

**valgrind**は実行時メモリチェツ(略

**ψ (プサイ)**

**@tikal**

**ledyba.org**





だれ  
誰だよ  
てめーは

いきなり現れて  
好き勝手言ってるじゃ  
ねーぞ



# 人間界での 所属

A doll with blonde hair, wearing a plaid dress with white lace and brown boots, stands on a yellow mat in a traditional Japanese building with orange walls. The text is overlaid on a semi-transparent white background.

東大  
農学部  
獣医学科

A doll with blonde hair, wearing a school uniform with a plaid skirt and brown boots, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing the text '↓転学部↓'.

↓転学部↓

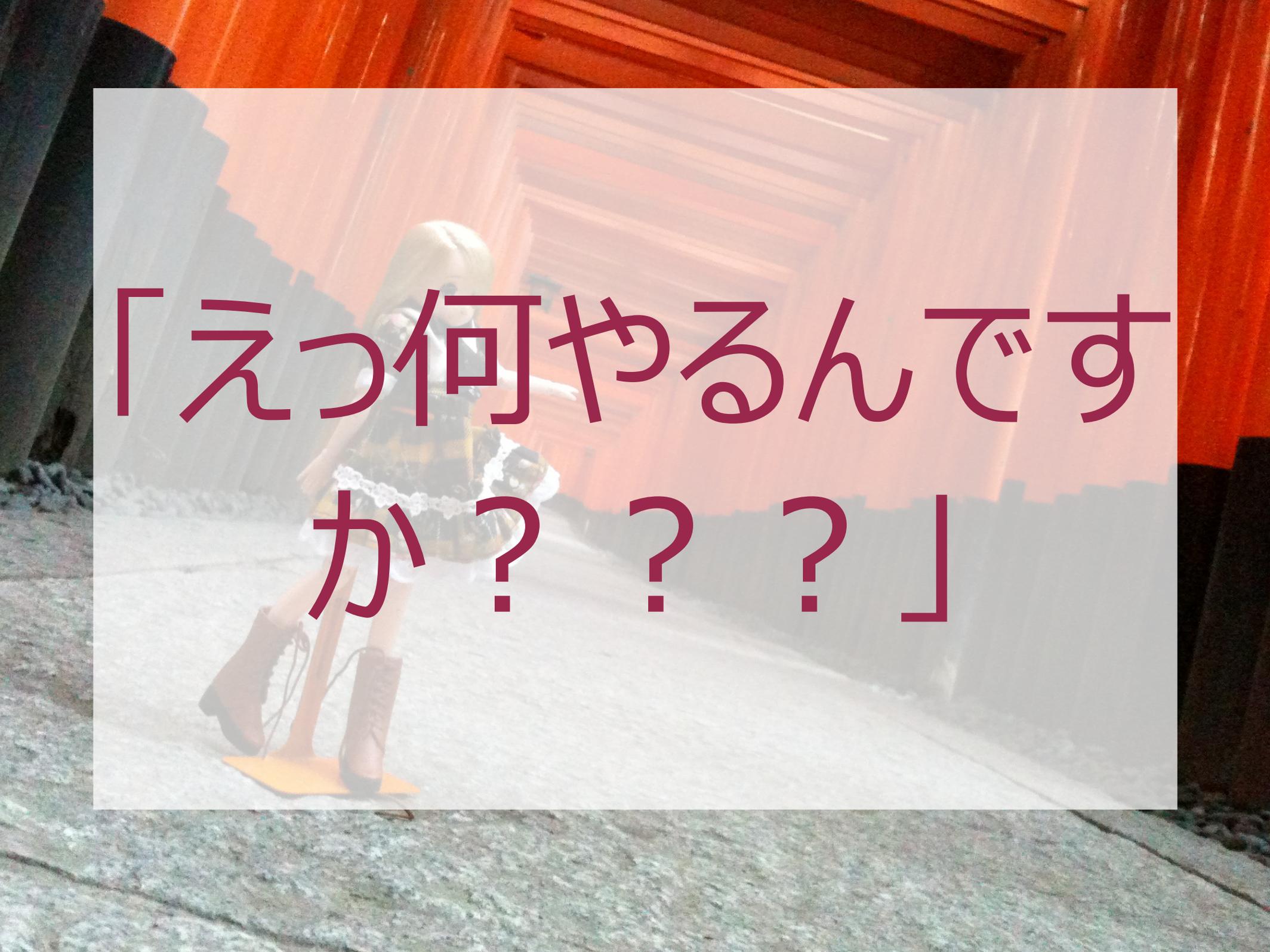
The background of the slide features a doll with long blonde hair, wearing a black and white patterned dress with a white lace collar and brown lace-up boots. The doll is standing on a small yellow mat in a hallway with a repeating pattern of wooden doors and walls, creating a sense of depth and perspective.

東大

理学部

地球惑星物理学

科



「えっ何やるんですか???

天氣



地震



A doll with blonde hair, wearing a plaid dress with white lace trim and brown boots, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing the text 'FORTRAN77'.

**FORTRAN77**

A doll with blonde hair, wearing a plaid dress and brown boots, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing the text.

前学科長が

元参議院議員



東大教授

ロバート・ゲラー

ロバート・ゲラー

東京大学大学院教授



A doll with blonde hair, wearing a black and white plaid dress with a white lace collar and white tights, stands on a small yellow mat. The background is a long, perspective view of a hallway of red torii gates, typical of a Shinto shrine. The scene is overlaid with a semi-transparent white rectangle containing text.

ツイ廃

@rjgeller

くらし

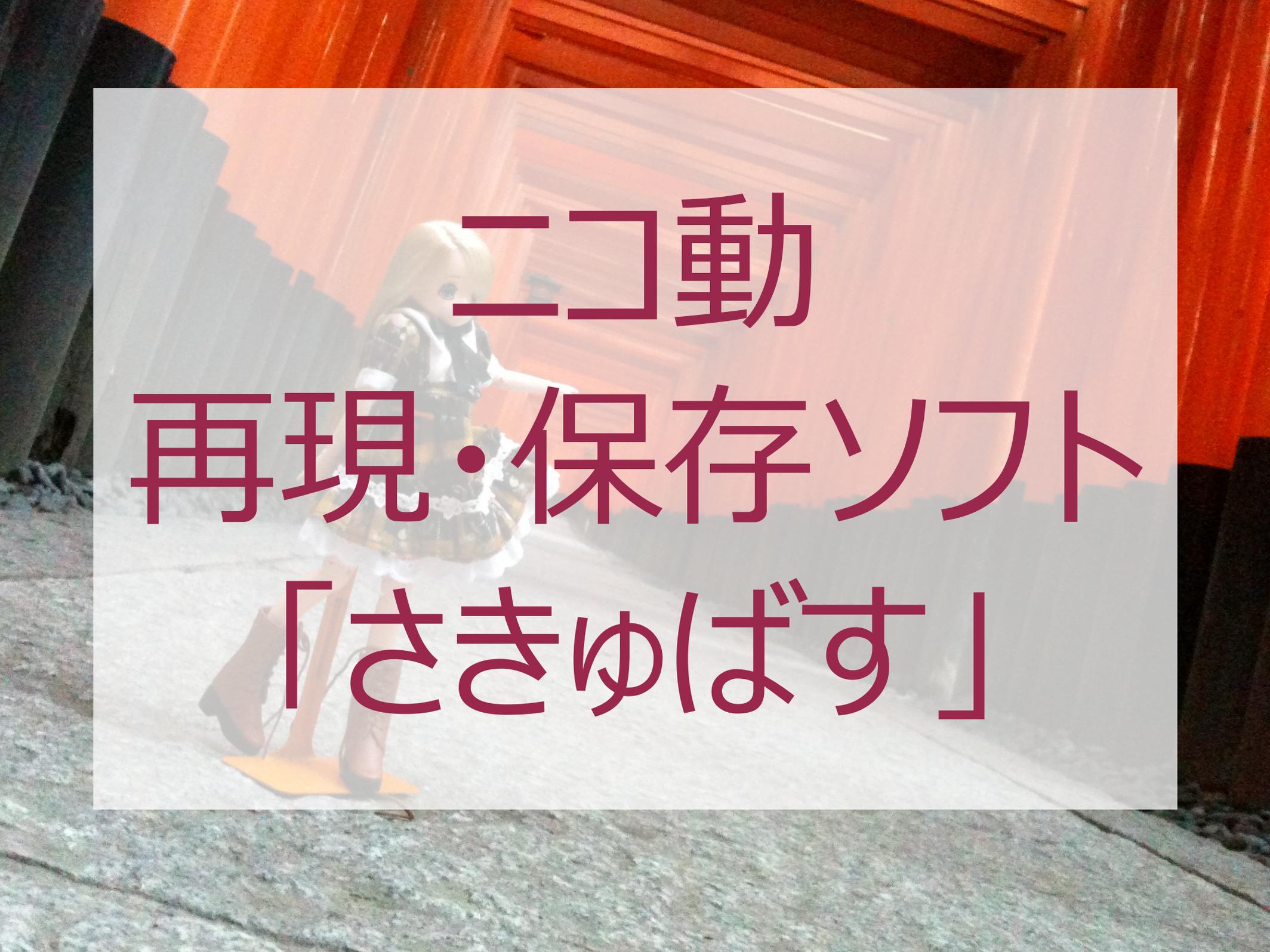




東大二〇研  
(略称：UNKO)

