # <reserved>..<reserved>
1930..193B
              PVALID
                          # LIMBU SMALL LETTER KA..LIMBU SIGN SA-I
193C..193F
              UNASSIGNED
                          # <reserved>..<reserved>
                          # LIMBU SIGN LOO
1940
              DISALLOWED
1941..1943
              UNASSIGNED
                          # <reserved>..<reserved>
1944..1945
              DISALLOWED
                          # LIMBU EXCLAMATION MARK..LIMBU QUESTION MARK
1946..196D
                          # LIMBU DIGIT ZERO..TAI LE LETTER AI
              PVALID
196E..196F
              UNASSIGNED
                          # <reserved>..<reserved>
                          # TAI LE LETTER TONE-2..TAI LE LETTER TONE-6
1970..1974
              PVALID
                          # <reserved>..<reserved>
# NEW TAI LUE LETTER HIGH QA..NEW TAI LUE LETT
              UNASSIGNED
1975..197F
1980..19AB
              PVALID
19AC..19AF
              UNASSIGNED # <reserved>..<reserved>
19B0..19C9
              PVALID
                          # NEW TAI LUE VOWEL SIGN VOWEL SHORTENER..NEW
19CA..19CF
              UNASSIGNED # <reserved>..<reserved>
19D0..19DA
              PVALID
                          # NEW TAI LUE DIGIT ZERO..NEW TAI LUE THAM DIG
19DB..19DD
              UNASSIGNED
                          # <reserved>..<reserved>
                          # NEW TAI LUE SIGN LAE..KHMER SYMBOL DAP-PRAM
19DE..19FF
              DISALLOWED
1A00..1A1B
                          # BUGINESE LETTER KA..BUGINESE VOWEL SIGN AE
              PVALID
1A1C..1A1D
              UNASSIGNED
                          # <reserved>..<reserved>
1A1E..1A1F
              DISALLOWED
                          # BUGINESE PALLAWA..BUGINESE END OF SECTION
1A20..1A5E
                          # TAI THAM LETTER HIGH KA..TAI THAM CONSONANT
              PVALID
1A5F
              UNASSIGNED
                          # <reserved>
1A60..1A7C
                          # TAI THAM SIGN SAKOT..TAI THAM SIGN KHUEN-LUE
              PVALID
1A7D..1A7E
                          # <reserved>..<reserved>
              UNASSIGNED
                          # TAI THAM COMBINING CRYPTOGRAMMIC DOT..TAI TH
1A7F..1A89
              PVALID
1A8A..1A8F
              UNASSIGNED
                          # <reserved>..<reserved>
1A90..1A99
                          # TAI THAM THAM DIGIT ZERO..TAI THAM THAM DIGI
              PVALID
1A9A..1A9F
              UNASSIGNED
                          # <reserved>..<reserved>
                          # TAI THAM SIGN WIANG..TAI THAM SIGN REVERSED
1AA0..1AA6
              DISALLOWED
                          # TAI THAM SIGN MAI YAMOK
1AA7
              PVALID
                          # TAI THAM SIGN KAAN..TAI THAM SIGN CAANG
1AA8..1AAD
              DISALLOWED
1AAE..1AFF
              UNASSIGNED
                          # <reserved>..<reserved>
1B00..1B4B
                          # BALINESE SIGN ULU RICEM..BALINESE LETTER ASY
              PVALID
1B4C..1B4F
              UNASSIGNED
                          # <reserved>..<reserved>
                          # BALINESE DIGIT ZERO..BALINESE DIGIT NINE
1B50..1B59
              PVALID
1B5A..1B6A
              DISALLOWED # BALINESE PANTI..BALINESE MUSICAL SYMBOL DANG
1B6B..1B73
              PVALID
                          # BALINESE MUSICAL SYMBOL COMBINING TEGEH..BAL
              DISALLOWED # BALINESE MUSICAL SYMBOL RIGHT-HAND OPEN DUG.
1B74..1B7C
```

```
1B7D..1B7F
               UNASSIGNED
                             # <reserved>..<reserved>
1B80..1BAA
               PVALID
                             # SUNDANESE SIGN PANYECEK...SUNDANESE SIGN PAMA
1BAB..1BAD
               UNASSIGNED # <reserved>..<reserved>
                             # SUNDANESE LETTER KHA..SUNDANESE DIGIT NINE
1BAE..1BB9
               PVALID
1BBA..1BFF
               UNASSIGNED # <reserved>..<reserved>
                             # LEPCHA LETTER KA..LEPCHA SIGN NUKTA
1C00..1C37
               PVALID
               UNASSIGNED # <reserved>..<reserved>
DISALLOWED # LEPCHA PUNCTUATION TA-ROL..LEPCHA PUNCTUATIO
1C38..1C3A
1C3B..1C3F
1C40..1C49
                             # LEPCHA DIGIT ZERO..LEPCHA DIGIT NINE
               PVALID
1C4A..1C4C
               UNASSIGNED # <reserved>..<reserved>
1C4D..1C7D
                             # LEPCHA LETTER TTA..OL CHIKI AHAD
               PVALID
1C7E..1C7F
               DISALLOWED # OL CHIKI PUNCTUATION MUCAAD..OL CHIKI PUNCTU
1C80..1CCF
               UNASSIGNED # <reserved>..<reserved>
                             # VEDIC TONE KARSHANA..VEDIC TONE PRENKHA
# VEDIC SIGN NIHSHVASA
# VEDIC SIGN YAJURVEDIC MIDLINE SVARITA..VEDIC
1CD0..1CD2
               PVALID
1CD3
               DISALLOWED
               PVALID
1CD4..1CF2
1CF3..1CFF
               UNASSIGNED # <reserved>..<reserved>
1D00..1D2B
                             # LATIN LETTER SMALL CAPITAL A..CYRILLIC LETTE
               PVALID
1D2C..1D2E
               DISALLOWED # MODIFIER LETTER CAPITAL A..MODIFIER LETTER C
                             # MODIFIER LETTER CAPITAL BARRED B
1D2F
               PVALID
               DISALLOWED # MODIFIER LETTER CAPITAL D..MODIFIER LETTER C
1D30..1D3A
                             # MODIFIER LETTER CAPITAL REVERSED N
1D3B
               PVALID
1D3C..1D4D
               DISALLOWED # MODIFIER LETTER CAPITAL O..MODIFIER LETTER S
                             # MODIFIER LETTER SMALL TURNED I
               PVALID
1D4E
               DISALLOWED # MODIFIER LETTER SMALL K..GREEK SUBSCRIPT SMA
1D4F..1D6A
1D6B..1D77
               PVALID
                             # LATIN SMALL LETTER UE..LATIN SMALL LETTER TU
               DISALLOWED # MODIFIER LETTER CYRILLIC EN
1D78
1D79..1D9A
                             # LATIN SMALL LETTER INSULAR G..LATIN SMALL LE
               PVALID
               DISALLOWED # MODIFIER LETTER SMALL TURNED ALPHA..MODIFIER
1D9B..1DBF
1DC0..1DE6
               PVALID
                             # COMBINING DOTTED GRAVE ACCENT..COMBINING LAT
1DE7..1DFC
               UNASSIGNED # <reserved>..<reserved>
                             # COMBINING ALMOST EQUAL TO BELOW..COMBINING R
1DFD..1DFF
               PVALID
               DISALLOWED # LATIN CAPITAL LETTER A WITH RING BELOW
1E00
                             # LATIN SMALL LETTER A WITH RING BELOW
1E01
               PVALID
               DISALLOWED # LATIN CAPITAL LETTER B WITH DOT ABOVE
1E02
                             # LATIN SMALL LETTER B WITH DOT ABOVE
1E03
               PVALID
1E04
               DISALLOWED # LATIN CAPITAL LETTER B WITH DOT BELOW
                             # LATIN SMALL LETTER B WITH DOT BELOW
1E05
               PVALID
1E06
               DISALLOWED # LATIN CAPITAL LETTER B WITH LINE BELOW
                             # LATIN SMALL LETTER B WITH LINE BELOW
1E07
               PVALID
               DISALLOWED # LATIN CAPITAL LETTER C WITH CEDILLA AND ACUT PVALID # LATIN SMALL LETTER C WITH CEDILLA AND ACUTE
1E08
1E09
               DISALLOWED # LATIN CAPITAL LETTER D WITH DOT ABOVE
1E0A
      ; PVALID # LATIN SMALL LETTER D WITH DOT ABOVE
; DISALLOWED # LATIN CAPITAL LETTER D WITH DOT BELOW
; PVALID # LATIN SMALL LETTER D WITH DOT BELOW
; DISALLOWED # LATIN CAPITAL LETTER D WITH LINE BELOW
; PVALID # LATIN SMALL LETTER D WITH LINE BELOW
1E0B
1E0C
1E0D
               DISALLOWED # LATIN CAPITAL LETTER D WITH LINE BELOW
1E0E
1E0F
```

1E10 ;	DISALLOWED	#	LATIN	CAPITAL LETTER	D WITH CEDILLA
1E11 :	PVALID	#	LATIN	SMALL LETTER D	WITH CEDILLA
1E12	DISALLOWED				D WITH CIRCUMFLEX BELOW
1E13 ;	PVALID				WITH CIRCUMFLEX BELOW
1E14 :	DISALLOWED				E WITH MACRON AND GRAVE
1E15 ;					WITH MACRON AND GRAVE
	PVALID				
1E16 ;	DISALLOWED				E WITH MACRON AND ACUTE
1E17 ;	PVALID				WITH MACRON AND ACUTE
1E18 ;	DISALLOWED				E WITH CIRCUMFLEX BELOW
1E19 ;	PVALID				WITH CIRCUMFLEX BELOW
1E1A ;	DISALLOWED	#	LATIN	CAPITAL LETTER	E WITH TILDE BELOW
1E1B ;	PVALID	#	LATIN	SMALL LETTER E	WITH TILDE BELOW
1E1C :	DISALLOWED	#	LATIN	CAPITAL LETTER	E WITH CEDILLA AND BREV
1E1D :	PVALID				WITH CEDILLA AND BREVE
1E1E ;	DISALLOWED				F WITH DOT ABOVE
1E1F :	PVALID			SMALL LETTER F	
1E20 :	DISALLOWED			CAPITAL LETTER	
1E21 :	PVALID			SMALL LETTER G	
1E22 ;	DISALLOWED				H WITH DOT ABOVE
1E23 ;	PVALID			SMALL LETTER H	
1E24 ;	DISALLOWED				H WITH DOT BELOW
1E25 ;	PVALID			SMALL LETTER H	
1E26 ;	DISALLOWED			_	H_WITH_DIAERESIS
1E27 ;	PVALID			SMALL LETTER H	
1E28 ;	DISALLOWED	#	LATIN	CAPITAL LETTER	H WITH CEDILLA
1E29 ;	PVALID	#	LATIN	SMALL LETTER H	WITH CEDILLA
1E2A :	DISALLOWED	#	LATIN	CAPITAL LETTER	H WITH BREVE BELOW
1E2B	PVALID	#			WITH BREVE BELOW
1E2C :	DISALLOWED	#			I WITH TILDE BELOW
1E2D ;	PVALID	#			WITH TILDE BELOW
1E2E :	DISALLOWED	#			I WITH DIAERESIS AND AC
1E2F :	PVALID	#		_	WITH DIAERESIS AND ACUT
1E30 :	DISALLOWED	#		CAPITAL LETTER	
	PVALID			_	
1E31 ;		#		SMALL LETTER K	
1E32 ;	DISALLOWED	#			K WITH DOT BELOW
1E33 ;	PVALID			SMALL LETTER K	
1E34 ;	DISALLOWED				K_WITH_LINE_BELOW
1E35 ;					WITH LINE BELOW
1E36 ;	DISALLOWED	#	LATIN	CAPITAL LETTER	L WITH DOT BELOW
1E37 ;	PVALID	#	LATIN	SMALL LETTER L	WITH DOT BELOW
1E38 ;	DISALLOWED	#	LATIN	CAPITAL LETTER	L WITH DOT BELOW AND MA
1E39 ;	PVALID				WITH DOT BELOW AND MACR
1E3A ;					L WITH LINE BELOW
1E3B	PVALID				WITH LINE BELOW
1E3C ;					L WITH CIRCUMFLEX BELOW
1E3D ;	PVALID				WITH CIRCUMFLEX BELOW
1E3E ;				CAPITAL LETTER	
1E3F ;	PVALID	#	LAIIN	SMALL LETTER M	MIIH ACUIE

4540	D-56411611ED				M LITTLE BOT ABOVE
1E40 ;	DISALLOWED				M_WITH_DOT_ABOVE
1E41 ;	PVALID	#		SMALL LETTER M	
1E42 ;	DISALLOWED	#			M WITH DOT BELOW
1E43	PVALID	#	LATIN	SMALL LETTER M	WITH DOT BELOW
1E44 :	DISALLOWED	#	LATIN	CAPITAL LETTER	N WITH DOT ABOVE
1E45	PVALID	#	LATTN	SMALL LETTER N	WITH DOT ABOVE
1E46	DISALLOWED	#			N WITH DOT BELOW
1E47	PVALID	#		SMALL LETTER N	
1E48	DISALLOWED	#			N WITH LINE BELOW
1E49 :	PVALID	#			WITH LINE BELOW
-					
1E4A ;	DISALLOWED	#			N WITH CIRCUMFLEX BELOW
1E4B ;	PVALID	#			WITH CIRCUMFLEX BELOW
1E4C ;	DISALLOWED	#			O WITH TILDE AND ACUTE
1E4D ;	PVALID	#			WITH TILDE AND ACUTE
