



Khmer Conversion Encoding API Technical Report

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1 Introduction to Khmer Conversion Encoding API

Before the creation of Khmer Unicode some Khmer fonts use Latin code to represent its characters. This is just a deal to have Khmer script be used in computer. According to this, we have no exact code to represent Khmer script and Khmer writing system either. As an example, Limon is a font family developed by a company has a code mapping table, ABC is also a font family and they have code mapping table for their own. The code mapping table of those two font family is different. As a result, data transferring across font is impossible. Nowadays, we have the unique code for Khmer script and we also have the Khmer writing system rule embedded in font, True Type Font.

To provide an easy way to end-users for converting their old documents using some Khmer fonts (Non-Unicode font) we have built an application to hold that process. The application has been split into two parts, Automation and Assembly Engine. Automation is a process to take text from any application, send to the Engine and receive back the text that already converted. Assembly Engine is a process to convert the given text from Automation and return back the text which has been converted.

KhmerConversion is an API for Khmer Conversion Encoding Assembly Engine. Developers only need the API and they can develop any application concerning to conversion from Khmer Non-Unicode to Khmer Unicode. KhmerConversion API is a DLL (Dynamic Link Library) which has been built by using Microsoft Studio Dot Net as the tool. The next section will detail on KhmerConversion Class and the usage of the library.

2 Class description

Following classes are identified during the process of the detailed design.

1. ABCEngine
2. AcledaEngine
3. AnlongvillEngine
4. ApsaraEngine
5. BattSiemEngine
6. Consonant
7. ConsonantMuusikatoan
8. ConsonantSet
9. ConsonantShifter
10. ConsonantShifterSet
11. ConsonantTriisap
12. ConversionController
13. ConversionCoreBufferInfo
14. ConversionVowelBufferInfo
15. CurrencySymbolSet
16. DependentVowel
17. DependentVowelSignSet
18. DiacriticSignSet
19. DigitSet
20. EastSubscript
21. EastSubscriptSet
22. EastVowel
23. EastVowelSet
24. Engine
25. ExtractData
26. FKEngine
27. FontDictionary
28. FormatString
29. IndependentScript
30. IndependentVowelSet
31. KhekEngine
32. KhmerScript
33. KhmerScriptSet
34. LimonEngine
35. NorthVowel
36. SignSet
37. SouthSubscript
38. SouthVowel
39. SpecialScript
40. SpecialScriptSet
41. SubScript
42. TerminatorGraphInfo
43. UnicodeWithType
44. VariousSign
45. VariousSignSet
46. VORLEAKEngine
47. WestSubScript
48. WestVowel

2.1 *ABCEngine*

This class is like a controller that catches some special cases and special scripts in ABC fonts.

Class Name	ABCEngine	
Attributes	eng	Internal engine used to generate the Unicode with Type corresponding to a non-Unicode character given.
Operations	toCSS()	Convert an input string with the <i>ABC</i> font name to CSS (Common Script Sentence)

2.2 *AcledaEngine*

This class is like a controller that catches some special cases and special scripts in Acleda fonts.

Class Name	AcledaEngine	
Attributes	eng	Internal engine used to generate the Unicode with Type corresponding to a non-Unicode character given.
Operations	toCSS()	Convert an input string with the <i>Acleda</i> font name to CSS (Common Script Sentence)

2.3 *AnlongvillEngine*

This class is like a controller that catches some special cases and special scripts in Anlongvill fonts.

Class Name	AnlongvillEngine	
Attributes	eng	Internal engine used to generate the Unicode with Type corresponding to a non-Unicode character given.
Operations	toCSS()	Convert an input string with the <i>Anlongvill</i> font name to CSS (Common Script Sentence)

2.4 *ApsaraEngine*

This class is like a controller that catches some special cases and special scripts in Apsara fonts.

Class Name	ApsaraEngine	
Attributes	eng	Internal engine used to generate the Unicode with Type corresponding to a non-Unicode character given.
Operations	toCSS()	Convert an input string with the <i>Apsara</i> font name to CSS (Common Script Sentence)

2.5 *BattSiemEngine*

This class is like a controller that catches some special cases and special scripts in Limon fonts.