A doll with blonde hair, wearing a plaid dress and brown boots, stands on a small orange mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing text.

# 1 of 創設メンバー

A doll with blonde hair, wearing a yellow and black plaid dress with white lace trim and brown boots, stands on a small yellow mat in a red torii gate. The background is a blurred red torii gate structure.

ニコ動  
再現・保存ソフト  
「さきゅばす」

A person dressed as a maid in a plaid dress with a white lace collar and a white apron stands on a wooden torii gate. The background is a blurred view of a torii gate receding into the distance under a hazy sky. The text is overlaid on a semi-transparent white rectangle.

未踏2012  
スーパ<sup>o</sup>ー(笑)  
クリエイター(笑)

The background of the image shows a doll with blonde hair and a black and white outfit, standing in a traditional Japanese shrine setting with orange torii gates. The scene is slightly blurred and has a warm, orange-toned lighting.

言語とか

作ってます♡

<http://donut-lang.org>

[github/ledyba/Akomachi](https://github.com/ledyba/Akomachi)

[github/Saccubus/Saccubus](https://github.com/Saccubus/Saccubus)

A doll with blonde hair, wearing a plaid dress with white lace trim and brown boots, stands on a small yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle.

というのは



全部

嘘

本当は



A doll with blonde hair, wearing a plaid dress and brown boots, stands in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing the text.

魔法界から来た

A doll with blonde hair, wearing a black and white plaid dress with a white lace collar and white tights, stands in a hallway with a repeating pattern of red wooden door frames. The doll is holding a small object. A large, semi-transparent white rectangle is overlaid on the image, containing the text "10万" and "10歳の" in a dark red, bold font.

10万  
10歳の

魔法使い

見習い



A doll with blonde hair and a plaid dress stands on a yellow mat in a hallway of red torii gates. The doll is wearing a dark plaid dress with white lace trim and brown boots. The background is a long, narrow hallway of red torii gates, creating a strong sense of perspective. The scene is overlaid with a semi-transparent white rectangle.

ほ…っ

ほんと

だもん！

# であと 格好





コンちゃん





は？  
こんなキャラ  
居た？？





OPで  
0.5秒  
出てくる

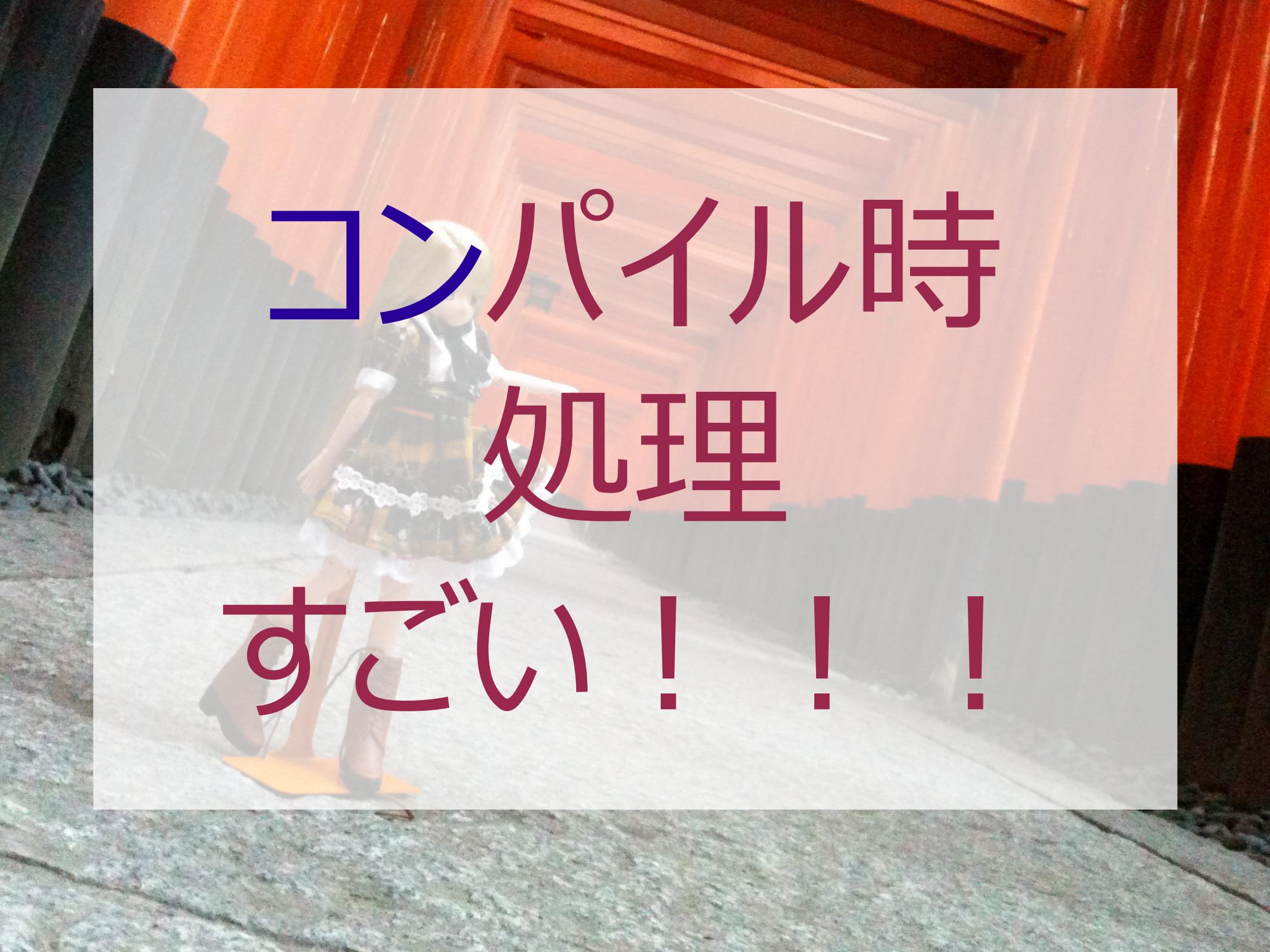


背景も  
伏見稻荷大社  
@京都



本題します



A doll with blonde hair, wearing a black and white plaid dress with a white lace collar and a white ruffled skirt, stands on a yellow mat. The background is a red torii gate structure, likely at a shrine, with a blurred cityscape in the distance. The text is overlaid on a semi-transparent white rectangle.

コンパイル時  
処理  
すごい!!!



メタプログラミング  
すごい!!!

キヤ一素敵！！

抱いて





# ごめんなさい

いもとようこ





悲しい  
お知らせが  
あります

A doll with blonde hair, wearing a black and white plaid dress with a white lace collar and white lace-trimmed skirt, and brown lace-up boots, stands on a yellow mat in a hallway with red walls. The doll is positioned on the left side of the frame. The background shows a long, narrow hallway with red walls and a white ceiling, receding into the distance. The floor is made of grey stone tiles.

# コンパイル時 処理

A doll with blonde hair, wearing a plaid dress with white lace trim and brown lace-up boots, stands on a small yellow mat. The doll is positioned in a long, narrow hallway formed by a series of red torii gates that recede into the distance. The scene is overlaid with a semi-transparent white rectangle.