1E4E ;	DISALLOWED	#			O WITH TILDE AND DIAERE
1E4F	PVALID	#	LATIN	SMALL LETTER 0	WITH TILDE AND DIAERESI
1E50 :	DISALLOWED	#	LATIN	CAPITAL LETTER	O WITH MACRON AND GRAVE
1E51	PVALID	#	LATIN	SMALL LETTER 0	WITH MACRON AND GRAVE
1E52	DISALLOWED	#	LATIN	CAPITAL LETTER	O WITH MACRON AND ACUTE
1E53	PVALID	#		_	WITH MACRON AND ACUTE
1E54 :	DISALLOWED	#		CAPITAL LETTER	
1E55 ;	PVALID	#		SMALL LETTER P	
1E56 ;	DISALLOWED	#			P WITH DOT ABOVE
1E57 ;	PVALID	#		SMALL LETTER P	
1E58 ;	DISALLOWED	#			R WITH DOT ABOVE
1E59 ;	PVALID	#		SMALL LETTER R	
1E5A ;	DISALLOWED	#			R WITH DOT BELOW
1E5B ;	PVALID	#	LATIN	SMALL LETTER R	WITH DOT BELOW
1E5C ;	DISALLOWED	#	LATIN	CAPITAL LETTER	R WITH DOT BELOW AND MA
1E5D :	PVALID	#	LATIN	SMALL LETTER R	WITH DOT BELOW AND MACR
1E5E :	DISALLOWED	#	LATIN	CAPITAL LETTER	R WITH LINE BELOW
1E5F	PVALID	#			WITH LINE BELOW
1E60	DISALLOWED	#			S WITH DOT ABOVE
1E61	PVALID	#		SMALL LETTER S	
1E62 :	DISALLOWED	#			S WITH DOT BELOW
1E63 :	PVALID	#		SMALL LETTER S	
1E64 ;	DISALLOWED	#			S WITH ACUTE AND DOT AB
1E65 ;	PVALID				WITH ACUTE AND DOT ABOV
1E66 ;	DISALLOWED	#		_	S WITH CARON AND DOT AB
1E67 ;	PVALID	#			WITH CARON AND DOT ABOV
1E68 ;	DISALLOWED	#			S WITH DOT BELOW AND DO
1E69 ;	PVALID	#	LATIN	SMALL LETTER S	WITH DOT BELOW AND DOT
1E6A (DISALLOWED	#	LATIN	CAPITAL LETTER	T WITH DOT ABOVE
1E6B	PVALID	#		SMALL LETTER T	
1E6C	DISALLOWED	#			T WITH DOT BELOW
1E6D ;	PVALID	#		SMALL LETTER T	
1E6E ;	DISALLOWED	#			T WITH LINE BELOW
1E6F ;	PVALID			_	WITH LINE BELOW
TEOF ;	LAWITA	#	FW I TIN	SMALL LETTER I	MILL LINE DEFAM

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RFC 5892

IDNA Code Points

August 2010

LE70

DISALLOWED

# LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW

LE71

DISALLOWED

LE73

PVALID

LE74

DISALLOWED

LATIN SMALL LETTER U WITH DIARRESIS BELOW

LATIN CAPITAL LETTER U WITH DIARRESIS BELOW

LE75

PVALID

LE76

DISALLOWED

LATIN SMALL LETTER U WITH DIARRESIS BELOW

LE77

PVALID

LATIN SMALL LETTER U WITH TILDE BELOW

LATIN CAPITAL LETTER U WITH TILDE BELOW

LATIN SMALL LETTER U WITH TILDE BELOW

LATIN SMALL LETTER U WITH TILDE BELOW

LATIN SMALL LETTER U WITH TILDE BELOW

LE77

PVALID

LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW

LATIN CAPITAL LETTER U WITH TILDE AND ACUTE

LE78

DISALLOWED

LATIN SMALL LETTER U WITH HACRON AND DIARRES

LE79

PVALID

LATIN SMALL LETTER U WITH MACRON AND DIARRES

LE70

DISALLOWED

LATIN SMALL LETTER U WITH MACRON AND DIARRES

LE71

DISALLOWED

LATIN SMALL LETTER V WITH TILDE

LATIN SMALL LETTER V WITH TILDE

LE79

PVALID

LATIN SMALL LETTER W WITH GRAVE

LATIN CAPITAL LETTER W WITH ACUTE

LE84

DISALLOWED

LATIN CAPITAL LETTER W WITH ACUTE

LATIN SMALL LETTER W WITH DIARRESIS

LE84

DISALLOWED

LATIN CAPITAL LETTER W WITH DIARRESIS

LATIN CAPITAL LETTER W WITH DIARRESIS

LE85

PVALID

LATIN SMALL LETTER W WITH DIARRESIS

LATIN CAPITAL LETTER W WITH DOT ABOVE

LATIN CAPITAL LETTER W WITH DOT ABOVE

LATIN CAPITAL LETTER W WITH DOT ABOVE

LATIN SMALL LETTER W WITH DOT ABOVE

LATIN CAPITAL LETTER W WITH DOT BELOW

LATIN CAPITAL LE
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4=40		"
1EA6 ;	DISALLOWED	# LATIN CAPITAL LETTER A WITH CIRCUMFLEX AND
1EA7 :	PVALID	# LATIN SMALL LETTER A WITH CIRCUMFLEX AND GRA
1EA8 :	DISALLOWED	# LATIN CAPITAL LETTER A WITH CIRCUMFLEX AND
1EA9	PVALID	# LATIN SMALL LETTER A WITH CIRCUMFLEX AND HO
1EAA	DISALLOWED	# LATIN CAPITAL LETTER A WITH CIRCUMFLEX AND
1EAB	PVALID	
1EAC	DISALLOWED	# LATIN CAPITAL LETTER A WITH CIRCUMFLEX AND
1EAD ;	PVALID	# LATIN SMALL LETTER A WITH CIRCUMFLEX AND DO
1EAE ;	DISALLOWED	# LATIN CAPITAL LETTER A WITH BREVE AND ACUTE
1EAF	PVALID	# LATIN SMALL LETTER A WITH BREVE AND ACUTE
1EB0 :	DISALLOWED	# LATIN CAPITAL LETTER A WITH BREVE AND GRAVE
1EB1 :	PVALID	# LATIN SMALL LETTER A WITH BREVE AND GRAVE
1EB2	DISALLOWED	# LATIN CAPITAL LETTER A WITH BREVE AND HOOK
1EB3	PVALID	# LATIN SMALL LETTER A WITH BREVE AND HOOK ABO
1EB4 :	DISALLOWED	# LATIN CAPITAL LETTER A WITH BREVE AND HOOK ABO
1EB5	PVALID	# LATIN SMALL LETTER A WITH BREVE AND TILDE
1EB6	DISALLOWED	# LATIN CAPITAL LETTER A WITH BREVE AND DOT B
1EB7 ;	PVALID	# LATIN SMALL LETTER A WITH BREVE AND DOT BELO
1EB8 ;	DISALLOWED	# LATIN CAPITAL LETTER E WITH DOT BELOW
1EB9 :	PVALID	# LATIN SMALL LETTER E WITH DOT BELOW
1EBA :	DISALLOWED	# LATIN CAPITAL LETTER E WITH HOOK ABOVE
1EBB :	PVALID	# LATIN SMALL LETTER E WITH HOOK ABOVE
1EBC :	DISALLOWED	# LATIN CAPITAL LETTER E WITH TILDE
1EBD	PVALID	# LATIN SMALL LETTER E WITH TILDE
1EBE	DISALLOWED	# LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND
1EBF	PVALID	# LATIN SMALL LETTER E WITH CIRCUMFLEX AND AC
1EC0	DISALLOWED	# LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND
1EC1	PVALID	# LATIN SMALL LETTER E WITH CIRCUMFLEX AND GR
1EC2 :	DISALLOWED	# LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND
- ,	,	
1EC3 ;	PVALID	# LATIN SMALL LETTER E WITH CIRCUMFLEX AND HO
1EC4 ;	DISALLOWED	# LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND
1EC5	PVALID	# LATIN SMALL LETTER E WITH CIRCUMFLEX AND TI
1EC6 ;	DISALLOWED	# LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND
1EC7 ;	PVALID	# LATIN SMALL LETTER E WITH CIRCUMFLEX AND DO
1EC8	DISALLOWED	# LATIN CAPITAL LETTER I WITH HOOK ABOVE
1EC9 :	PVALID	# LATIN SMALL LETTER I WITH HOOK ABOVE
1ECA	DISALLOWED	# LATIN CAPITAL LETTER I WITH DOT BELOW
1ECB	PVALID	# LATIN SMALL LETTER I WITH DOT BELOW
1ECC		# LATIN CAPITAL LETTER O WITH DOT BELOW
1ECD	PVALID	# LATIN SMALL LETTER O WITH DOT BELOW
1ECE	DISALLOWED	# LATIN CAPITAL LETTER O WITH HOOK ABOVE
,	,	
1ECF	PVALID	
1ED0	DISALLOWED	# LATIN CAPITAL LETTER O WITH CIRCUMFLEX AND A
1ED1 ;	PVALID	# LATIN SMALL LETTER O WITH CIRCUMFLEX AND ACK
1ED2 ;	DISALLOWED	# LATIN CAPITAL LETTER O WITH CIRCUMFLEX AND
1ED3	PVALID	# LATIN SMALL LETTER O WITH CIRCUMFLEX AND GRA
1ED4		# LATIN CAPITAL LETTER O WITH CIRCUMFLEX AND
1ED5 ;	PVALID	# LATIN SMALL LETTER O WITH CIRCUMFLEX AND HO

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1ED6 | DISALLOWED | # LATIN CAPITAL LETTER O WITH CIRCUMFLEX AND TI LED8 | DISALLOWED | # LATIN SMALL LETTER O WITH CIRCUMFLEX AND TI LED8 | DISALLOWED | # LATIN SMALL LETTER O WITH CIRCUMFLEX AND DI ED9 | PVALID | LATIN SMALL LETTER O WITH CIRCUMFLEX AND DOT ED04 | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND ACUTE LEDB | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND ACUTE LEDB | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND ACUTE LEDB | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND ACUTE LEDB | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND HOOK ABOVE LECO | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER O WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN CAPITAL LETTER U WITH HORN AND ACUTE LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND ACUTE LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND ACUTE LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND ACUTE LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND ACUTE LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND ACUTE LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND ACUTE LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND ACUTE LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND DOT BELOW LECO | DISALLOWED | LATIN SMALL LETTER U WITH HORN AND DOT BELO
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DISALLOWED # GREEK CAPITAL LETTER ETA WITH PSILI..GREEK C
1F28..1F2F
1F30..1F37
                  PVALID
                                 # GREEK SMALL LETTER IOTA WITH PSILI..GREEK SM
                  DISALLOWED # GREEK CAPITAL LETTER IOTA WITH PSILI..GREEK
1F38..1F3F
1F40..1F45
                                 # GREEK SMALL LETTER OMICRON WITH PSILI..GREEK
                  PVALID
1F46..1F47
                  UNASSIGNED
                                # <reserved>..<reserved>
                  DISALLOWED # GREEK CAPITAL LETTER OMICRON WITH PSILI..GRE
1F48..1F4D
                  UNASSIGNED # <reserved>..<reserved>
PVALID # GREEK SMALL LETTER UPSILON WITH PSILI..GREEK
1F4E..1F4F
1F50..1F57
1F58
                                 # <reserved>
                  UNASSIGNED
1F59
                  DISALLOWED # GREEK CAPITAL LETTER UPSILON WITH DASIA
1F5A
                  UNASSIGNED
                                # <reserved>
1F5B
                  DISALLOWED # GREEK CAPITAL LETTER UPSILON WITH DASIA AND
1F5C
                  UNASSIGNED
                                 # <reserved>
                                 # GREEK CAPITAL LETTER UPSILON WITH DASIA AND
1F5D
                  DISALLOWED
1F5E
                  UNASSIGNED
                                 # <reserved>
1F5F
                  DISALLOWED # GREEK CAPITAL LETTER UPSILON WITH DASIA AND
1F60..1F67
                                 # GREEK SMALL LETTER OMEGA WITH PSILI..GREEK S
                  PVALID
1F68..1F6F
                  DISALLOWED # GREEK CAPITAL LETTER OMEGA WITH PSILI..GREEK
1F70
                  PVALID
                                 # GREEK SMALL LETTER ALPHA WITH VARIA
                  DISALLOWED # GREEK SMALL LETTER ALPHA WITH OXIA
1F71
1F72
1F73
                 PVALID # GREEK SMALL LETTER EPSILON WITH VARIA DISALLOWED # GREEK SMALL LETTER EPSILON WITH OXIA
              PVALID # GREEK SMALL LETTER ETA WITH VARIA
DISALLOWED # GREEK SMALL LETTER ETA WITH OXIA
PVALID # GREEK SMALL LETTER IOTA WITH VARIA
DISALLOWED # GREEK SMALL LETTER IOTA WITH OXIA

PVALID # GREEK SMALL LETTER OMICRON WITH VARIA
1F74
1F75
1F76
                              # GREEK SMALL LETTER IOTA WITH VARIA
1F77
                 PVALID # GREEK SMALL LETTER OMICRON WITH VARIA
DISALLOWED # GREEK SMALL LETTER OMICRON WITH OXIA
PVALID # GREEK SMALL LETTER UPSILON WITH VARIA
DISALLOWED # GREEK SMALL LETTER UPSILON WITH OXIA
1F78
1F79
1F7A
              , PVALID
, DISALLO
, PVALID
1F7B
                                 # GREEK SMALL LETTER OMEGA WITH VARIA
1F7C
                  PVALID
                  DISALLOWED # GREEK SMALL LETTER OMEGA WITH OXIA
1F7D
1F7E..1F7F