Class Name	BattSiemEngine	
Attributes	eng	Internal engine used to generate the Unicode with Type corresponding to a non-Unicode character given.
Operations	toCSS()	Convert an input string with the BattSiem font name to CSS (Common Script Sentence)

2.6 *Consonant*

Consonant is a KhmerScript. Consonant has ConsonantMuusikatoan and ConsonantTriisap.

Class Name	Consonant	
Operations	combineCore()	When the end of a combination is met, the <i>coreBuffer</i> should be recombined or rearranged into the spelling order (including additional ZERO conjoiner).
	getShifter()	to get the zero non joiner if the consonant shifter have to use with zero non joiner
	getZeroNonJoiner	to get the zero non joiner if the consonant shifter have to use with zero non joiner
	Render()	Render the script to where it should be in the <i>CoreBuffer</i> or <i>VowelBuffer</i> , and detect the termination of a combination.

2.7 *ConsonantMuusikatoan*

ConsonantMuusikatoan is a *Consonant*. This class represents the *Consonant* that is affected by MUUSIKATOAN shifter (including ʉ).

Class Name	ConsonantMuusikatoan	
Operations	getShifter()	to get the zero non joiner if the consonant shifter have to use with zero non joiner
	getZeroNonJoiner	to get the zero non joiner if the consonant shifter have to use with zero non joiner
	Render()	Render the script to where it should be in the <i>CoreBuffer</i> or <i>VowelBuffer</i> , and detect the termination of a combination.

2.8 *ConsonantSet*

A custom define class. All attributes are in decimal number.

Class Name	ConsonantSet	
Attributes	NHO_AC	33353
	KA	6016
Operations	KHA	6017
	KO	6018
	KHO	6019
	NGO	6020
	CA	6021
	CHA	6022
	CO	6023
	CHO	6024
	NYO	6025

	DA	6026
	TTHA	6027
	DO_	6028
	TTHO	6029
	NNO	6030
	TA	6031
	THA	6032
	TO_	6033
	THO	6034
	NO	6035
	BA	6036
	PHA	6037
	PO	6038
	PHO	6039
	MO	6040
	YO	6041
	RO	6042
	LO	6043
	VO_	6044
	SHA	6045
	SSO	6046
	SA	6047

	HA	6048
	LA	6049
	QA	6050
	identifyConsonantGroup()	To identify whether the consonant given is in triisap ou muusikatoan group.

2.9 *ConsonantShifter*

ConsonantShifter is a KhmerScript.

Class Name	ConsonantShifter	
Operations	Render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.
	isTerminator()	A method which indicate that the code is the terminator or not by giving the previous state and its graph. Return true if it is terminator. Return false if it is not terminator.

2.10 *ConsonantShifterSet*

A custom define class which contains all the constants concerning with the consonant shifter. All attributes are in decimal number.

Class Name	ConsonantShifterSet	
Attributes	MUUSIKATOAN	6089
	TRIISAP	6090

2.11 ConsonantTriisap

ConsonantTriisap is a Consonant. This class represents the Consonant that is affected by TRIISAP shifter (NOT including ឆ).

Class Name	ConsonantTriisap	
Operations	getShifter()	to get the zero non joiner if the consonant shifter have to use with zero non joiner
	getZeroNonJoiner	to get the zero non joiner if the consonant shifter have to use with zero non joiner.

2.12 ConversionController

Class Name	ConversionController	
Attributes	abcEngine	Engine used to generate CSS from an ABC input string
	khkekEngine	Engine used to generate CSS from an Khek input string
	limonEngine	Engine used to generate CSS from an Limon input string
	abcFile	Dictionary file which contains all the codes of abc fonts and its correspondent Unicode and type of character.
	khkekFile	Dictionary file which contains all the codes of Khek fonts and its correspondent Unicode and type of character.
	limonFile	Dictionary file which contains all the codes of Limon fonts and its correspondent Unicode and type of character.
Operations	toUnicode()	Convert the text given into Unicode font by considering the spell order.
	reformKhmerSentence()	Reform the Khmer script array from non-Unicode order (CSS) into a Unicode order
	combineVowelBloc()	When the end of a combination is met, the vowelBuffer should be recombined or rearranged into the spelling order. a string

		of vowel bloc in spelling order (sometimes including consonant shifter).
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2.13 *ConversionCoreBufferInfo*

A custom define class which contains all the constants concerning with the core buffer.