だけでは

A doll with blonde hair, wearing a plaid dress and brown boots, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing the Japanese text 'なんと'.

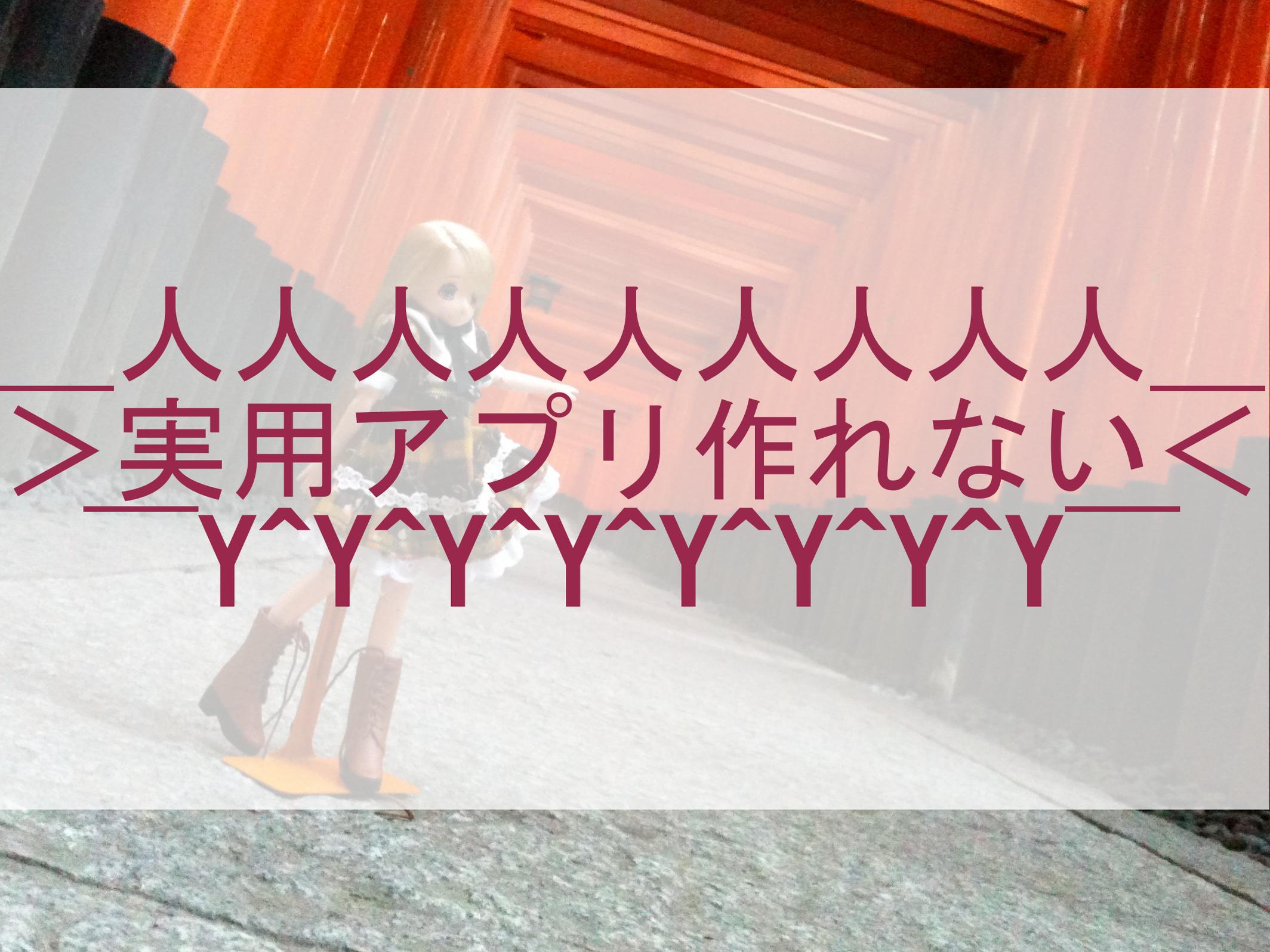
なんと

なんと



なんと





人人人人人人人人  
> 実用アプリ作れない <  
Y^Y^Y^Y^Y^Y^Y^Y



突然興奮する患者



現実世界に  
生きる我々

A doll with blonde hair, wearing a black and yellow patterned dress with white lace trim and brown lace-up boots, stands on a yellow mat in a hallway with red walls. The text is overlaid on a semi-transparent white box.

実行時からは  
逃れられない！

A doll with blonde hair, wearing a plaid dress with white lace trim and brown boots, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing Japanese text.

そして  
付き纏う

A doll with blonde hair, wearing a black and yellow plaid dress with white lace trim and brown boots, stands on a yellow mat. The background is a red torii gate structure, slightly out of focus.