                  UNASSIGNED # <reserved>..<reserved>
                 DISALLOWED # GREEK SMALL LETTER ALPHA WITH PSILI AND YPOG PVALID # GREEK SMALL LETTER ALPHA WITH VRACHY..GREEK DISALLOWED # GREEK SMALL LETTER ALPHA WITH VARIA AND YPOG
1F80..1FAF
1FB0..1FB1
                 PVALID
1FB2..1FB4
                 DISALLOWED
1FB5
                  UNASSIGNED # <reserved>
                                 # GREEK SMALL LETTER ALPHA WITH PERISPOMENI
1FB6
                  PVALID
1FB7..1FC4
                  DISALLOWED # GREEK SMALL LETTER ALPHA WITH PERISPOMENI AN
                  UNASSIGNED # <reserved>
1FC5
1FC6
                                 # GREEK SMALL LETTER ETA WITH PERISPOMENI
                  PVALID
                  DISALLOWED # GREEK SMALL LETTER ETA WITH PERISPOMENI AND PVALID # GREEK SMALL LETTER IOTA WITH VRACHY..GREEK S
1FC7..1FCF
1FD0..1FD2
                  DISALLOWED # GREEK SMALL LETTER IOTA WITH DIALYTIKA AND O
1FD3
               ; UNASSIGNED # <reserved>..<reserved>
1FD4..1FD5
                                 # GREEK SMALL LETTER IOTA WITH PERISPOMENI..GR
1FD6..1FD7
                 PVALID
                ; DISALLOWED # GREEK CAPITAL LETTER IOTA WITH VRACHY..GREEK
; UNASSIGNED # <reserved>
1FD8..1FDB
1FDC
```

```
# GREEK DASIA AND VARIA..GREEK DASIA AND PERIS
1FDD..1FDF
              DISALLOWED
                          # GREEK SMALL LETTER UPSILON WITH VRACHY..GREE
1FE0..1FE2
              PVALID
                          # GREEK SMALL LETTER UPSILON WITH DIALYTIKA AN
1FE3
              DISALLOWED
                          # GREEK SMALL LETTER RHO WITH PSILI..GREEK SMA
1FE4..1FE7
              PVALID
1FE8..1FEF
              DISALLOWED
                          # GREEK CAPITAL LETTER UPSILON WITH VRACHY..GR
1FF0..1FF1
              UNASSIGNED
                          # <reserved>..<reserved>
                          # GREEK SMALL LETTER OMEGA WITH VARIA AND YPOG
1FF2..1FF4
              DISALLOWED
1FF5
              UNASSIGNED
                          # <reserved>
                          # GREEK SMALL LETTER OMEGA WITH PERISPOMENI
1FF6
              PVALID
1FF7..1FFE
                          # GREEK SMALL LETTER OMEGA WITH PERISPOMENI AN
              DISALLOWED
1FFF
              UNASSIGNED
                          # <reserved>
2000..200B
              DISALLOWED
                          # EN QUAD..ZERO WIDTH SPACE
200C..200D
                          # ZERO WIDTH NON-JOINER..ZERO WIDTH JOINER
              CONTEXTJ
                          # LEFT-TO-RIGHT MARK..INVISIBLE PLUS
200E..2064
              DISALLOWED
2065..2069
              UNASSIGNED
                          # <reserved>..<reserved>
206A..2071
              DISALLOWED
                          # INHIBIT SYMMETRIC SWAPPING..SUPERSCRIPT LATI
2072..2073
              UNASSIGNED
                          # <reserved>..<reserved>
2074..208E
              DISALLOWED
                          # SUPERSCRIPT FOUR...SUBSCRIPT RIGHT PARENTHESI
208F
              UNASSIGNED
                          # <reserved>
2090..2094
              DISALLOWED
                          # LATIN SUBSCRIPT SMALL LETTER A..LATIN SUBSCR
2095..209F
                          # <reserved>..<reserved>
              UNASSIGNED
                          # EURO-CURRENCY SIGN..TENGE SIGN
20A0..20B8
              DISALLOWED
20B9..20CF
              UNASSIGNED
                          # <reserved>..<reserved>
                          # COMBINING LEFT HARPOON ABOVE..COMBINING ASTE
20D0..20F0
              DISALLOWED
20F1..20FF
              UNASSIGNED
                          # <reserved>..<reserved>
2100..214D
              DISALLOWED
                          # ACCOUNT OF..AKTIESELSKAB
214E
                          # TURNED SMALL F
              PVALID
                          # SYMBOL FOR SAMARITAN SOURCE..ROMAN NUMERAL R
# LATIN SMALL LETTER REVERSED C
214F..2183
              DISALLOWED
2184
              PVALID
2185..2189
              DISALLOWED
                          # ROMAN NUMERAL SIX LATE FORM..VULGAR FRACTION
218A..218F
              UNASSIGNED
                          # <reserved>..<reserved>
2190..23E8
                          # LEFTWARDS ARROW..DECIMAL EXPONENT SYMBOL
              DISALLOWED
23E9..23FF
              UNASSIGNED
                          # <reserved>..<reserved>
                          # SYMBOL FOR NULL..SYMBOL FOR SUBSTITUTE FORM
2400..2426
              DISALLOWED
2427..243F
                          # <reserved>..<reserved>
              UNASSIGNED
2440..244A
                          # OCR HOOK..OCR DOUBLE BACKSLASH
              DISALLOWED
244B..245F
              UNASSIGNED
                          # <reserved>..<reserved>
2460..26CD
              DISALLOWED
                          # CIRCLED DIGIT ONE..DISABLED CAR
26CE
              UNASSIGNED
                          # <reserved>
26CF..26E1
                          # PICK..RESTRICTED LEFT ENTRY-2
              DISALLOWED
                          # <reserved>
26E2
              UNASSIGNED
                          # HEAVY CIRCLE WITH STROKE AND TWO DOTS ABOVE
26E3
              DISALLOWED
26E4..26E7
              UNASSIGNED
                          # <reserved>..<reserved>
26E8..26FF
              DISALLOWED
                          # BLACK CROSS ON SHIELD..WHITE FLAG WITH HORIZ
              UNASSIGNED
2700
                          # <reserved>
                          # UPPER BLADE SCISSORS..WHITE SCISSORS
2701..2704
              DISALLOWED
2705
              UNASSIGNED # <reserved>
2706..2709
                          # TELEPHONE LOCATION SIGN..ENVELOPE
            : DISALLOWED
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```
270A..270B
              UNASSIGNED
                          # <reserved>..<reserved>
270C..2727
              DISALLOWED
                          # VICTORY HAND..WHITE FOUR POINTED STAR
2728
              UNASSIGNED
                          # <reserved>
2729..274B
                          # STRESS OUTLINED WHITE STAR..HEAVY EIGHT TEAR
              DISALLOWED
274C
              UNASSIGNED
                          # <reserved>
                          # SHADOWED WHITE CIRCLE
274D
              DISALLOWED
274E
              UNASSIGNED
                          # <reserved>
274F..2752
                          # LOWER RIGHT DROP-SHADOWED WHITE SQUARE..UPPE
              DISALLOWED
2753..2755
              UNASSIGNED
                          # <reserved>..<reserved>
2756..275E
                          # BLACK DIAMOND MINUS WHITE X..HEAVY DOUBLE CO
              DISALLOWED
275F..2760
              UNASSIGNED
                          # <reserved>..<reserved>
2761..2794
                          # CURVED STEM PARAGRAPH SIGN ORNAMENT..HEAVY W
              DISALLOWED
2795..2797
              UNASSIGNED
                          # <reserved>..<reserved>
                          # HEAVY SOUTH EAST ARROW..NOTCHED LOWER RIGHT-
2798..27AF
              DISALLOWED
27B0
                          # <reserved>
              UNASSIGNED
27B1..27BE
              DISALLOWED
                          # NOTCHED UPPER RIGHT-SHADOWED WHITE RIGHTWARD
              UNASSIGNED
27BF
                          # <reserved>
27C0..27CA
              DISALLOWED
                          # THREE DIMENSIONAL ANGLE..VERTICAL BAR WITH H
27CB
              UNASSIGNED
                          # <reserved>
27CC
              DISALLOWED
                          # LONG DIVISION
                          # <reserved>..<reserved>
# WHITE DIAMOND WITH CENTRED DOT..RIGHTWARDS A
27CD..27CF
              UNASSIGNED
            ; DISALLOWED
27D0..2B4C
2B4D..2B4F
              UNASSIGNED
                          # <reserved>..<reserved>
2B50..2B59
              DISALLOWED
                          # WHITE MEDIUM STAR..HEAVY CIRCLED SALTIRE
2B5A..2BFF
              UNASSIGNED
                          # <reserved>..<reserved>
2C00..2C2E
              DISALLOWED
                          # GLAGOLITIC CAPITAL LETTER AZU..GLAGOLITIC CA
2C2F
              UNASSIGNED # <reserved>
2C30..2C5E
                          # GLAGOLITIC SMALL LETTER AZU...GLAGOLITIC SMAL
              PVALID
2C5F
              UNASSIGNED
                          # <reserved>
2C60
              DISALLOWED
                          # LATIN CAPITAL LETTER L WITH DOUBLE BAR
2C61
                          # LATIN SMALL LETTER L WITH DOUBLE BAR
              PVALID
2C62..2C64
                          # LATIN CAPITAL LETTER L WITH MIDDLE TILDE..LA
              DISALLOWED
2C65..2C66
              PVALID
                          # LATIN SMALL LETTER A WITH STROKE..LATIN SMAL
              DISALLOWED # LATIN CAPITAL LETTER H WITH DESCENDER
2C67
                          # LATIN SMALL LETTER H WITH DESCENDER
2C68
              PVALID
2C69
              DISALLOWED # LATIN CAPITAL LETTER K WITH DESCENDER
2C6A
              PVALID
                          # LATIN SMALL LETTER K WITH DESCENDER
              DISALLOWED # LATIN CAPITAL LETTER Z WITH DESCENDER
2C6B
2C6C
              PVALID
                          # LATIN SMALL LETTER Z WITH DESCENDER
2C6D..2C70 ;
              DISALLOWED # LATIN CAPITAL LETTER ALPHA..LATIN CAPITAL LE
                          # LATIN SMALL LETTER V WITH RIGHT HOOK
2C71
              PVALID
              DISALLOWED # LATIN CAPITAL LETTER W WITH HOOK
2C72
2C73..2C74
                          # LATIN SMALL LETTER W WITH HOOK..LATIN SMALL
              PVALID
2C75
              DISALLOWED # LATIN CAPITAL LETTER HALF H
                          # LATIN SMALL LETTER HALF H..LATIN LETTER SMAL
2C76..2C7B
              PVALID
              DISALLOWED # LATIN SUBSCRIPT SMALL LETTER J..COPTIC CAPIT
2C7C..2C80
             PVALID # COPTIC SMALL LETTER ALFA DISALLOWED # COPTIC CAPITAL LETTER VIDA
2C81
2C82
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ZC83 ; PVALID # COPTIC SMALL LETTER VIDA
ZC84 ; DISALLOWED # COPTIC CAPITAL LETTER GAMMA
ZC85 ; PVALID # COPTIC SMALL LETTER GAMMA