Class Name	ConversionCoreBufferInfo	
Attributes	SIZE	4
	CONSONANT	0
	SUB_SCRIPT1	1
	SUB_SCRIPT2	2
	CONSONANT_SHIFTER	3

2.14 *ConversionVowelBufferInfo*

A custom define class which contains all the constants concerning with the vowel buffer.

Class Name	ConversionVowelBufferInfo	
Attributes	SIZE	5
	WEST_VOWEL	0
	EAST_VOWEL	1
	SOUTH_VOWEL	2
	NOTH_VOWEL	3
	VARIOUS_SIGN	4

2.15 *CurrencySymbolSet*

A custom define class which contains all the constants concerning with the currency symbol.
The attribute is in decimal number.

Class Name	CurrencySymbolSet	
Attributes	RIEL	6107

2.16 *DependentVowel*

DependentVowel is a KhmerScript; it has NorthVowel, SouthVowel, WestVowel and EastVowel.

Class Name	DependentVowel	
Operations	Render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

2.17 *DependentVowelSignSet*

A custom define class which contains all the constants concerning with the Dependent Vowel Sign. All attributes are in decimal number.

Class Name	DependentVowelSignSet	
Attributes	SRAK_AA	6070
	SRAK_I	6071
	SRAK_II	6072
	SRAK_Y	6073
	SRAK_YY	6074
	SRAK_U	6075
	SRAK_UU	6076
	SRAK_UA	6077
	SRAK_OE	6078
	SRAK_YA	6079
	SRAK_IE	6080
	SRAK_E	6081
	SRAK_AE	6082
	SRAK_AI	6083
	SRAK_OO	6084
	SRAK_AU	6085

	SRAK_OY	6065
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2.18 *DiacriticSignSet*

A custom define class which contains all the diacritics concerning with the diacritic sign set. The attribute is in decimal number.

Class Name	DiacriticSignSet	
Attributes	ATTHACAN	6109

2.19 *DigitSet*

A custom define class which contains all the constants concerning with the digit set. All attributes are in decimal number.

Class Name	DigitSet	
Attributes	ZERO	6112
	ONE	6113
	TWO	6114
	THREE	6115
	FOUR	6116
	FIVE	6117
	SIX	6118
	SEVEN	6119
	EIGHT	6120
	NINE	6121

2.20 *EastSubscript*

EastSubScript is a SubScript.

Class Name	EastSubscript	
Operations	isTerminator()	A method which indicate that the code is the terminator or not by giving the previous state and its graph. Return true if it is terminator. Return false if it is not terminator.
	Render()	to render the east subscript given

2.21 *EastSubscriptSet*

A custom define class which contains the subscripts concerning with the east subscript set. All attributes are in decimal number. The attribute value is in decimal number.

Class Name	EastSubscriptSet	
Attributes	SUBSCRIPT_YOR	6041

2.22 *EastVowel*

EastVowel is a DependentVowel.

Class Name	EastVowel	
Operations	Render()	to render the east vowel given

2.23 *EastVowelSet*

A custom define class which contains the vowel concerning with the east vowel set. All attributes are in decimal number. The attribute value is in decimal number.

Class Name	EastVowelSet	
Attributes	SRAK_A_ANG	6070

2.24 Engine

This class is responsible for holding Unicode fonts to Non-Unicode fonts dictionary and generate a Unicode value from a given Non-Unicode value.