実行時エラー

という

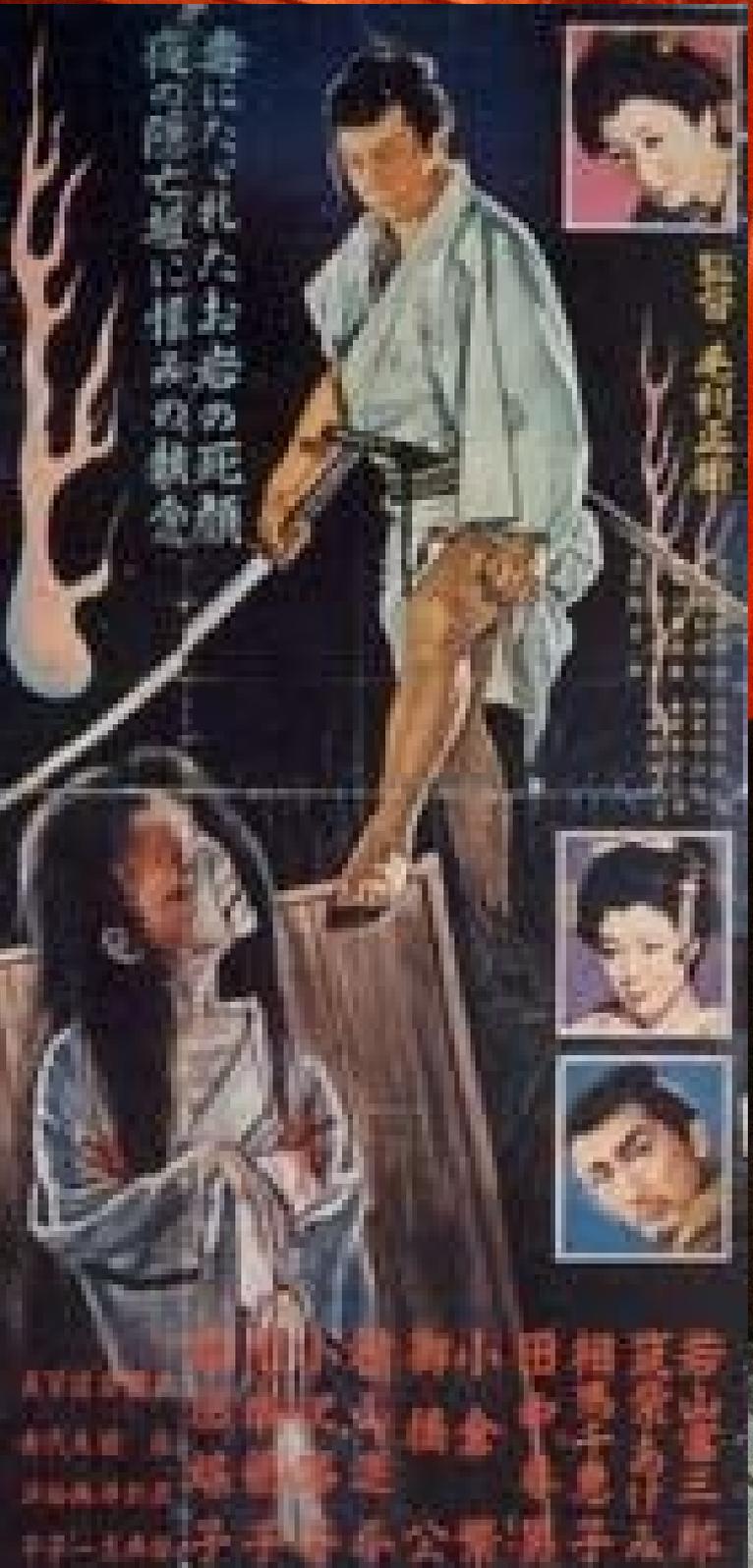
“““怪談“““

これは  
本当に  
あった  
話です

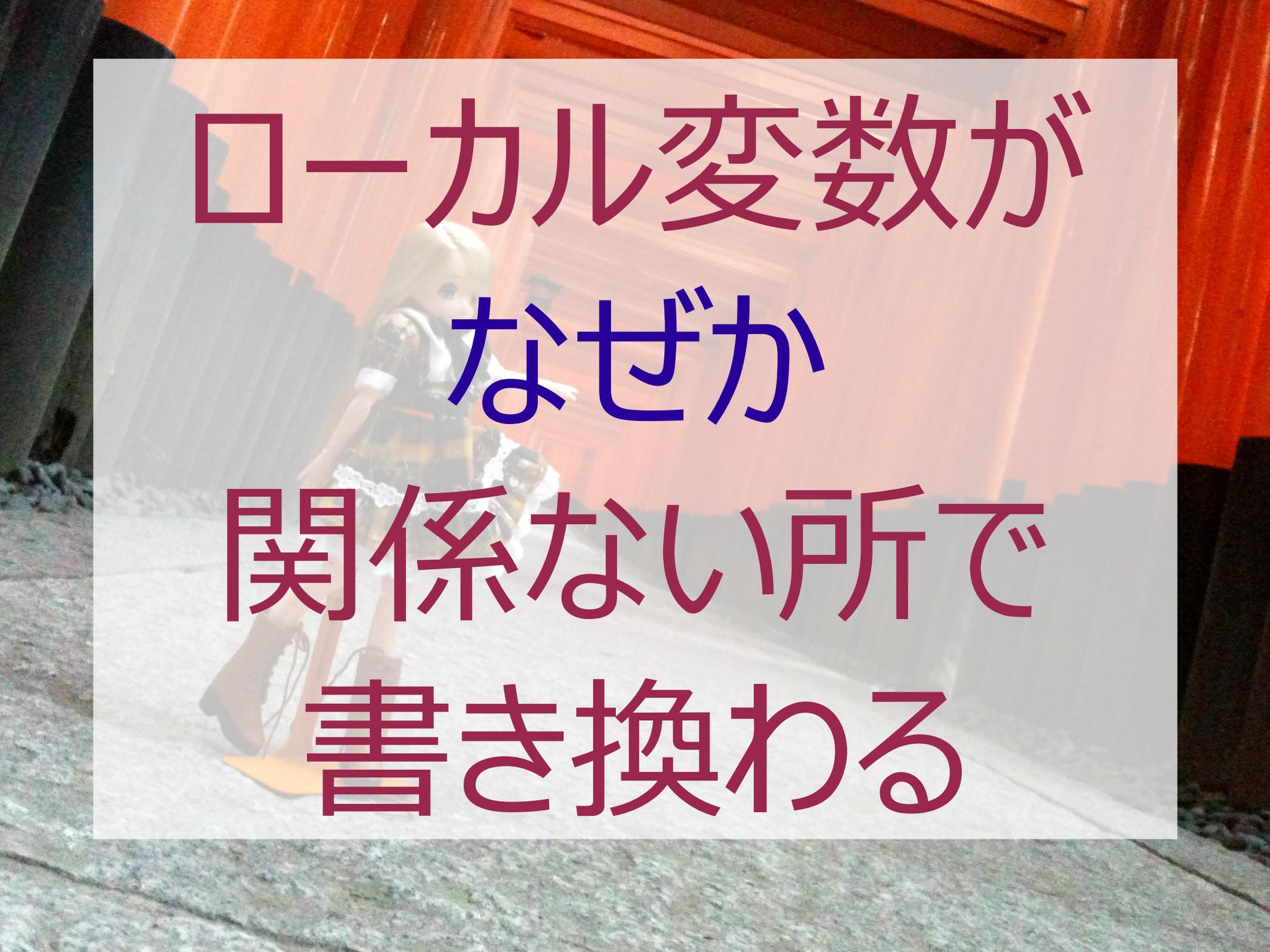
# 四谷怪談

新東宝特作

SHIN TOHO

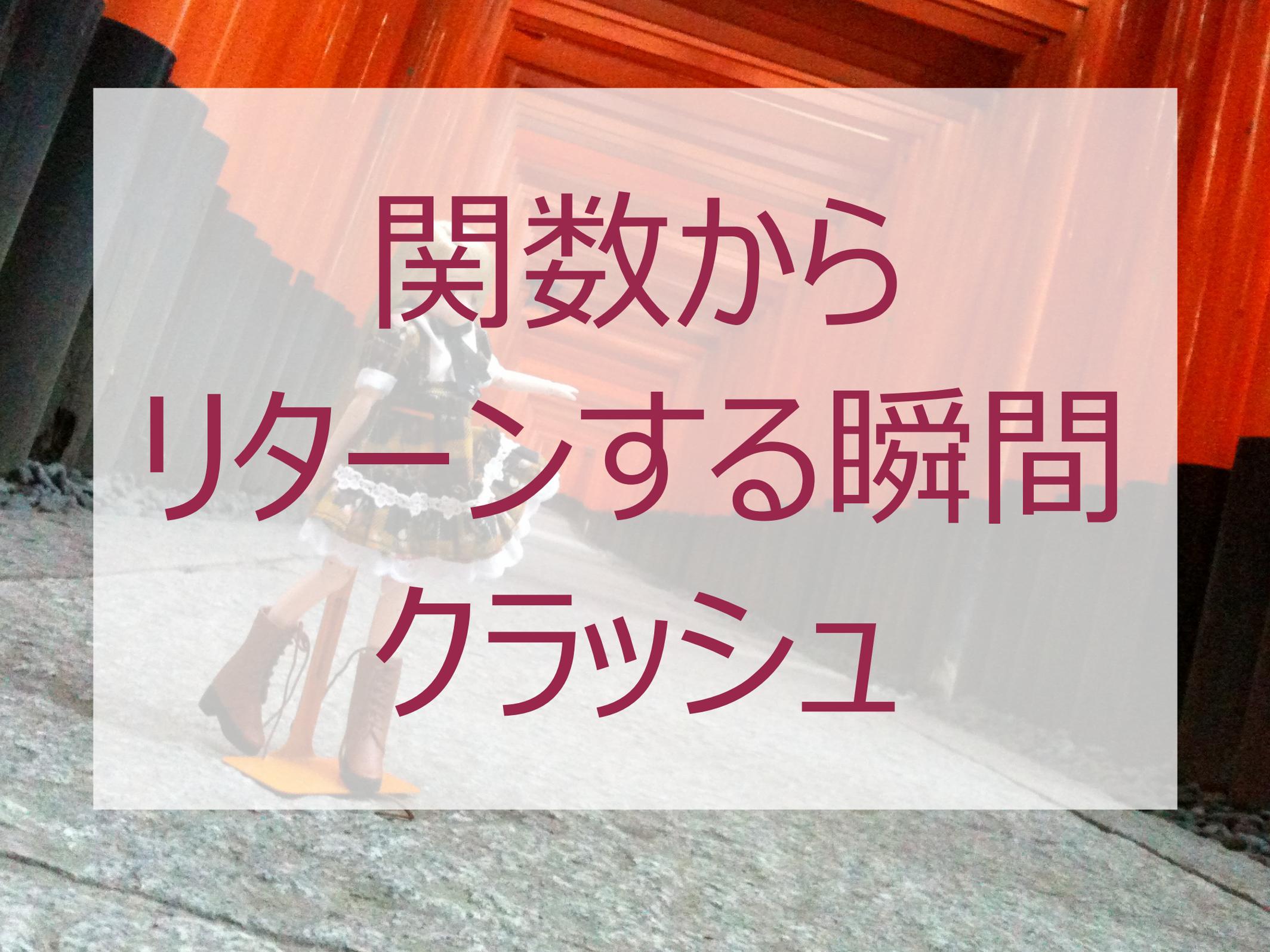






ローカル変数が  
なぜか  
関係ない所で  
書き換わる



A doll with blonde hair, wearing a black and white plaid dress with a white lace collar and white lace trim at the hem, and brown lace-up boots, stands on a yellow mat. The doll is positioned in front of a red wooden building with a traditional Japanese architectural style. The background is slightly blurred, showing the building's structure and a stone path.