ZC86 ; DISALLOWED # COPTIC SMALL LETTER GAMMA
ZC87 ; PVALID # COPTIC SMALL LETTER DALDA
ZC88 ; DISALLOWED # COPTIC SMALL LETTER DALDA
ZC88 ; DISALLOWED # COPTIC SMALL LETTER DALDA
ZC89 ; PVALID # COPTIC SMALL LETTER EIE
ZC8A ; DISALLOWED # COPTIC SMALL LETTER SOU
ZC8B ; DISALLOWED # COPTIC SMALL LETTER SOU
ZC8C ; DISALLOWED # COPTIC SMALL LETTER SOU
ZC8D # DISALLOWED # COPTIC SMALL LETTER ZATA
ZC8E ; DISALLOWED # COPTIC SMALL LETTER HATE
ZC9A ; DISALLOWED # COPTIC SMALL LETTER HATE
ZC91 ; PVALID # COPTIC SMALL LETTER HATE
ZC91 ; PVALID # COPTIC CAPITAL LETTER THETHE
ZC91 ; PVALID # COPTIC CAPITAL LETTER THETHE
ZC92 ; DISALLOWED # COPTIC CAPITAL LETTER TAUDA
ZC93 ; PVALID # COPTIC CAPITAL LETTER TAUDA
ZC94 ; DISALLOWED # COPTIC CAPITAL LETTER TAUDA
ZC95 ; PVALID # COPTIC CAPITAL LETTER KAPA
ZC95 ; PVALID # COPTIC CAPITAL LETTER KAPA
ZC96 ; DISALLOWED # COPTIC CAPITAL LETTER KAPA
ZC97 ; PVALID # COPTIC SMALL LETTER KAPA
ZC98 ; DISALLOWED # COPTIC CAPITAL LETTER KAPA
ZC99 ; PVALID # COPTIC CAPITAL LETTER KAPA
ZC99 ; PVALID # COPTIC SMALL LETTER MI
ZC99 ; PVALID # COPTIC SMALL LETTER NI
ZC90 ; DISALLOWED # COPTIC CAPITAL LETTER NI
ZC90 ; DISALLOWED # COPTIC SMALL LETTER NI
ZC90 ; DISALLOWED # COPTIC SMALL LETTER NO
ZCA3 ; PVALID # COPTIC SMALL LETTER PI
ZCA2 ; DISALLOWED # COPTIC CAPITAL LETTER FAU
ZCA3 ; PVALID # COPTIC SMALL LETTER PI
ZCA4 ; DISALLOWED # COPTIC CAPITAL LETTER NI
ZCA5 ; PVALID # COPTIC SMALL LETTER NI
ZCA6 ; DISALLOWED # COPTIC CAPITAL LETTER PI
ZC
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ZCB3 ; PVALID # COPTIC SMALL LETTER DIALECT-P ALEF
ZCB4 ; DISALLOWED # COPTIC CAPITAL LETTER OLD COPTIC AIN
ZCB5 ; PVALID # COPTIC SMALL LETTER OLD COPTIC AIN
ZCB6 ; DISALLOWED # COPTIC SMALL LETTER CRYPTOGRAMMIC EIE
ZCB7 ; PVALID # COPTIC SMALL LETTER CRYPTOGRAMMIC EIE
ZCB8 ; DISALLOWED # COPTIC SMALL LETTER CRYPTOGRAMMIC EIE
ZCB9 ; PVALID # COPTIC SMALL LETTER DIALECT-P KAPA
ZCBA DISALLOWED # COPTIC SMALL LETTER DIALECT-P NI
ZCBC # DISALLOWED # COPTIC CAPITAL LETTER CRYPTOGRAMMIC NI
ZCBD # PVALID # COPTIC SMALL LETTER DIALECT-P NI
ZCBC # DISALLOWED # COPTIC CAPITAL LETTER CRYPTOGRAMMIC NI
ZCBD # PVALID # COPTIC SMALL LETTER DIALECT-P NI
ZCBC # DISALLOWED # COPTIC CAPITAL LETTER CRYPTOGRAMMIC NI
ZCBC # DISALLOWED # COPTIC CAPITAL LETTER OLD COPTIC OOU
ZCC0 # DISALLOWED # COPTIC CAPITAL LETTER OLD COPTIC OOU
ZCC0 # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC OOU
ZCC1 # PVALID # COPTIC SMALL LETTER CROSSED SHEI
ZCC2 # DISALLOWED # COPTIC SMALL LETTER CROSSED SHEI
ZCC3 # PVALID # COPTIC SMALL LETTER CROSSED SHEI
ZCC4 # DISALLOWED # COPTIC CAPITAL LETTER OLD COPTIC SHEI
ZCC4 # DISALLOWED # COPTIC CAPITAL LETTER OLD COPTIC SHEI
ZCC6 # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC SHEI
ZCC6 # DISALLOWED # COPTIC CAPITAL LETTER OLD COPTIC SHEI
ZCC6 # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC CESH
ZCC6 # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC CESH
ZCC6 # DISALLOWED # COPTIC CAPITAL LETTER OLD COPTIC HORI
ZCCC # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC HORI
ZCCC # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC HA
ZCCC # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC HA
ZCCC # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC HA
ZCCC # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC HA
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ZCCC # DISALLOWED # COPTIC SMALL LETTER OLD COPTIC HA
ZCCC # DISALLOWED # COPTIC CAPITAL LETTER OLD COPTIC HA
ZCCC # DISALLOWED # COPTIC CAPITAL LETTER OLD COPTIC HA
ZCCC # DISALLOWED #
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# COPTIC SMALL LETTER OLD NUBIAN WAU..COPTIC S # COPTIC SYMBOL MI RO..COPTIC CAPITAL LETTER C
2CE3..2CE4
              PVALID
              DISALLOWED
2CE5..2CEB
                          # COPTIC SMALL LETTER CRYPTOGRAMMIC SHEI
2CEC
              PVALID
                          # COPTIC CAPITAL LETTER CRYPTOGRAMMIC GANGIA
2CED
              DISALLOWED
2CEE..2CF1
              PVALID
                          # COPTIC SMALL LETTER CRYPTOGRAMMIC GANGIA..CO
2CF2..2CF8
              UNASSIGNED
                          # <reserved>..<reserved>
2CF9..2CFF
              DISALLOWED
                          # COPTIC OLD NUBIAN FULL STOP..COPTIC MORPHOLO
2D00..2D25
                          # GEORGIAN SMALL LETTER AN..GEORGIAN SMALL LET
              PVALID
2D26..2D2F
              UNASSIGNED
                          # <reserved>..<reserved>
2D30..2D65
                          # TIFINAGH LETTER YA..TIFINAGH LETTER YAZZ
              PVALID
2D66..2D6E
              UNASSIGNED
                          # <reserved>..<reserved>
2D6F
              DISALLOWED
                          # TIFINAGH MODIFIER LETTER LABIALIZATION MARK
2D70..2D7F
              UNASSIGNED
                          # <reserved>..<reserved>
                          # ETHIOPIC SYLLABLE LOA..ETHIOPIC SYLLABLE GGW
2D80..2D96
              PVALID
2D97..2D9F
              UNASSIGNED
                          # <reserved>..<reserved>
2DA0..2DA6
              PVALID
                          # ETHIOPIC SYLLABLE SSA..ETHIOPIC SYLLABLE SSO
              UNASSIGNED
                          # <reserved>
2DA7
                          # ETHIOPIC SYLLABLE CCA..ETHIOPIC SYLLABLE CCO
2DA8..2DAE
              PVALID
              UNASSIGNED # <reserved>
2DAF
2DB0..2DB6
              PVALID
                          # ETHIOPIC SYLLABLE ZZA..ETHIOPIC SYLLABLE ZZO
              UNASSIGNED # <reserved>
2DB7
2DB8..2DBE
                          # ETHIOPIC SYLLABLE CCHA..ETHIOPIC SYLLABLE CC
              PVALID
              UNASSIGNED # <reserved>
2DBF
2DC0..2DC6
                          # ETHIOPIC SYLLABLE QYA..ETHIOPIC SYLLABLE QYO
              PVALID
2DC7
              UNASSIGNED # <reserved>
2DC8..2DCE
              PVALID
                          # ETHIOPIC SYLLABLE KYA..ETHIOPIC SYLLABLE KYO
              UNASSIGNED # <reserved>
2DCF
2DD0..2DD6
                          # ETHIOPIC SYLLABLE XYA..ETHIOPIC SYLLABLE XYO
              PVALID
2DD7
              UNASSIGNED
                          # <reserved>
                          # ETHIOPIC SYLLABLE GYA..ETHIOPIC SYLLABLE GYO
              PVALID
2DD8..2DDE
                          # <reserved>
2DDF
              UNASSIGNED
                          # COMBINING CYRILLIC LETTER BE..COMBINING CYRI
2DE0..2DFF
              PVALID
              DISALLOWED # RIGHT ANGLE SUBSTITUTION MARKER..REVERSED QU
2E00..2E2E
                          # VERTICAL TILDE
2E2F
              PVALID
2E30..2E31
              DISALLOWED
                          # RING POINT..WORD SEPARATOR MIDDLE DOT
2E32..2E7F
                          # <reserved>..<reserved>
              UNASSIGNED
                          # CJK RADICAL REPEAT..CJK RADICAL RAP
2E80..2E99
              DISALLOWED
2E9A
              UNASSIGNED
                          # <reserved>
                          # CJK RADICAL CHOKE..CJK RADICAL C-SIMPLIFIED
2E9B..2EF3
              DISALLOWED
2EF4..2EFF
              UNASSIGNED
                          # <reserved>..<reserved>
2F00..2FD5
              DISALLOWED
                          # KANGXI RADICAL ONE..KANGXI RADICAL FLUTE
2FD6..2FEF
              UNASSIGNED
                          # <reserved>..<reserved>
2FF0..2FFB
                          # IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RI
              DISALLOWED
2FFC..2FFF
              UNASSIGNED
                          # <reserved>..<reserved>
                          # IDEOGRAPHIC SPACE..JAPANESE INDUSTRIAL STAND
3000..3004
              DISALLOWED
                          # IDEOGRAPHIC ITERATION MARK..IDEOGRAPHIC NUMB
3005..3007
              PVALID
              DISALLOWED # LEFT ANGLE BRACKET..HANGZHOU NUMERAL NINE
3008..3029
                          # IDEOGRAPHIC LEVEL TONE MARK..IDEOGRAPHIC ENT
302A..302D
            PVALID
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DISALLOWED
                           # HANGUL SINGLE DOT TONE MARK..VERTICAL IDEOGR
302E..303B
303C
              PVALID
                           # MASU MARK
              DISALLOWED
                           # PART ALTERNATION MARK..IDEOGRAPHIC HALF FILL
303D..303F
3040
              UNASSIGNED
                           # <reserved>
                           # HIRAGANA LETTER SMALL A..HIRAGANA LETTER SMA
3041..3096
              PVALID
                           # <reserved>..<reserved>
3097..3098
              UNASSIGNED
3099..309A
              PVALID
                           # COMBINING KATAKANA-HIRAGANA VOICED SOUND MAR
              DISALLOWED # KATAKANA-HIRAGANA VOICED SOUND MARK..KATAKAN
309B..309C
309D..309E
                           # HIRAGANA ITERATION MARK..HIRAGANA VOICED ITE
              PVALID
              DISALLOWED # HIRAGANA DIGRAPH YORI..KATAKANA-HIRAGANA DOU PVALID # KATAKANA LETTER SMALL A..KATAKANA LETTER VO
309F..30A0
30A1..30FA
30FB
              CONTEXTO
                           # KATAKANA MIDDLE DOT
30FC..30FE
              PVALID
                           # KATAKANA-HIRAGANA PROLONGED SOUND MARK..KATA
                           # KATAKANA DIGRAPH KOTO
30FF
              DISALLOWED
3100..3104
                           # <reserved>..<reserved>
              UNASSIGNED
3105..312D
              PVALID
                           # BOPOMOFO LETTER B..BOPOMOFO LETTER IH
312E..3130
              UNASSIGNED
                           # <reserved>..<reserved>
                           # HANGUL LETTER KIYEOK..HANGUL LETTER ARAEAE
3131..318E
              DISALLOWED
318F
              UNASSIGNED
                           # <reserved>
                           # IDEOGRAPHIC ANNOTATION LINKING MARK..IDEOGRA
3190..319F
              DISALLOWED
                           # BOPOMOFO LETTER BU..BOPOMOFO FINAL LETTER H
31A0..31B7
              PVALID
31B8..31BF
              UNASSIGNED
                           # <reserved>..<reserved>
31C0..31E3
              DISALLOWED
                           # CJK STROKE T...CJK STROKE Q