Class Name	Engine	
Attributes	dico	A font Dictionary used to stored the non-Unicode to Unicode data dictionary.
Operations	getUnicode()	this method is used to generate a Unicode and its khmer script type from a given non-unicode value
	checkHeader()	Check if the file given is PLC file or not

2.25 ExtractData

Class Name	ExtractData	
Attributes	ABCFile	StreamWriter to extract <i>ABCFile</i> which contains the code mapping table to local hard drive.
	ABCZSFile	StreamWriter to extract <i>ABC Zero Space</i> File which contains the code mapping table to local hard drive.
	AcledaFile	StreamWriter to extract <i>Acleda</i> File which contains the code mapping table to local hard drive.
	AnlongvillKhekFile	StreamWriter to extract <i>Anlongvill Khek</i> File which contains the code mapping table to local hard drive.
	ApsaraFile	StreamWriter to extract <i>Apsara</i> File which contains the code mapping table to local hard drive.
	BattSiemFile	StreamWriter to extract <i>BattSiem</i> File which contains the code mapping table to local hard drive.
	FKFile	StreamWriter to extract <i>FK</i> File which contains the code mapping table to local hard drive.
	khekFile	StreamWriter to extract <i>Khek</i> File which contains the code mapping table to local hard drive.

	limonFile	StreamWriter to extract <i>Limon</i> File which contains the code mapping table to local hard drive.
	terminatorGraph	StreamWriter to extract <i>terminatorGraph</i> File which contains the table combination ability of Khmer Character.
	VORLEAKFile	StreamWriter to extract <i>Voleak</i> File which contains the code mapping table to local hard drive.
	DirectoryPath_	To remember the path of data extracting
Operations	New()	Constructor to extract all data files to the current directory on the local drive.

2.26 FKEngine

This class is like a controller that catches some special cases and special scripts in FK fonts.

Class Name	FKEngine	
Attributes	eng	Internal engine used to generate the Unicode with Type corresponding to a non-Unicode character given.
Operations	toCSS()	Convert an input string with the FK font name to CSS (Common Script Sentence)

2.27 FontDictionary

This class contains the non-Unicode to Unicode dictionary. This class inherits from built in DictionaryBase of .NET Framework. For more detail on its attributes and operations, please see the API of the DictionaryBase.

2.28 FormatString

This class is a container of a string with format. The FormatString is the interface between ConversionAssembly and AutomationApplication.

Class Name	FormatString	
Attributes	sentence	String of FormatString
	fontName	The font name of the string.
Operations	getCharacter()	Get a character from the sentence attribute by

		index.
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2.29 *IndependentScript*

IndependentScript is a KhmerScript.

Class Name	IndependentScript	
Operations	render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

2.30 *IndependentVowelSet*

A custom define class which contains all the independent vowels concerning with the indepent vowel set. All attributes are in decimal numbers.

Class Name	IndependentVowelSet	
Attributes	QAQ	6051
	QAA	6052
	QI	6053
	QII	6054
	QU	6055
	QUK	6056
	QUU	6057
	QUUV	6058
	RY	6059
	RYY	6060
	LY	6061
	LYY	6062
	QE	6063

	QAI	6064
	QOO1	6065
	QOO2	6066
	QAU	6067

2.31 *KhekEngine*

This class is like a controller that catches some special cases and special scripts in Khek fonts.

Class Name	KhekEngine	
Attributes	eng	Internal engine used to generate the Unicode with Type corresponding to a non-Unicode character given.
Operations	toCSS()	Convert an input string with the Khek font name to CSS (Common Script Sentence)

2.32 *KhmerScript (abstract class)*

KhmerScript has Consonant, IndependentScript, DependentVowel, SpecialScript, SubScript, ConsonantShifter.

Class Name	KhmerScript	
Attributes	KhmerUnicode	The value of the Unicode of the script
Operations	Render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

2.33 *KhmerScriptSet*

A custom define class which contains all the constants concerning with khmerScriptSet.

Class Name	KhmerScriptSet	
Attributes	CONSONANT	1
	SPECIAL_SCRIPT	2

	INDEPENDENT_SCRIPT	3
	CONSONANT_SHIFTER	4
	WEST_SUBSCRIPT	5
	EAST_SUBSCRIPT	6
	SOUTH_SUBSCRIPT	7
	WEST_VOWEL	8
	EAST_VOWEL	9
	SOUTH_VOWEL	10
	NORTH_VOWEL	11
	VARIOUS_SIGN	12
	CONSONANT_MUUSIKATOAN	14
	CONSONANT_TRIISAP	13

2.34 *LimonEngine*

This class is like a controller that catches some special cases and special scripts in Limon fonts.