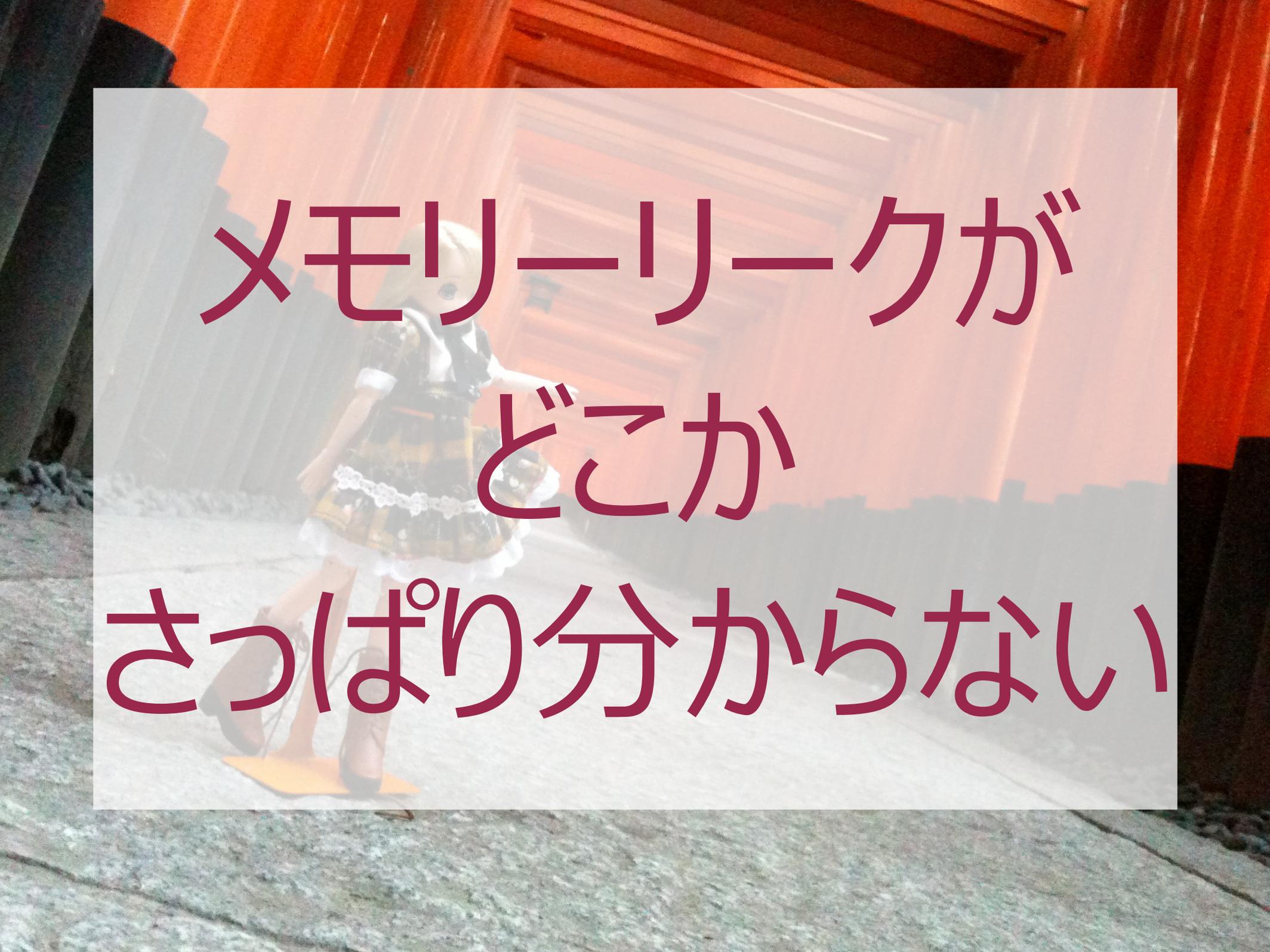
関数から  
リターンする瞬間  
クラッシュ





new T()  
しようとした瞬間  
クラッシュ



A doll with blonde hair, wearing a black and yellow plaid dress with white lace trim and brown shoes, stands on a stone path. In the background, a large red torii gate is visible against a hazy sky. The scene is overlaid with a semi-transparent white rectangle containing Japanese text.

メモリーリークが

どこか

さっぱり分からない



A doll with blonde hair, wearing a black and white plaid dress with a white lace collar and a white skirt, stands on a stone path. The background features a red torii gate structure. The scene is overlaid with a semi-transparent white rectangle containing Japanese text.

オブジェクトが  
知らない所で  
deleteされてた

大人だからな!!

いさよひに  
いさよひに  
いさよひに



①

②

9/19

人生支

あきあな



実は  
**SIGSEGV**で  
落ちる分にはラク

# SIGSEGVで死



SIGSEGVで死



そこがバグの本丸

A doll with blonde hair, wearing a plaid dress with a white collar and lace, and brown boots, stands on a small wooden platform. The background is a blurred torii gate structure with warm orange lighting.

そこを  
念入りに調べれば  
大体直る

A doll with blonde hair, wearing a plaid dress with a white lace collar and brown boots, stands on a small orange mat in a long, narrow tunnel of torii gates. The scene is dimly lit, with a soft orange glow from the gates. The doll is positioned on the left side of the frame, looking towards the right. The torii gates recede into the distance, creating a strong sense of perspective.

でも

A doll with a white headpiece, wearing a black and white top and a yellow and black plaid skirt with white lace trim, stands on a yellow mat in a hallway of red torii gates. The scene is dimly lit, with a hazy, orange-tinted background.

怪談バグ

is

よくわからない

A person wearing a maid-style outfit with a white apron and a yellow and black patterned dress is walking away from the camera down a long, narrow hallway. The walls are a vibrant red color, and the floor is a light-colored stone or concrete. The person is carrying a basket and is walking on a small yellow mat. The overall atmosphere is somewhat somber or reflective.

