Tamil Font Fixer and Tamil Font Encoder

What is the problem with the Tamil font in unity?

Unicode tamil font uses shape glyph sequences (GSUB processing) and position glyph sequences (GPOS processing) but unity does not support properly so some of the tamil characters won't render properly in unity editor,Text UI and TextMesh Pro.

So solution to this problem is…:

The Font which won't use that much shape glyph sequences (GSUB processing) or position glyph sequences (GPOS processing) where Unity can render the font.

So the answer is TSCII and TACE16 fonts but there is a problem…

TSCII and TACE16 font are not readable by Unicode fonts

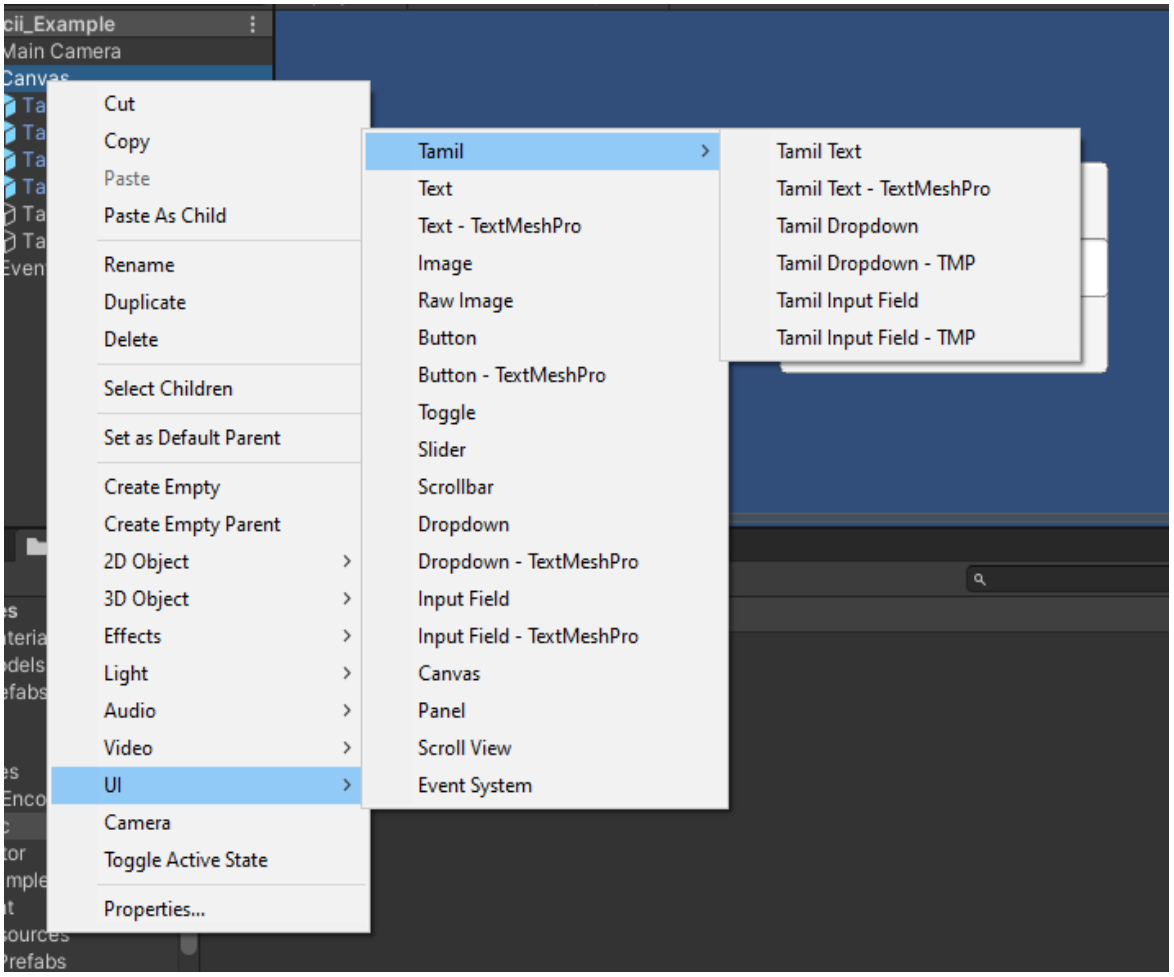
So solve this problem I made built-in Tamil Encoder for unity with C# which converts unicode tamil text to TSCII and TACE16.