31E4..31EF
              UNASSIGNED
                           # <reserved>..<reserved>
31F0..31FF
              PVALID
                           # KATAKANA LETTER SMALL KU..KATAKANA LETTER SM
3200..321E
              DISALLOWED
                           # PARENTHESIZED HANGUL KIYEOK..PARENTHESIZED K
321F
                           # <reserved>
              UNASSIGNED
                           # PARENTHESIZED IDEOGRAPH ONE..CIRCLED KATAKAN
3220..32FE
              DISALLOWED
32FF
              UNASSIGNED
                           # <reserved>
3300..33FF
              DISALLOWED
                           # SQUARE APAATO...SQUARE GAL
                           # <CJK Ideograph Extension A>..<CJK Ideograph
3400..4DB5
              PVALID
4DB6..4DBF
              UNASSIGNED
                           # <reserved>..<reserved>
                           # HEXAGRAM FOR THE CREATIVE HEAVEN..HEXAGRAM F
4DC0..4DFF
              DISALLOWED
                           # <CJK Ideograph>..<CJK Ideograph>
4E00..9FCB
              PVALID
                           # <reserved>..<reserved>
# YI SYLLABLE IT..YI SYLLABLE YYR
9FCC..9FFF
              UNASSIGNED
A000..A48C
              PVALID
A48D..A48F
                           # <reserved>..<reserved>
              UNASSIGNED
A490..A4C6
                           # YI RADICAL OOT..YI RADICAL KE
              DISALLOWED
A4C7..A4CF
              UNASSIGNED
                           # <reserved>..<reserved>
A4D0..A4FD
              PVALID
                           # LISU LETTER BA..LISU LETTER TONE MYA JEU
A4FE..A4FF
              DISALLOWED
                           # LISU PUNCTUATION COMMA..LISU PUNCTUATION FUL
                           # VAI SYLLABLE EE..VAI SYLLABLE LENGTHENER
# VAI COMMA..VAI QUESTION MARK
A500..A60C
              PVALID
A60D..A60F
              DISALLOWED
A610..A62B
              PVALID
                           # VAI SYLLABLE NDOLE FA..VAI SYLLABLE NDOLE DO
                           # <reserved>..<reserved>
A62C..A63F
              UNASSIGNED
              DISALLOWED # CYRILLIC CAPITAL LETTER ZEMLYA
A640
                           # CYRILLIC SMALL LETTER ZEMLYA
A641
              PVALID
             : DISALLOWED # CYRILLIC CAPITAL LETTER DZELO
A642
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; PVALID
                                                                       # LATIN SMALL LETTER THORN WITH STROKE
A765
A766
A767
A767
A768
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A768
A769
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A768
A768
A760
A769
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A761

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A760

BERNALDWED

BER
 A765
                                       PVALID # LATIN SMALL LETTER DUM..LATIN SMALL LETTER U DISALLOWED # LATIN CAPITAL LETTER INSULAR D
 A779
                               ; PVALID
                                                                  # LATIN SMALL LETTER INSULAR D
 A77A
                                ; DISALLOWED # LATIN CAPITAL LETTER INSULAR F
 A77B
                                       PVALID
                                                               # LATIN SMALL LETTER INSULAR F
 A77C
 A77D..A77E ;
                                       DISALLOWED # LATIN CAPITAL LETTER INSULAR G..LATIN CAPITA
                                                            # LATIN SMALL LETTER TURNED INSULAR G
 A77F
                                       PVALID
A780
A781
A782
A783
                   DISALLOWED # LATIN CAPITAL LETTER TURNED L
PVALID # LATIN SMALL LETTER TURNED L
DISALLOWED # LATIN CAPITAL LETTER INSULAR R
PVALID # LATIN SMALL LETTER INSULAR R
DISALLOWED # LATIN CAPITAL LETTER INSULAR S
PVALID # LATIN SMALL LETTER INSULAR S
DISALLOWED # LATIN CAPITAL LETTER INSULAR T
                                       DISALLOWED # LATIN CAPITAL LETTER TURNED L
 A784
 A785
 A786
                               ; PVALID # LATIN SMALL LETTER INSULAR T..MODIFIER LETTE ; DISALLOWED # MODIFIER LETTER COLON..LATIN CAPITAL LETTER
 A787..A788
 A789..A78B
                               # LATIN SMALL LETTER SALTILLO

; UNASSIGNED # <reserved>..<reserved>
; PVALID # LATIN EPIGRAPHIC LETTER REVERSED F..SYLOTI N
; DISALLOWED # SYLOTI NAGRI POETRY MARK-1..SYLOTI NAGRI POE
; UNASSIGNED # <reserved>..<
 A78C
 A78D..A7FA
 A7FB..A827
 A828..A82B
 A82C..A82F
                                       DISALLOWED # NORTH INDIC FRACTION ONE OUARTER..NORTH INDI
 A830..A839
                                      UNASSIGNED # <reserved>..<reserved>
PVALID # PHAGS-PA LETTER KA..PHAGS-PA LETTER CANDRABI
 A83A..A83F
                                   ; PVALID
 A840..A873
 A874..A877
                                   ; DISALLOWED
                                                                      # PHAGS-PA SINGLE HEAD MARK..PHAGS-PA MARK DOU
 A878..A87F
                                   : UNASSIGNED # <reserved>..<reserved>
 A880..A8C4
                                       PVALID
                                                                       # SAURASHTRA SIGN ANUSVARA..SAURASHTRA SIGN VI
 A8C5..A8CD
                                   : UNASSIGNED # <reserved>..<reserved>
                                ; DISALLOWED # SAURASHTRA DANDA..SAURASHTRA DOUBLE DANDA
; PVALID # SAURASHTRA DIGIT ZERO..SAURASHTRA DIGIT NINE
 A8CE..A8CF
                                ; PVALID
 A8D0..A8D9
                                  ; UNASSIGNED # <reserved>..<reserved>
 A8DA..A8DF
                               ; UNASSIGNED # <reserved>..<reserved>
; PVALID # COMBINING DEVANAGARI DIGIT ZERO..DEVANAGARI; DISALLOWED # DEVANAGARI SIGN PUSHPIKA..DEVANAGARI CARET
                                                                      # COMBINING DEVANAGARI DIGIT ZERO..DEVANAGARI
 A8E0..A8F7
 A8F8..A8FA
                                                          # DEVANAGARI HEADSTROKE
 A8FB
                                    PVALID
A8FC..A8FF ; UNASSIGNED # <reserved>..<reserved>
A900..A92D ; PVALID # KAYAH LI DIGIT ZERO..KAYAH LI TONE CALYA PLO
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# KAYAH LI SIGN CWI..KAYAH LI SIGN SHYA
A92E..A92F
               DISALLOWED
A930..A953
               PVALID
                            # REJANG LETTER KA..REJANG VIRAMA
A954..A95E
               UNASSIGNED
                            # <reserved>..<reserved>
                            # REJANG SECTION MARK..HANGUL CHOSEONG SSANGYE
A95F..A97C
               DISALLOWED
A97D..A97F
               UNASSIGNED
                            # <reserved>..<reserved>
                            # JAVANESE SIGN PANYANGGA..JAVANESE PANGKON
A980..A9C0
               PVALID
                            # JAVANESE LEFT RERENGGAN..JAVANESE TURNED PAD
A9C1..A9CD
               DISALLOWED
                            # <reserved>
A9CE
               UNASSIGNED
                            # JAVANESE PANGRANGKEP...JAVANESE DIGIT NINE
A9CF..A9D9
               PVALID
A9DA..A9DD
                            # <reserved>..<reserved>
               UNASSIGNED
                            # JAVANESE PADA TIRTA TUMETES..JAVANESE PADA I
A9DE..A9DF
               DISALLOWED
A9E0..A9FF
               UNASSIGNED
                            # <reserved>..<reserved>
AA00..AA36
               PVALID
                            # CHAM LETTER A..CHAM CONSONANT SIGN WA
AA37..AA3F
               UNASSIGNED
                            # <reserved>..<reserved>
                            # CHAM LETTER FINAL K..CHAM CONSONANT SIGN FIN
AA40..AA4D
               PVALID
AA4E..AA4F
               UNASSIGNED
                            # <reserved>..<reserved>
                            # CHAM DIGIT ZERO..CHAM DIGIT NINE
AA50..AA59
               PVALID
               UNASSIGNED
AA5A..AA5B
                            # <reserved>..<reserved>
                            # CHAM PUNCTUATION SPIRAL..CHAM PUNCTUATION TR
AA5C..AA5F
               DISALLOWED
AA60..AA76
               PVALID
                            # MYANMAR LETTER KHAMTI GA..MYANMAR LOGOGRAM K
                            # MYANMAR SYMBOL AITON EXCLAMATION..MYANMAR SY
AA77..AA79
               DISALLOWED
AA7A..AA7B
               PVALID
                            # MYANMAR LETTER AITON RA..MYANMAR SIGN PAO KA
AA7C..AA7F
               UNASSIGNED # <reserved>..<reserved>
                            # TAI VIET LETTER LOW KO..TAI VIET TONE MAI SO
AA80..AAC2
               PVALID
AAC3..AADA
               UNASSIGNED # <reserved>..<reserved>
AADB..AADD
               PVALID
                            # TAI VIET SYMBOL KON..TAI VIET SYMBOL SAM
                            # TAI VIET SYMBOL HO HOI..TAI VIET SYMBOL KOI
AADE..AADF
               DISALLOWED
                            # <reserved>..<reserved>
AAEO..ABBF
               UNASSIGNED
                            # MEETEI MAYEK LETTER KOK..MEETEI MAYEK VOWEL
ABCO..ABEA
               PVALID
               DISALLOWED
                            # MEETEI MAYEK CHEIKHEI
ABEB
                            # MEETEI MAYEK LUM IYEK..MEETEI MAYEK APUN IYE
ABEC..ABED
               PVALID
ABEE..ABEF
               UNASSIGNED # <reserved>..<reserved>
ABF0..ABF9
                            # MEETEI MAYEK DIGIT ZERO..MEETEI MAYEK DIGIT
               PVALID
               UNASSIGNED # <reserved>..<reserved>
PVALID # <Hangul Syllable>..<Hangul Syllable>
ABFA..ABFF
AC00..D7A3
D7A4..D7AF
                            # <reserved>..<reserved>
               UNASSIGNED
D7B0..D7C6
                            # HANGUL JUNGSEONG O-YEO..HANGUL JUNGSEONG ARA
               DISALLOWED
D7C7..D7CA
               UNASSIGNED
                            # <reserved>..<reserved>
D7CB..D7FB
               DISALLOWED
                            # HANGUL JONGSEONG NIEUN-RIEUL..HANGUL JONGSEO
D7FC..D7FF
               UNASSIGNED
                            # <reserved>..<reserved>
D800..FA0D
               DISALLOWED
                            # <Non Private Use High Surrogate>..CJK COMPAT