原因と  
結果が  
離れている！

どないすねん



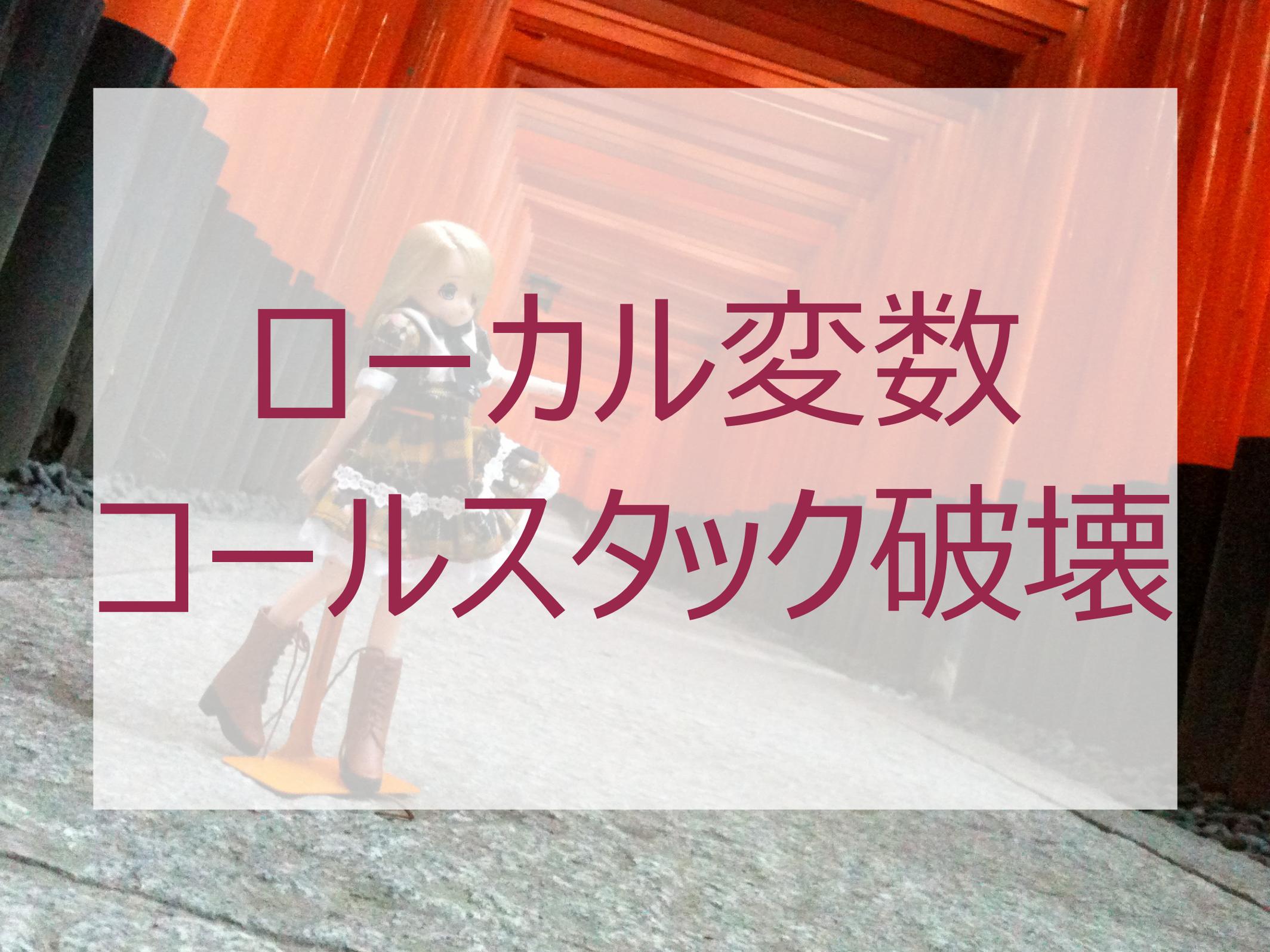
事前にしっかり  
確認しましょう。

最終兵器

アセンブラ

A doll with blonde hair, wearing a black and white dress with a yellow and black patterned skirt and brown boots, stands on a yellow mat in a hallway with red walls and a white floor. The hallway is long and narrow, with a series of red doors or panels on the right side. The doll is holding a small object in its hands.

**gdb -S**  
**odjdump -D**



ローカル変数  
コールスタック破壊



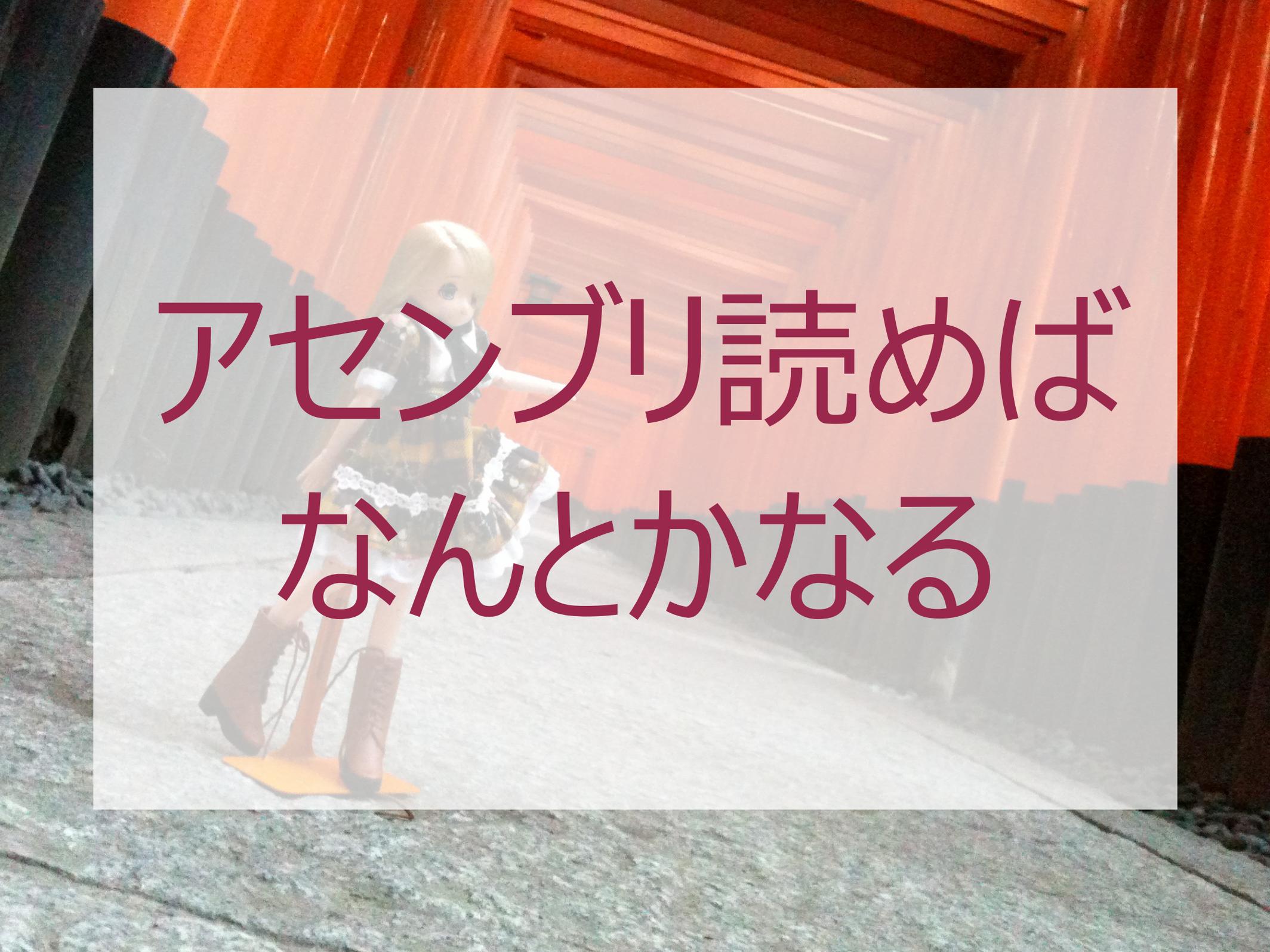
ローカルな  
変なバグは

最悪



アセンブリ読めば



A doll with blonde hair, wearing a black and white plaid dress with white lace trim and brown lace-up boots, stands on a small orange mat. The background is a blurred torii gate with orange pillars and a grey sky.

アセンブリ読めば  
なんとかなる

あーん!!



アアアア



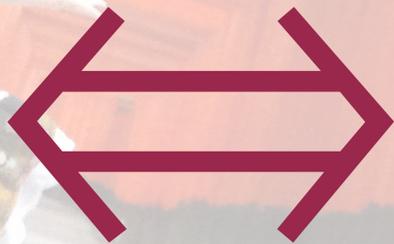
ローカルな

バグは

# ローカル



# ローカル



ローカル



グローバル

世界で勝ち抜くための

# グローバル人材 の育成と活用

デロイトトーマツ コンサルティング (株)