Class Name	LimonEngine	
Attributes	eng	Internal engine used to generate the Unicode with Type corresponding to a non-Unicode character given.
Operations	toCSS()	Convert an input string with the Limon font name to CSS (Common Script Sentence)

2.35 *NorthVowel*

NorthVowel is a DependentVowel.

Class Name	NorthVowel	
Operations	isTerminator	A method which indicate that the code is the terminator or not by giving the previous state and its graph. Return true if it is terminator.Return false if it is not terminator.

	render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.
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2.36 *SignSet*

A class which contains all the constants concerning with the Sign Set. The attribute is in decimal number.

Class Name	SignSet	
Attributes	AVAKRAHASANYA	6108

2.37 *SouthSubscript*

SouthSubScript is a SubScript.

Class Name	SouthSubscript	
Operations	isTerminator	A method which indicate that the code is the terminator or not by giving the previous state and its graph. Return true if it is terminator.Return false if it is not terminator.
	render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

2.38 *SouthVowel*

SouthVowel is a DependentVowel.

Class Name	SouthVowel	
Operations	isTerminator	A method which indicate that the code is the terminator or not by giving the previous state and its graph. Return true if it is terminator.Return false if it is not terminator.
	render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

2.39 *SpecialScript*

SpecialScript is a KhmerScript.

Class Name	Specialscript	
Operations	render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

2.40 *SpecialScriptSet*

A custom define class which contains all the constants concerning with the special script in Non-Unicode font. All attributes are in decimal number.

Class Name	SpecialScriptSet	
Attributes	LOW_BOUND	12288
	KHA_NYO_AM	12288
	SRAK_I_TOANDAKHIAT	12289
	GIVE	12290
	BA_AU	12291
	BA_AA	12292
	SRAK_AM	12293
	SRAK_AA_REAHMUK	12294
	ILLEGAL_LYY	12295
	ILLEGAL_NYO	12296
	MO_MUSIKATOAN	12305
	NGO_MUSIKATOAN	12306
	NYO_MUSIKATOAN	12307
	YO_MUSIKATOAN	12308
	RO_MUSIKATOAN	12309
	BA_MUSIKATOAN	12310

	SRAK_OM	12311
	OY_ACLEDA	12293
	BA_MUSIKATOAN_AU	12312
	RO_KER	12313
	BO	12294
	A	12295
	AO	12296
	NYO_ANG	12294
	srak_a	6070

2.41 SubScript

SubScript is a KhmerScript; it has SouthSubScript, WestSubScript and EastSubScript.

Class Name	Subscript	
Operations	render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

2.42 TerminatorGraphInfo

A custom define class which contains all the constants concerning with the terminator graph.

Class Name	TerminatorGraphInfo	
Attributes	C	0
	CS	1
	WV	2
	NV	3
	SV	4
	EV	5
	WSS	6
	SSS	7
	ESS	8
	VS	9

2.43 UnicodeWithType

The instance of this class is use temporary as a return object of the toUnicode operation of the three engines classes. So it's used implicitly that we do not illustrate in the classes diagram.

Class Name	UnicodeWithType	
Attributes	code	Unicode value of the converted font.
	type	Khmer script type (subscript, consonant, Vowel...) of the Unicode.

2.44 VariousSign

VariousSign is a KhmerScript. Not including ៀ and ៊

Class Name	VariousSign	
Operations	isTerminator	A method which indicate that the code is the terminator or not by giving the previous state and its graph. Return true if it is terminator.Return

		false if it is not terminator.
	render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

2.45 *VariousSignSet*

A custom define class which contains all the constants concerning with the various sign set.
All attributes are in decimal number.

Class Name	VariousSignSet	
Attributes	NIKAHIT	6086
	REAHMUK	6087
	YUUKALEAPINTU	6088
	BANTOC	6091
	ROBAT	6092
	TOANDAKHIAT	6093
	KAKABAT	6094
	AHSDA	6095
	SANNYA	6096
	VIRIAM	6097
	COEUNG	6098
	BATHAMASAT	6099
	KHAN	6100
	BARIYOOSAN	6101
	CAMNU_PII_KUUK	6102
	LEK_TOO	6103
	BEYYAL	6104
	MUAN	6105
	KOOMUUT	6106

2.46 *VORLEAKEngine*

This class is like a controller that catches some special cases and special scripts in VOLEAK fonts.