               PVALID # CJK COMPATIBILITY IDEOGRAPH-FA0E..CJK COMPAT DISALLOWED # CJK COMPATIBILITY IDEOGRAPH-FA10
PVALID # CJK COMPATIBILITY IDEOGRAPH-FA11
DISALLOWED # CJK COMPATIBILITY IDEOGRAPH-FA12
FAOE..FAOF
FA10
FA11
FA12
                            # CJK COMPATIBILITY IDEOGRAPH-FA13..CJK COMPAT
FA13..FA14
               PVALID
               DISALLOWED # CJK COMPATIBILITY IDEOGRAPH-FA15..CJK COMPAT PVALID # CJK COMPATIBILITY IDEOGRAPH-FA1F
FA15..FA1E
FA1F
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```
DISALLOWED # CJK COMPATIBILITY IDEOGRAPH-FA20
PVALID # CJK COMPATIBILITY IDEOGRAPH-FA21
DISALLOWED # CJK COMPATIBILITY IDEOGRAPH-FA22
PVALID # CJK COMPATIBILITY IDEOGRAPH-FA23..CJK COMPAT
FA20
FA21
FA22
FA23..FA24
               DISALLOWED # CJK COMPATIBILITY IDEOGRAPH-FA25..CJK COMPAT
FA25..FA26
                            # CJK COMPATIBILITY IDEOGRAPH-FA27..CJK COMPAT # CJK COMPATIBILITY IDEOGRAPH-FA2A..CJK COMPAT
FA27..FA29
               PVALID
FA2A..FA2D
               DISALLOWED
FA2E..FA2F
                            # <reserved>..<reserved>
# CJK COMPATIBILITY IDEOGRAPH-FA30..CJK COMPAT
               UNASSIGNED
FA30..FA6D
               DISALLOWED
FA6E..FA6F
               UNASSIGNED
                            # <reserved>..<reserved>
FA70..FAD9
               DISALLOWED
                            # CJK COMPATIBILITY IDEOGRAPH-FA70..CJK COMPAT
FADA..FAFF
               UNASSIGNED
                            # <reserved>..<reserved>
FB00..FB06
               DISALLOWED
                            # LATIN SMALL LIGATURE FF..LATIN SMALL LIGATUR
FB07..FB12
               UNASSIGNED
                            # <reserved>..<reserved>
                            # ARMENIAN SMALL LIGATURE MEN NOW..ARMENIAN SM
FB13..FB17
               DISALLOWED
FB18..FB1C
               UNASSIGNED
                            # <reserved>..<reserved>
                            # HEBREW LETTER YOD WITH HIRIO
FB1D
               DISALLOWED
                            # HEBREW POINT JUDEO-SPANISH VARIKA
FB1E
               PVALID
FB1F..FB36
               DISALLOWED
                            # HEBREW LIGATURE YIDDISH YOD YOD PATAH..HEBRE
               UNASSIGNED
FB37
                            # <reserved>
FB38..FB3C
                            # HEBREW LETTER TET WITH DAGESH..HEBREW LETTER
               DISALLOWED
                            # <reserved>
FB3D
               UNASSIGNED
                            # HEBREW LETTER MEM WITH DAGESH
FB3E
               DISALLOWED
FB3F
               UNASSIGNED
                            # <reserved>
                            # HEBREW LETTER NUN WITH DAGESH..HEBREW LETTER
FB40..FB41
               DISALLOWED
               UNASSIGNED
FB42
                            # <reserved>
FB43..FB44
               DISALLOWED
                            # HEBREW LETTER FINAL PE WITH DAGESH..HEBREW L
FB45
               UNASSIGNED
                            # <reserved>
FB46..FBB1
               DISALLOWED
                            # HEBREW LETTER TSADI WITH DAGESH..ARABIC LETT
FBB2..FBD2
               UNASSIGNED
                            # <reserved>..<reserved>
               DISALLOWED
FBD3..FD3F
                            # ARABIC LETTER NG ISOLATED FORM..ORNATE RIGHT
FD40..FD4F
               UNASSIGNED
                            # <reserved>..<reserved>
FD50..FD8F
                            # ARABIC LIGATURE TEH WITH JEEM WITH MEEM INIT
               DISALLOWED
FD90..FD91
                            # <reserved>..<reserved>
               UNASSIGNED
                            # ARABIC LIGATURE MEEM WITH JEEM WITH KHAH INI
FD92..FDC7
               DISALLOWED
FDC8..FDCF
                            # <reserved>..<reserved>
               UNASSIGNED
FDD0..FDFD
               DISALLOWED
                            # <noncharacter>..ARABIC LIGATURE BISMILLAH AR
FDFE..FDFF
               UNASSIGNED
                            # <reserved>..<reserved>
FE00..FE19
               DISALLOWED
                            # VARIATION SELECTOR-1..PRESENTATION FORM FOR
FE1A..FE1F
               UNASSIGNED
                            # <reserved>..<reserved>
FE20..FE26
               PVALID
                            # COMBINING LIGATURE LEFT HALF..COMBINING CONJ
FE27..FE2F
               UNASSIGNED
                            # <reserved>..<reserved>
FE30..FE52
                            # PRESENTATION FORM FOR VERTICAL TWO DOT LEADE
               DISALLOWED
FE53
               UNASSIGNED
                            # <reserved>
FE54..FE66
                            # SMALL SEMICOLON..SMALL EQUALS SIGN
               DISALLOWED
FE67
               UNASSIGNED
                            # <reserved>
             ; DISALLOWED # SMALL REVERSE SOLIDUS..SMALL COMMERCIAL AT
FE68..FE6B
FE6C..FE6F
             UNASSIGNED
                            # <reserved>..<reserved>
```

```
# ARABIC FATHATAN ISOLATED FORM..ARABIC DAMMAT
FE70..FE72
              DISALLOWED
                           # ARABIC TAIL FRAGMENT
              PVALID
FE73
FE74
              DISALLOWED
                           # ARABIC KASRATAN ISOLATED FORM
              UNASSIGNED
                           # <reserved>
FE75
              DISALLOWED
FE76..FEFC
                           # ARABIC FATHA ISOLATED FORM..ARABIC LIGATURE
FEFD..FEFE
              UNASSIGNED
                           # <reserved>..<reserved>
FEFF
              DISALLOWED
                           # ZERO WIDTH NO-BREAK SPACE
FF00
              UNASSIGNED
                           # <reserved>
FF01..FFBE
                           # FULLWIDTH EXCLAMATION MARK..HALFWIDTH HANGUL
              DISALLOWED
FFBF..FFC1
                           # <reserved>..<reserved>
              UNASSIGNED
FFC2..FFC7
                           # HALFWIDTH HANGUL LETTER A..HALFWIDTH HANGUL
              DISALLOWED
                           # <reserved>..<reserved>
FFC8..FFC9
              UNASSIGNED
                           # HALFWIDTH HANGUL LETTER YEO..HALFWIDTH HANGU
FFCA..FFCF
              DISALLOWED
FFD0..FFD1
              UNASSIGNED
                           # <reserved>..<reserved>
FFD2..FFD7
              DISALLOWED
                           # HALFWIDTH HANGUL LETTER YO..HALFWIDTH HANGUL
FFD8..FFD9
              UNASSIGNED
                           # <reserved>..<reserved>
FFDA..FFDC
                           # HALFWIDTH HANGUL LETTER EU..HALFWIDTH HANGUL
              DISALLOWED
FFDD..FFDF
              UNASSIGNED
                           # <reserved>..<reserved>
FFE0..FFE6
              DISALLOWED
                           # FULLWIDTH CENT SIGN..FULLWIDTH WON SIGN
FFE7
              UNASSIGNED
                           # <reserved>
                           # HALFWIDTH FORMS LIGHT VERTICAL..HALFWIDTH WH
FFE8..FFEE
              DISALLOWED
                           # <reserved>..<reserved>
FFEF..FFF8
              UNASSIGNED
                           # INTERLINEAR ANNOTATION ANCHOR..<noncharacter
FFF9..FFFF
              DISALLOWED
10000..1000B:
              PVALID
                           # LINEAR B SYLLABLE B008 A..LINEAR B SYLLABLE
1000C
              UNASSIGNED
                           # <reserved>
1000D..10026;
              PVALID
                           # LINEAR B SYLLABLE B036 JO..LINEAR B SYLLABLE
              UNASSIGNED
                           # <reserved>
10027
10028..1003A;
                           # LINEAR B SYLLABLE B060 RA..LINEAR B SYLLABLE
              PVALID
              UNASSIGNED
1003B
                           # <reserved>
                           # LINEAR B SYLLABLE B017 ZA..LINEAR B SYLLABLE
1003C..1003D;
              PVALID
1003E
              UNASSIGNED
                           # <reserved>
                           # LINEAR B SYLLABLE B020 ZO..LINEAR B SYLLABLE
1003F..1004D;
              PVALID
1004E..1004F;
              UNASSIGNED
                           # <reserved>..<reserved>
10050..1005D:
                           # LINEAR B SYMBOL B018..LINEAR B SYMBOL B089
              PVALID
1005E..1007F;
              UNASSIGNED
                           # <reserved>..<reserved>
10080..100FA;
                           # LINEAR B IDEOGRAM B100 MAN..LINEAR B IDEOGRA
              PVALID
100FB..100FF;
                           # <reserved>..<reserved>
              UNASSIGNED
10100..10102;
                           # AEGEAN WORD SEPARATOR LINE..AEGEAN CHECK MAR
              DISALLOWED
10103..10106;
              UNASSIGNED
                           # <reserved>..<reserved>
10107..10133;
                           # AEGEAN NUMBER ONE..AEGEAN NUMBER NINETY THOU
              DISALLOWED
10134..10136;
              UNASSIGNED
                           # <reserved>..<reserved>
10137..1018A;
              DISALLOWED
                           # AEGEAN WEIGHT BASE UNIT..GREEK ZERO SIGN
1018B..1018F;
              UNASSIGNED
                           # <reserved>..<reserved>
10190..1019B;
              DISALLOWED
                           # ROMAN SEXTANS SIGN..ROMAN CENTURIAL SIGN
1019C..101CF;
              UNASSIGNED
                           # <reserved>..<reserved>
                           # PHAISTOS DISC SIGN PEDESTRIAN..PHAISTOS DISC # PHAISTOS DISC SIGN COMBINING OBLIQUE STROKE
101D0..101FC;
              DISALLOWED
101FD
              PVALID
101FE..1027F; UNASSIGNED
                           # <reserved>..<reserved>
```

```
10280..1029C; PVALID
                            # LYCIAN LETTER A..LYCIAN LETTER X
1029D..1029F;
               UNASSIGNED
                            # <reserved>..<reserved>
102A0..102D0;
               PVALID
                            # CARIAN LETTER A..CARIAN LETTER UUU3
102D1..102FF;
               UNASSIGNED
                            # <reserved>..<reserved>
                            # OLD ITALIC LETTER A..OLD ITALIC LETTER UU
10300..1031E;
               PVALID
1031F
               UNASSIGNED
                            # <reserved>
10320..10323;
10324..1032F;