どうにもならない

# メモリーリーク

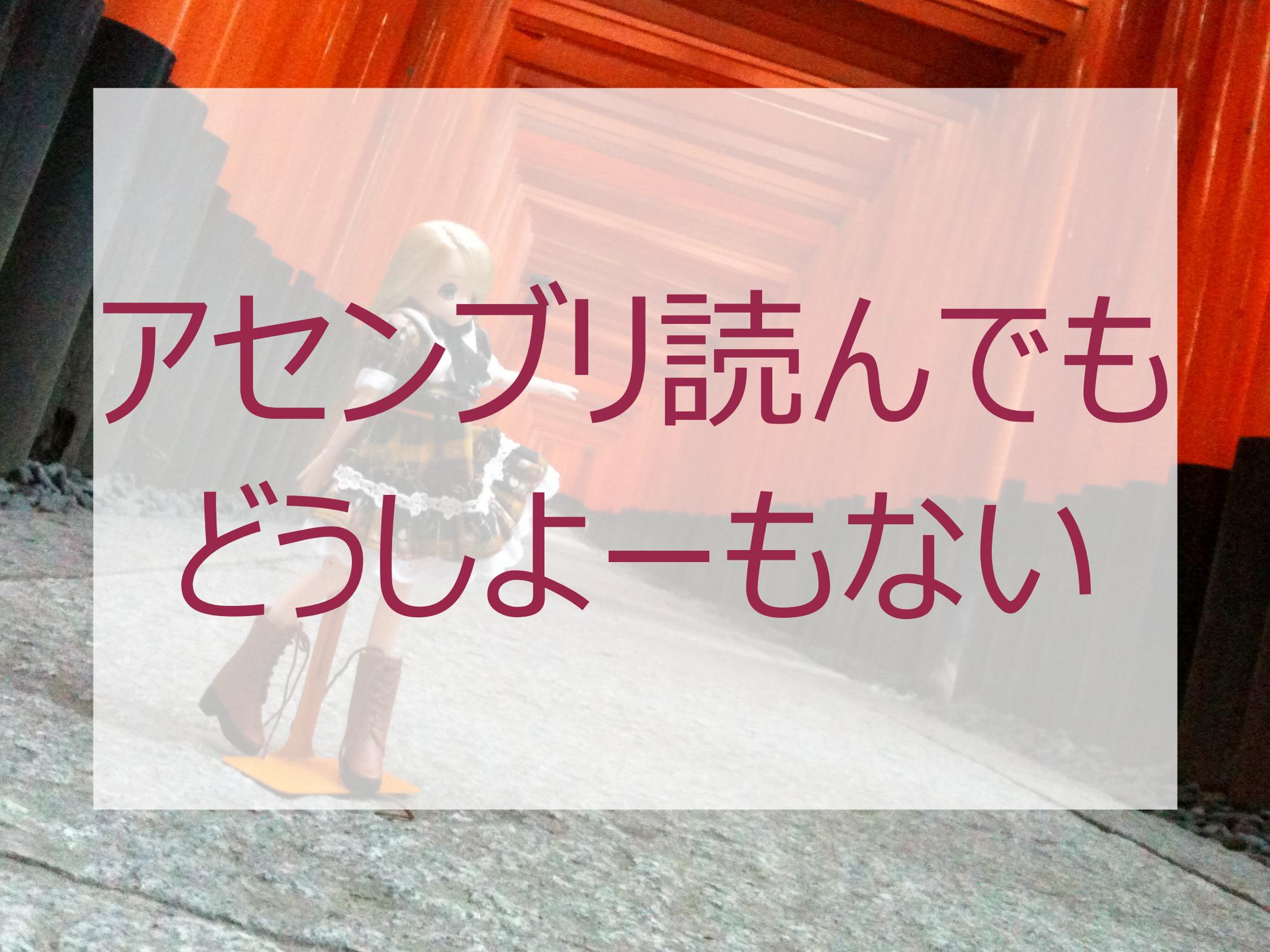




# メモリ管理領域の 破壊

# グローバルな領域 (ヒーブ) のバグ



A doll with blonde hair, wearing a plaid dress with a white lace collar and brown boots, stands on a wooden torii gate. The background is a blurred view of the torii gate's structure, creating a sense of depth. The text is overlaid on a semi-transparent white rectangular area.

