Subject: Re: Unicode from file
Posted by coolman on Sun, 19 Feb 2023 07:46:28 GMT
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Based on CParser, I created a simple functionality for decoding escape sequences for UTF. It's really simple, so in case UTF decoding fails, they don't translate this bad sequence, but leave it unchanged.

```
static bool ReadHex(StringStream &in, dword &hex, int n) {
 hex = 0;
 while (n--) {
  if (in.IsEof())
   return false;
  int c = in.Get();
  if (!IsXDigit(c))
   return false;
  hex = (hex << 4) + ctoi(c);
 }
 return true;
}

static String GetUtfSmall(StringStream &in) {
 String result;
 dword hex = 0;
 if (ReadHex(in, hex, 4)) {
  if (hex >= 0xD800 && hex < 0xDBFF) {
   int c = in.Get();
   int next = in.Get();
   if (c == '\\' && next == 'u') {
    dword hex2;
    if (ReadHex(in, hex2, 4) && hex2 >= 0xDC00 && hex2 <= 0xDFFF) {
     result.Cat(ToUtf8(((hex & 0x3ff) << 10) | (hex2 & 0x3ff) + 0x10000));
    }
   }
  } else {
   if (hex > 0 && hex < 0xDC00) {
    result.Cat(ToUtf8(hex));
   }
  }
 }
 return result;
}

static String GetUtfCapital(StringStream &in) {
 String result;
 dword hex = 0;
 if (ReadHex(in, hex, 8) && hex > 0 && hex < 0x10ffff) {
```

```
  result.Cat(ToUtf8(hex));
 }
 return result;
}

static String DecodeEscapedUtf(const String &s) {
 StringStream ss(s);
 String result;

 while (!ss.IsEof()) {
  int c = ss.Get();
  if (c == '\\') {
   int next = ss.Get();
   int64 pos = ss.GetPos();
   String utf;
   switch (next) {
   case 'u':
    utf = GetUtfSmall(ss);
    break;
   case 'U':
    utf = GetUtfCapital(ss);
    break;
   default:
    break;
   }
   if (utf.GetCount() > 0) {
    result.Cat(utf);
   } else {
    ss.Seek(pos);
    result.Cat(c);
    result.Cat(next);
   }
  } else {
   result.Cat(c);
  }
 }
 return result;
}
```