               DISALLOWED
                            # OLD ITALIC NUMERAL ONE..OLD ITALIC NUMERAL F
               UNASSIGNED
                            # <reserved>..<reserved>
                            # GOTHIC LETTER AHSA..GOTHIC LETTER PAIRTHRA
10330..10340;
               PVALID
10341
               DISALLOWED
                            # GOTHIC LETTER NINETY
10342..10349;
                            # GOTHIC LETTER RAIDA..GOTHIC LETTER OTHAL
               PVALID
1034A
               DISALLOWED
                            # GOTHIC LETTER NINE HUNDRED
1034B..1037F;
               UNASSIGNED
                            # <reserved>..<reserved>
                            # UGARITIC LETTER ALPA..UGARITIC LETTER SSU
10380..1039D;
               PVALID
1039E
               UNASSIGNED
                            # <reserved>
1039F
               DISALLOWED
                            # UGARITIC WORD DIVIDER
103A0..103C3;
               PVALID
                            # OLD PERSIAN SIGN A..OLD PERSIAN SIGN HA
103C4..103C7;
               UNASSIGNED
                            # <reserved>..<reserved>
                            # OLD PERSIAN SIGN AURAMAZDAA..OLD PERSIAN SIG
103C8..103CF;
               PVALID
103D0..103D5;
103D6..103FF;
10400..10427;
                            # OLD PERSIAN WORD DIVIDER..OLD PERSIAN NUMBER
               DISALLOWED
                            # <reserved>..<reserved>
# DESERET CAPITAL LETTER LONG I..DESERET CAPIT
# DESERET SMALL LETTER LONG I..OSMANYA LETTER
               UNASSIGNED
               DISALLOWED
10428..1049D;
               PVALID
1049E..1049F;
               UNASSIGNED
                            # <reserved>..<reserved>
104A0..104A9:
               PVALID
                            # OSMANYA DIGIT ZERO..OSMANYA DIGIT NINE
104AA..107FF;
               UNASSIGNED
                            # <reserved>..<reserved>
10800..10805;
10806..10807;
                            # CYPRIOT SYLLABLE A..CYPRIOT SYLLABLE JA
               PVALID
               UNASSIGNED
                            # <reserved>..<reserved>
10808
               PVALID
                            # CYPRIOT SYLLABLE JO
10809
               UNASSIGNED
                            # <reserved>
1080A..10835;
               PVALID
                            # CYPRIOT SYLLABLE KA..CYPRIOT SYLLABLE WO
                            # <reserved>
10836
               UNASSIGNED
10837..10838;
                            # CYPRIOT SYLLABLE XA..CYPRIOT SYLLABLE XE
               PVALID
                            # <reserved>..<reserved>
10839..1083B:
               UNASSIGNED
                            # CYPRIOT SYLLABLE ZA
1083C
               PVALID
1083D..1083E; UNASSIGNED
                            # <reserved>..<reserved>
                            # CYPRIOT SYLLABLE ZO..IMPERIAL ARAMAIC LETTER
1083F..10855;
               PVALID
10856
               UNASSIGNED
                            # <reserved>
                            # IMPERIAL ARAMAIC SECTION SIGN..IMPERIAL ARAM
10857..1085F;
               DISALLOWED
10860..108FF;
               UNASSIGNED
                            # <reserved>..<reserved>
                            # PHOENICIAN LETTER ALF..PHOENICIAN LETTER TAU
# PHOENICIAN NUMBER ONE..PHOENICIAN NUMBER THR
10900..10915;
               PVALID
10916..1091B;
               DISALLOWED
1091C..1091E:
               UNASSIGNED
                            # <reserved>..<reserved>
                            # PHOENICIAN WORD SEPARATOR
1091F
               DISALLOWED
10920..10939;
                            # LYDIAN LETTER A..LYDIAN LETTER C
               PVALID
1093A..1093E;
               UNASSIGNED
                            # <reserved>..<reserved>
               DISALLOWED # LYDIAN TRIANGULAR MARK
1093F
10940..109FF; UNASSIGNED # <reserved>..<reserved>
```

```
# KHAROSHTHI LETTER A..KHAROSHTHI VOWEL SIGN V
10A00..10A03; PVALID
10A04
               UNASSIGNED
                            # <reserved>
                            # KHAROSHTHI VOWEL SIGN E..KHAROSHTHI VOWEL SI
10A05..10A06;
               PVALID
10A07..10A0B;
               UNASSIGNED
                            # <reserved>..<reserved>
                            # KHAROSHTHI VOWEL LENGTH MARK..KHAROSHTHI LET
10A0C..10A13;
               PVALID
10A14
               UNASSIGNED
                            # <reserved>
10A15..10A17;
             PVALID
                            # KHAROSHTHI LETTER CA..KHAROSHTHI LETTER JA
10A18
               UNASSIGNED
                           # <reserved>
10A19..10A33;
                            # KHAROSHTHI LETTER NYA..KHAROSHTHI LETTER TTT
               PVALID
10A34..10A37;
                           # <reserved>..<reserved>
               UNASSIGNED
10A38..10A3A;
                           # KHAROSHTHI SIGN BAR ABOVE..KHAROSHTHI SIGN D
              PVALID
10A3B..10A3E; UNASSIGNED # <reserved>..<reserved>
10A3F
               PVALID
                            # KHAROSHTHI VIRAMA
10A40..10A47;
10A48..10A4F;
                            # KHAROSHTHI DIGIT ONE..KHAROSHTHI NUMBER ONE
               DISALLOWED
               UNASSIGNED
                           # <reserved>..<reserved>
10A50..10A58;
               DISALLOWED
                            # KHAROSHTHI PUNCTUATION DOT..KHAROSHTHI PUNCT
10A59..10A5F;
                            # <reserved>..<reserved>
               UNASSIGNED
                            # OLD SOUTH ARABIAN LETTER HE..OLD SOUTH ARABI
10A60..10A7C;
               PVALID
10A7D..10A7F;
               DISALLOWED
                            # OLD SOUTH ARABIAN NUMBER ONE..OLD SOUTH ARAB
10A80..10AFF:
               UNASSIGNED
                            # <reserved>..<reserved>
10B00..10B35;
                            # AVESTAN LETTER A..AVESTAN LETTER HE
               PVALID
10B36..10B38;
               UNASSIGNED
                            # <reserved>..<reserved>
10B39..10B3F;
               DISALLOWED
                            # AVESTAN ABBREVIATION MARK..LARGE ONE RING OV
10B40..10B55;
               PVALID
                            # INSCRIPTIONAL PARTHIAN LETTER ALEPH..INSCRIP
10B56..10B57:
               UNASSIGNED
                            # <reserved>..<reserved>
10B58..10B5F;
               DISALLOWED
                            # INSCRIPTIONAL PARTHIAN NUMBER ONE..INSCRIPTI
10B60..10B72;
10B73..10B77;
10B78..10B7F;
                            # INSCRIPTIONAL PAHLAVI LETTER ALEPH..INSCRIPT
               PVALID
               UNASSIGNED
                            # <reserved>..<reserved>
                            # INSCRIPTIONAL PAHLAVI NUMBER ONE..INSCRIPTIO
               DISALLOWED
10B80..10BFF;
               UNASSIGNED
                            # <reserved>..<reserved>
10C00..10C48;
                            # OLD TURKIC LETTER ORKHON A..OLD TURKIC LETTE
               PVALID
10C49..10E5F;
               UNASSIGNED
                            # <reserved>..<reserved>
10E60..10E7E;
                            # RUMI DIGIT ONE..RUMI FRACTION TWO THIRDS
               DISALLOWED
                           # <reserved>..<reserved>
# KAITHI SIGN CANDRABINDU..KAITHI SIGN NUKTA
# KAITHI ABBREVIATION SIGN..KAITHI DOUBLE DAND
10E7F..1107F;
               UNASSIGNED
11080..110BA;
               PVALID
110BB..110C1; DISALLOWED
110C2..11FFF;
                            # <reserved>..<reserved>
               UNASSIGNED
12000..1236E;
                            # CUNEIFORM SIGN A..CUNEIFORM SIGN ZUM
               PVALID
1236F..123FF;
12400..12462;
               UNASSIGNED
                            # <reserved>..<reserved>
                            # CUNEIFORM NUMERIC SIGN TWO ASH...CUNEIFORM NU
               DISALLOWED
12463..1246F;
12470..12473;
12474..12FFF;
              UNASSIGNED
                            # <reserved>..<reserved>
                            # CUNEIFORM PUNCTUATION SIGN OLD ASSYRIAN WORD
               DISALLOWED
               UNASSIGNED
                            # <reserved>..<reserved>
13000..1342E;
               PVALID
                            # EGYPTIAN HIEROGLYPH A001..EGYPTIAN HIEROGLYP
1342F..1CFFF;
               UNASSIGNED
                           # <reserved>..<reserved>
                           # BYZANTINE MUSICAL SYMBOL PSILI..BYZANTINE MU
1D000..1D0F5;
               DISALLOWED
1D0F6..1D0FF; UNASSIGNED
                           # <reserved>..<reserved>
1D100..1D126; DISALLOWED
                           # MUSICAL SYMBOL SINGLE BARLINE..MUSICAL SYMBO
```

```
1D127..1D128; UNASSIGNED
                          # <reserved>..<reserved>
1D129..1D1DD;
              DISALLOWED
                          # MUSICAL SYMBOL MULTIPLE MEASURE REST..MUSICA
1D1DE..1D1FF;
              UNASSIGNED
                          # <reserved>..<reserved>
                          # GREEK VOCAL NOTATION SYMBOL-1..GREEK MUSICAL
1D200..1D245;
              DISALLOWED
1D246..1D2FF;
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MONOGRAM FOR EARTH..TETRAGRAM FOR FOSTERING
1D300..1D356;
              DISALLOWED
1D357..1D35F;
              UNASSIGNED
                          # <reserved>..<reserved>
1D360..1D371;
                          # COUNTING ROD UNIT DIGIT ONE..COUNTING ROD TE
              DISALLOWED
1D372..1D3FF;
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MATHEMATICAL BOLD CAPITAL A..MATHEMATICAL IT
1D400..1D454;
              DISALLOWED
                          # <reserved>
1D455
              UNASSIGNED
1D456..1D49C;
                          # MATHEMATICAL ITALIC SMALL I..MATHEMATICAL SC
              DISALLOWED
              UNASSIGNED
1D49D
                          # <reserved>
1D49E..1D49F;
                          # MATHEMATICAL SCRIPT CAPITAL C..MATHEMATICAL
              DISALLOWED
1D4A0..1D4A1;
              UNASSIGNED
                          # <reserved>..<reserved>
1D4A2
              DISALLOWED
                          # MATHEMATICAL SCRIPT CAPITAL G
1D4A3..1D4A4;