Features:

- **Tamil Font Fixer**
  - **Tamil Text**
  - **Tamil Text Mesh Pro**
  - **Tamil Dropdown**
  - **Tamil Dropdown - TMP**
  - **Tamil InputField**
  - **Tamil InputField - TMP**
- **Tamil Encoder**
  - **Tamil Unicode to TSCII**
  - **TSCII to Tamil Unicode**

Tutorial Video Link: check out video

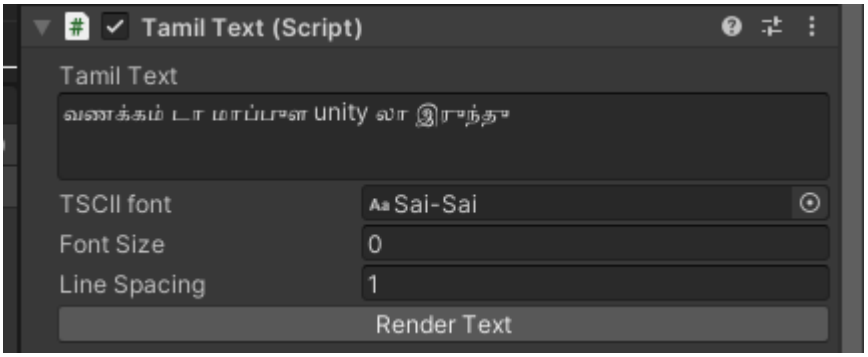
As shown below this is how we add tamil component



To add Tamil Text and Tamil Text Mesh Pro:

Step 1 : (Right click on hierarchy or GameObject) -> UI -> Tamil -> (Tamil Text or Tamil Text - TextMesh Pro).

Step 2 : Enter Tamil texts from keyboard or copy and paste in the Tamil Text or Tamil Text Mesh Pro component text box as shown below.

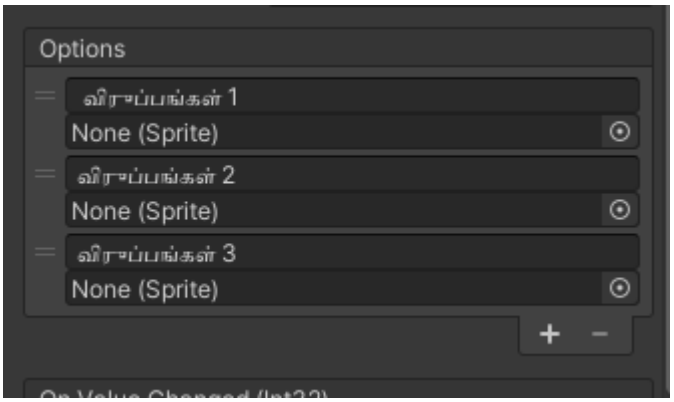


Step 3 : Press Render Text button to render the tamil text or enable the component so it will automatically render text at runtime as well as disable the component to stop rendering text and It can be used for localization.(check below for scripting).

To add Tamil dropdown & Tamil dropdown - TMP:

Step 1 : (Right click on hierarchy or GameObject) -> UI -> Tamil -> (Tamil dropdown or Tamil dropdown - TMP).

Step 2 : Enter Tamil texts from keyboard or copy and paste in the InputField options as shown below.If you get Warning from text mesh pro then follow step 3.



Step 3 : Press Render Text button to render the tamil text. (or)
For normal dropdown only:
enable the component so it will automatically render text at runtime as well as disable the component to stop rendering text and It can be used for localization.

For Tamil InputField & Tamil InputField - TMP:

Goto GameObject -> UI -> Tamil -> Tamil Input Field or Tamil InputField - TMP to create input field that support tamil.

Scripting (Input Field):

Public methods:

public void RenderTextOnValueChanged():

It will Replace all the tamil unicode text to tscii on value changed for UnityEngine.UI inputField.

public void RenderTextOnEndEdit():

It will Replace all the tamil unicode text to tscii on end value for UnityEngine.UI inputField.

public void RenderTextOnValueChangedTMP():

It will Replace all the tamil unicode text to tscii on value changed for TMP_inputField.

public void RenderTextOnEndEditTMP():

It will Replace all the tamil unicode text to tscii on end value for TMP_inputField.