Class Name	VOLEAKEngine	
Attributes	eng	Internal engine used to generate the Unicode with Type corresponding to a non-Unicode character given.
Operations	toCSS()	Convert an input string with the Voleak font name to CSS (Common Script Sentence)

2.47 *WestSubScript*

WestSubScript is a SubScript.

Class Name	WestSubScript	
Operations	isTerminator	A method which indicate that the code is the terminator or not by giving the previous state and its graph. Return true if it is terminator.Return false if it is not terminator.
	render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

2.48 *WestVowel*

WestVowel is a DependentVowel.

Class Name	WestVowel	
Operations	combinewith ()	to combine the vowel which has the combination with SRAK E
	Render()	Render the script to where it should be in the CoreBuffer or VowelBuffer, and detect the termination of a combination.

3 Data Files

KhmerConversion API requires some data to process. Our team embedded the data files into the library and they will extract during the use. Those data files are *ABCfile*, *ABCZSFile*, *AcledaFile*, *AnlongvillKhekFile*, *ApsaraFile*, *BattSiemFile*, *FKFile*, *khekFile*, *limonFile*, *terminatorGraph*, and *VOLEAKFile*.

Name	File Name	Purpose
ABCfile	ABCfile.dat	The file contains the code mapping between Latin code, <i>ABC</i> font file use Latin code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
ABCZSFile	ABCZSFile.dat	The file contains the code mapping between Latin code, <i>ABC Zero Space</i> font file use Latin code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
AcledaFile	AcledaFile.dat	The file contains the code mapping between Latin code, <i>Acleda</i> font file use Latin code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
AnlongvillKhekFile	AnlongvillKhekFile.dat	The file contains the code mapping between Latin code, <i>AnlongVill Khek</i> font file use Latin code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
ApsaraFile	ApsaraFile.dat	The file contains the code mapping between Latin code, <i>Apsara</i> font file use Latin code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
BattSiemFile	BattSiemFile.dat	The file contains the code mapping between Latin code, <i>BattamBang SiemReap</i> font file use Latin code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
khekFile	khekFile.dat	The file contains the code mapping between Latin code, <i>Khek</i> font family use Latin code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
limonFile	limonFile.dat	The file contains the code mapping between Latin code, <i>Limon</i> font family use Latin code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
VOLEAKFile	VOLEAKFile.dat	The file contains the code mapping between Latin code, <i>Voleak</i> font family use Latin

		code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
FKFile	FKFile.dat	The file contains the code mapping between Latin code, <i>FK</i> font family use Latin code to represent Khmer Script, and Khmer Unicode. The file also contains the type of script such as Consonant, Vowel, and Subscript ... etc.
terminatorGraph	terminatorGraph.dat	The file contains the table combination ability of Khmer Character.

4 Usage

There are many classes containing in the library, even though, we only need some classes to convert Non-Unicode Khmer text to Unicode Khmer text.

This is a simple example to use Khmer Conversion API applying with VB.Net programming. Suppose we have *KhmereConversion.dll* as the library. To use our library developer need to import our API file to the project as the reference. The purpose of this sample code is to convert Khmer Non-Unicode (font name *Limon*) to Khmer Unicode (font name *Khmer Nettra*).

Suppose we have a Text Box named TextBoxResult

```

Dim Conversion as New KhmerConversion.ConversionController
Dim OriginalFormat as New KhmerConversion.FormatString
Dim Result as New KhmerConversion.FormatString
Dim OriginalString As String = "ជាតិជាមរណ៍នៅពេលដែលប្រជាជនកម្ពុជាបានរួមគ្នាសង្គ្រោះ"
OriginalFormat.fontName = "Limon S1"
OriginalFormat.sentence = OriginalString

Result = Conversion.toUnicode(OriginalFormat)

TextBoxResult.Font = New Font ("Khmer Nettra", 12)
TextBoxResult.Text = Result.sentence()

```