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MATHEMATICAL SCRIPT CAPITAL J..MATHEMATICAL
1D4A5..1D4A6;
              DISALLOWED
1D4A7..1D4A8;
              UNASSIGNED
                          # <reserved>..<reserved>
              DISALLOWED
1D4A9..1D4AC;
                          # MATHEMATICAL SCRIPT CAPITAL N..MATHEMATICAL
1D4AD
                          # <reserved>
              UNASSIGNED
1D4AE..1D4B9; DISALLOWED
                          # MATHEMATICAL SCRIPT CAPITAL S..MATHEMATICAL
1D4BA
              UNASSIGNED
                          # <reserved>
                          # MATHEMATICAL SCRIPT SMALL F
1D4BB
              DISALLOWED
1D4BC
              UNASSIGNED
                          # <reserved>
1D4BD..1D4C3; DISALLOWED
                          # MATHEMATICAL SCRIPT SMALL H..MATHEMATICAL SC
              UNASSIGNED
                          # <reserved>
1D4C4
1D4C5..1D505;
                          # MATHEMATICAL SCRIPT SMALL P..MATHEMATICAL FR
              DISALLOWED
1D506
              UNASSIGNED
                          # <reserved>
1D507..1D50A;
              DISALLOWED
                          # MATHEMATICAL FRAKTUR CAPITAL D..MATHEMATICAL
1D50B..1D50C;
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MATHEMATICAL FRAKTUR CAPITAL J..MATHEMATICAL
1D50D..1D514;
              DISALLOWED
1D515
              UNASSIGNED
                          # <reserved>
                          # MATHEMATICAL FRAKTUR CAPITAL S..MATHEMATICAL
1D516..1D51C:
              DISALLOWED
1D51D
              UNASSIGNED
                          # <reserved>
1D51E..1D539; DISALLOWED
                          # MATHEMATICAL FRAKTUR SMALL A..MATHEMATICAL D
              UNASSIGNED
                          # <reserved>
1D53A
1D53B..1D53E;
                          # MATHEMATICAL DOUBLE-STRUCK CAPITAL D..MATHEM
              DISALLOWED
1D53F
              UNASSIGNED
                          # <reserved>
1D540..1D544;
                          # MATHEMATICAL DOUBLE-STRUCK CAPITAL I..MATHEM
              DISALLOWED
                          # <reserved>
              UNASSIGNED
1D545
1D546
              DISALLOWED
                          # MATHEMATICAL DOUBLE-STRUCK CAPITAL O
1D547..1D549;
              UNASSIGNED
                          # <reserved>..<reserved>
                          # MATHEMATICAL DOUBLE-STRUCK CAPITAL S..MATHEM
1D54A..1D550;
              DISALLOWED
              UNASSIGNED
1D551
                          # <reserved>
1D552..1D6A5;
              DISALLOWED
                          # MATHEMATICAL DOUBLE-STRUCK SMALL A..MATHEMAT
1D6A6..1D6A7;
              UNASSIGNED
                          # <reserved>..<reserved>
1D6A8..1D7CB; DISALLOWED
                          # MATHEMATICAL BOLD CAPITAL ALPHA..MATHEMATICA
```

```
# <reserved>..<reserved>
1D7CC..1D7CD; UNASSIGNED
1D7CE..1D7FF;
              DISALLOWED
                           # MATHEMATICAL BOLD DIGIT ZERO..MATHEMATICAL M
1D800..1EFFF;
              UNASSIGNED
                           # <reserved>..<reserved>
1F000..1F02B;
                           # MAHJONG TILE EAST WIND..MAHJONG TILE BACK
              DISALLOWED
1F02C..1F02F;
              UNASSIGNED
                           # <reserved>..<reserved>
1F030..1F093;
1F094..1F0FF;
                           # DOMINO TILE HORIZONTAL BACK..DOMINO TILE VER
              DISALLOWED
                           # <reserved>..<reserved>
# DIGIT ZERO FULL STOP..DIGIT NINE COMMA
              UNASSIGNED
1F100..1F10A;
              DISALLOWED
1F10B..1F10F;
              UNASSIGNED
                           # <reserved>..<reserved>
1F110..1F12E;
                           # PARENTHESIZED LATIN CAPITAL LETTER A..CIRCLE
              DISALLOWED
1F12F..1F130; UNASSIGNED
                           # <reserved>..<reserved>
1F131
              DISALLOWED
                           # SQUARED LATIN CAPITAL LETTER B
1F132..1F13C;
              UNASSIGNED
                           # <reserved>..<reserved>
                           # SQUARED LATIN CAPITAL LETTER N
1F13D
              DISALLOWED
                           # <reserved>
1F13E
              UNASSIGNED
1F13F
              DISALLOWED
                           # SQUARED LATIN CAPITAL LETTER P
1F140..1F141; UNASSIGNED
                           # <reserved>..<reserved>
                           # SQUARED LATIN CAPITAL LETTER S
1F142
              DISALLOWED
                           # <reserved>..<reserved>
1F143..1F145; UNASSIGNED
                           # SQUARED LATIN CAPITAL LETTER W
1F146
              DISALLOWED
1F147..1F149;
              UNASSIGNED
                           # <reserved>..<reserved>
# SQUARED HV..SQUARED PPV
1F14A..1F14E; DISALLOWED
1F14F..1F156; UNASSIGNED
                           # <reserved>..<reserved>
                           # NEGATIVE CIRCLED LATIN CAPITAL LETTER H
1F157
              DISALLOWED
1F158..1F15E; UNASSIGNED
                           # <reserved>..<reserved>
              DISALLOWED
                           # NEGATIVE CIRCLED LATIN CAPITAL LETTER P
1F15F
1F160..1F178;
                           # <reserved>..<reserved>
              UNASSIGNED
                           # NEGATIVE SQUARED LATIN CAPITAL LETTER J
1F179
              DISALLOWED
1F17A
              UNASSIGNED
                           # <reserved>
1F17B..1F17C;
              DISALLOWED
                           # NEGATIVE SQUARED LATIN CAPITAL LETTER L..NEG
                           # <reserved>..<reserved>
1F17D..1F17E;
              UNASSIGNED
                           # NEGATIVE SQUARED LATIN CAPITAL LETTER P
1F17F
              DISALLOWED
1F180..1F189;
              UNASSIGNED
                           # <reserved>..<reserved>
                           # CROSSED NEGATIVE SQUARED LATIN CAPITAL LETTE
1F18A..1F18D:
              DISALLOWED
1F18E..1F18F;
                           # <reserved>..<reserved>
              UNASSIGNED
                           # SQUARE DJ
1F190
              DISALLOWED
1F191..1F1FF; UNASSIGNED
                           # <reserved>..<reserved>
1F200
              DISALLOWED
                           # SQUARE HIRAGANA HOKA
1F201..1F20F;
              UNASSIGNED
                           # <reserved>..<reserved>
1F210..1F231; DISALLOWED
                           # SQUARED CJK UNIFIED IDEOGRAPH-624B..SQUARED
1F232..1F23F;
              UNASSIGNED
                           # <reserved>..<reserved>
                           # TORTOISE SHELL BRACKETED CJK UNIFIED IDEOGRA
1F240..1F248;
              DISALLOWED
1F249..1FFFD;
              UNASSIGNED
                           # <reserved>..<reserved>
1FFFE..1FFFF;
              DISALLOWED
                           # <noncharacter>..<noncharacter>
                           # <CJK Ideograph Extension B>..<CJK Ideograph
20000..2A6D6;
              PVALID
2A6D7..2A6FF;
              UNASSIGNED # <reserved>..<reserved>
2A700..2B734; PVALID
                           # <CJK Ideograph Extension C>..<CJK Ideograph
2B735..2F7FF; UNASSIGNED # <reserved>..<reserved>
```

```
# CJK COMPATIBILITY IDEOGRAPH-2F800..CJK COMPA
2F800..2FA1D; DISALLOWED
2FA1E..2FFFD;
              UNASSIGNED
                          # <reserved>..<reserved>
2FFFE..2FFFF;
              DISALLOWED
                          # <noncharacter>..<noncharacter>
30000..3FFFD:
              UNASSIGNED
                          # <reserved>..<reserved>
3FFFE..3FFFF:
              DISALLOWED
                          # <noncharacter>..<noncharacter>
40000..4FFFD:
              UNASSIGNED
                          # <reserved>..<reserved>
4FFFE..4FFFF;
                          # <noncharacter>..<noncharacter>
              DISALLOWED
50000..5FFFD;
              UNASSIGNED
                          # <reserved>..<reserved>
5FFFE..5FFFF;
              DISALLOWED
                          # <noncharacter>..<noncharacter>
60000..6FFFD;
                          # <reserved>..<reserved>
              UNASSIGNED
6FFFE..6FFFF;
              DISALLOWED
                          # <noncharacter>..<noncharacter>
70000..7FFFD; UNASSIGNED
                          # <reserved>..<reserved>
7FFFE..7FFFF;
80000..8FFFD;
              DISALLOWED
                          # <noncharacter>..<noncharacter>
              UNASSIGNED
                          # <reserved>..<reserved>
8FFFE..8FFFF;
              DISALLOWED
                          # <noncharacter>..<noncharacter>
90000..9FFFD;
              UNASSIGNED
                          # <reserved>..<reserved>
9FFFE..9FFFF;
              DISALLOWED
                          # <noncharacter>..<noncharacter>
A0000..AFFFD;
                          # <reserved>..<reserved>
              UNASSIGNED
                          # <noncharacter>..<noncharacter>
AFFFE..AFFFF;
              DISALLOWED
B0000..BFFFD;
              UNASSIGNED
                          # <reserved>..<reserved>
BFFFE..BFFFF;
                          # <noncharacter>..<noncharacter>
              DISALLOWED
C0000..CFFFD;
              UNASSIGNED
                          # <reserved>..<reserved>
CFFFE..CFFFF;
              DISALLOWED
                          # <noncharacter>..<noncharacter>
D0000..DFFFD: UNASSIGNED
                          # <reserved>..<reserved>
DFFFE..DFFFF:
              DISALLOWED
                          # <noncharacter>..<noncharacter>
                          # <reserved>
E0000
              UNASSIGNED
              DISALLOWED
                          # LANGUAGE TAG
E0001
E0002..E001F;
E0020..E007F;
                          # <reserved>..<reserved>
              UNASSIGNED
              DISALLOWED
                          # TAG SPACE..CANCEL TAG
E0080..E00FF;
              UNASSIGNED
                          # <reserved>..<reserved>
E0100..E01EF;
                          # VARIATION SELECTOR-17..VARIATION SELECTOR-25
              DISALLOWED
E01F0..EFFFD; UNASSIGNED # <reserved>..<reserved>
EFFFE..10FFFF; DISALLOWED # <noncharacter>..<noncharacter>
```

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