Scripting (Tamil Text):

Required Component:

UnityEngine.UI.Text,TamilUI.TamilText,TamilEncoder.dll

UNITY EDITOR:

Text Box:

Datatype: string

Here you will enter tamil text as said above.When editor enters play mode the tamil text entered will be updated to text UI component or use (Render Text) button to override the Text.Leaving it empty to stop override the text.

TSCII font:

Datatype: UserDefined - Font

References to TSCII Font which will override the font of Text UI on play mode.

Font Size:

Datatype: int

It will override font size in Text component and if best fit is true it will also override max font size too.setting it to 0 to avoid override.

Line Spacing:

Datatype:float

It will override line spacing in the Text component.

Render Text Button:

It will call the RenderText function (check out below).

SCRIPTING:

It has one public method and public properties.

Text property:

It will update the text UI component with a given string.

```
using TamilUI;
class Example : MonoBehaviour{
[SerializeField] TamilText tamilTextScript; //Get TamilText
void Start()
{
     tamilTextScript.Text = "நன்றி"; //Update UI text
}}
```

RenderText method:

It will update Text UI with the current text box string value.if text box is empty it won't do anything.

Scripting (Tamil Text Mesh Pro):

Required Component:

UnityEngine.UI.TextMeshPro,TamilEncoder.dll

UNITY EDITOR:

Text Box:

Datatype: string

Here you will enter tamil text as said above.When editor enters play mode the tamil text entered will be updated to text mesh pro UI component or use (Render Text) button to override the Text.Leaving it empty to stop override the text.

Font:

This font asset is updated to the Text Mesh Pro

Render Text Button:

It will call the RenderText function (check out below).

SCRIPTING:

It has one public method and public properties.

Text property:

It will update the text mesh pro UI component with a given string.

```
using TamilUI;
class Example : MonoBehaviour{
[SerializeField] TamilTextMeshPro tamilTextScript;
void Start()
{
     tamilTextScript.Text = "நன்றி"; //text given string
}}
```

RenderText method:

It will update Text UI with the current text box string value.if text box is empty it won't do anything.

TAMIL ENCODER:

Features:

- ➔ **Unicode to TSCII**
- ➔ **TSCII to Unicode**
- ➔ **Unicode to TACE16**

CLASS TamilEncoding:

PUBLIC METHODS:

ConvertFromUnicode(string unicode):

It will return a TSCII string with a given unicode string value.

```
using TamilEncoder;
class Example : MonoBehaviour
{
    string unicode = "நன்றி";
    void Start()
    {
       string tscii =
TamilEncoding.ConvertFromUnicode(unicode);
       //return encoded tscii
    }
}
```

Convert(TamilFontEncoding from,TamilFontEncoding to,string unicode):

```
using TamilEncoder;
class Example : MonoBehaviour
{
    string TSCII = "Å¢ÕôÀõ";
    void Start()
    {
       string tscii = TamilEncoding.Convert
(TamilFontEncoding.TSCII, TamilFontEncoding.Unicode_ISCII,
TSCII);
       //return encoded unicode
       //output : விருப்பம்
}}
```

ConvertFromUnicode(string unicode, TamilFontEncoding encode):

It will return a TSCII string with a given unicode string value.

```
using TamilEncoder;
class Example : MonoBehaviour
{
    string unicode = "நன்றி";
    void Start()
    {
       string tace16 =
TamilEncoding.ConvertFromUnicode(unicode,
TamilFontEncoding.TACE16);
       //return encoded tace16
    }
}
```

HERE FINAL SAMPLE SCRIPT:

```
using TamilEncoder;
using TamilUI;
class Example : MonoBehaviour
{
    [SerializeField] TamilTextMeshPro tamilTextProScript;
    [SerializeField] TamilText tamilTextScript;
    [SerializeField] Text textUI;
    string unicode = "நன்றி";
    void Start()
    {
        //Simply update text by scripting
        tamilTextScript.Text = "நன்றி";
        tamilTextProScript.Text = "நன்றி";

        //Tamil Encoder simply convert unicode to TSCII
        string tscii =
TamilEncoding.ConvertFromUnicode(unicode);
        textUI.text = tscii;
    }
}
```