アセンブリ読んでも  
どうしよーもない

とくに  
cocos2d-x



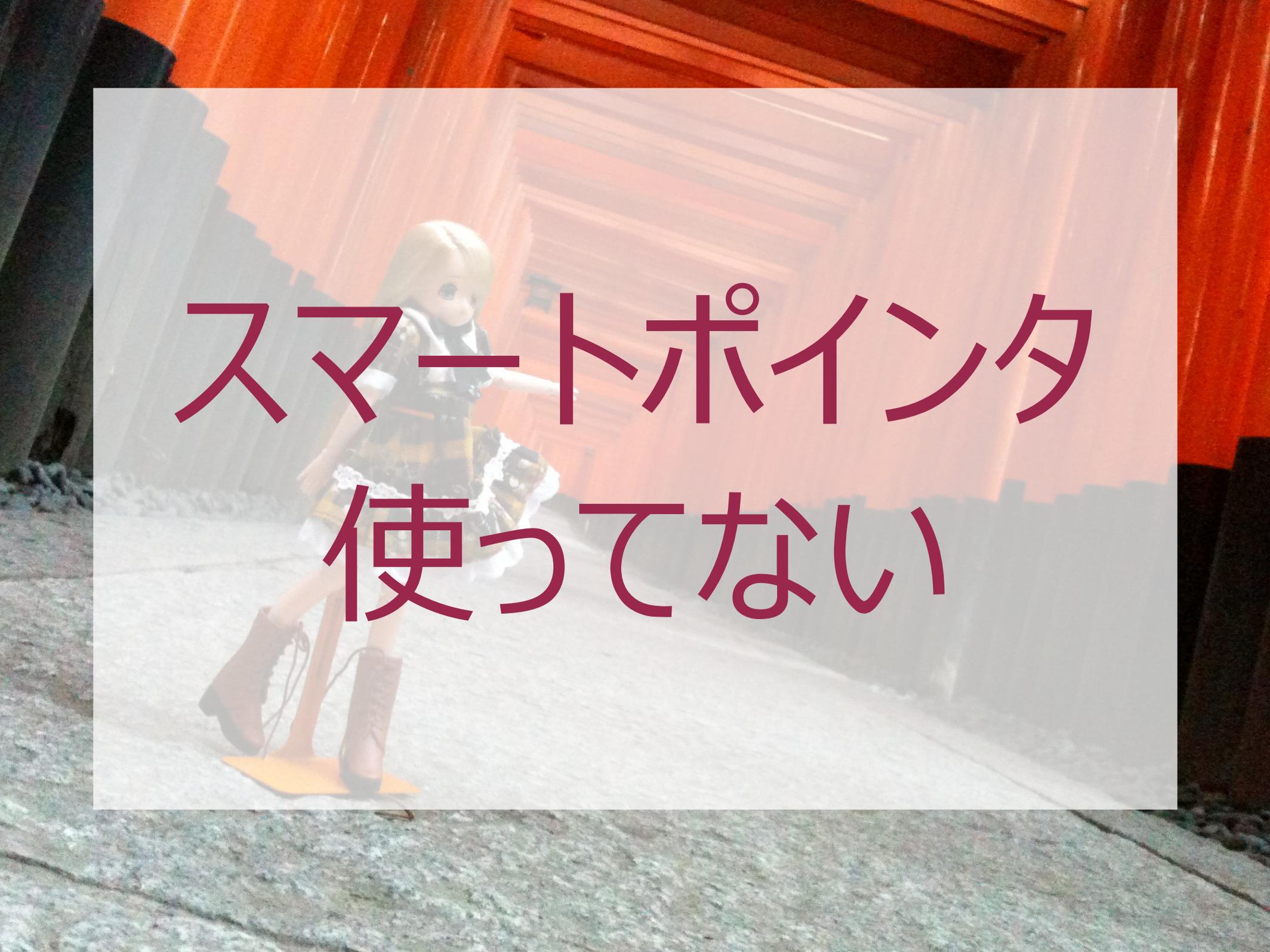


# てめエだよ てめエー

ごとうきよはるさんは今どこに？

Antropia おしてね。



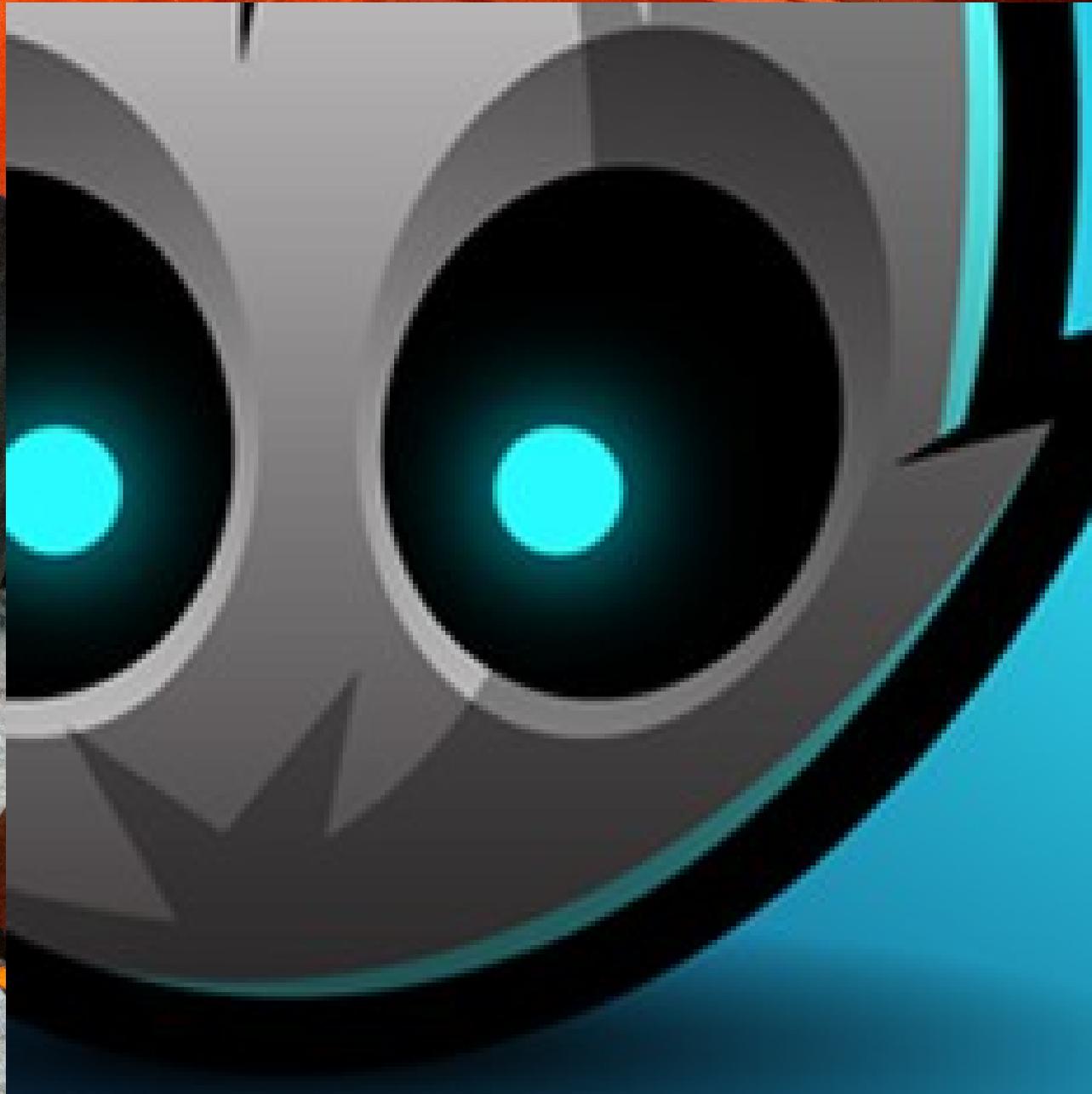
A photograph of a doll on a stand in a hallway of torii gates. The doll has blonde hair, blue eyes, and is wearing a black and yellow plaid dress with white lace trim and brown boots. The hallway is made of wooden torii gates receding into the distance. The text is overlaid on a semi-transparent white rectangle.

スマートポイント  
使っていない





全手動  
retain  
release



A doll with blonde hair, wearing a yellow and black plaid dress with white lace trim and brown lace-up boots, stands on a yellow mat in a hallway with red walls. The doll is positioned in the center-left of the frame. The hallway has a repeating pattern of red walls and white trim, creating a sense of depth. The lighting is soft, and the overall tone is warm.

例外安全性

**: ZERO**



A doll with blonde hair, wearing a black and yellow plaid dress and brown boots, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing text.

**RAII... ?**  
**何それ... ?**





どないすねん  
(2度目)

きんぎょ



# Valgrind



ゆるすよ



A doll with blonde hair, wearing a black and white dress with a yellow plaid skirt and brown boots, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle.

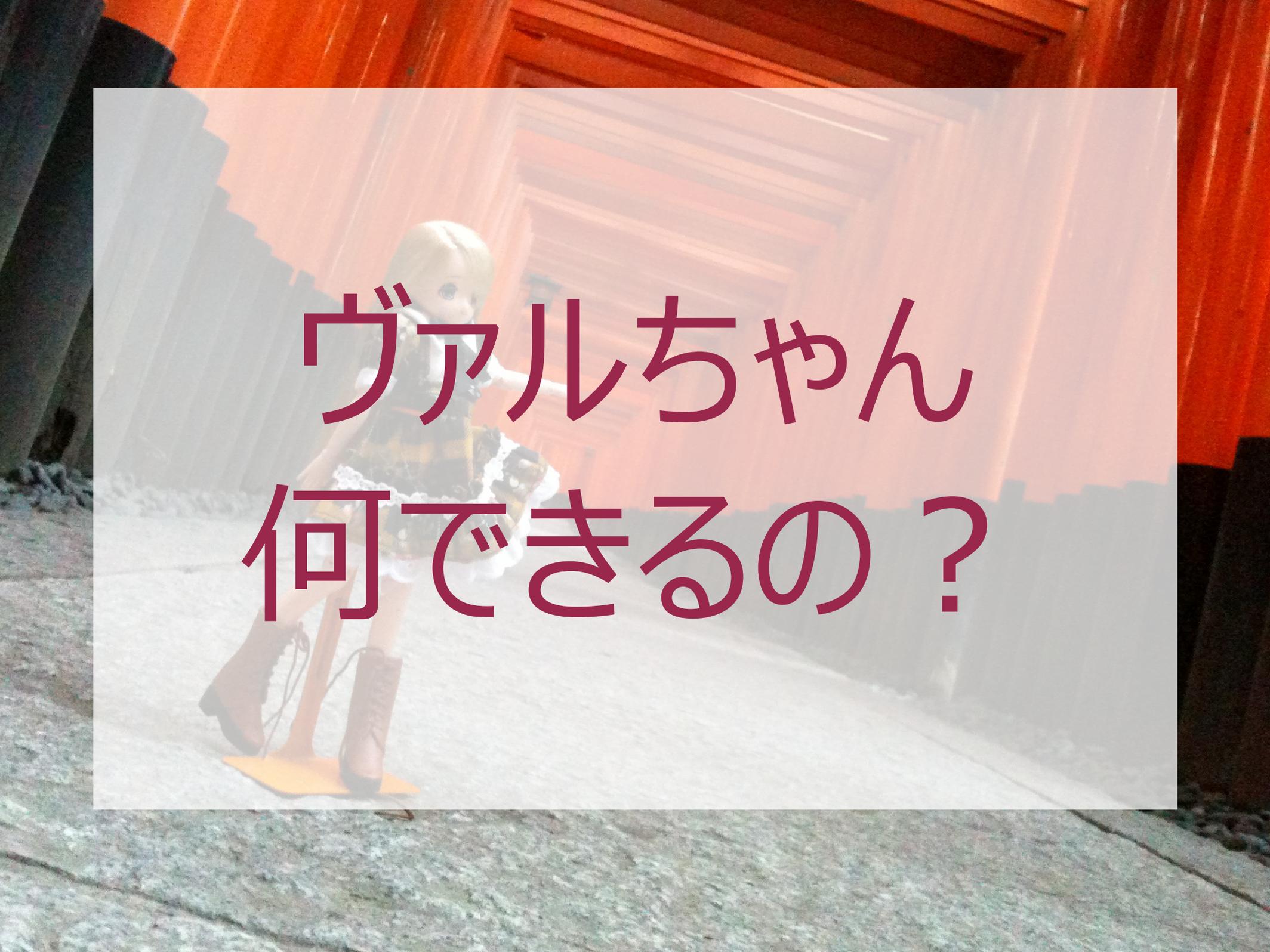
**valgrind**

以下





ヴァルちゃん

A doll with blonde hair, wearing a black and yellow patterned dress with white lace trim and brown boots, stands on a yellow mat in a hallway with red walls. The doll is positioned in the center-left of the frame. The hallway is long and narrow, with red walls and a grey floor. The lighting is warm, and the perspective is from a low angle, looking down the hallway.

ヴァルちゃん  
何できるの？

A doll with blonde hair, wearing a black and white plaid dress with a white collar and lace, and brown lace-up boots, stands on a small yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle.

たとえば、

# メモリーク検出





# メモリーク検出 (場所付き)

# 解放済み領域 アクセス検出





解放済み領域  
アクセス検出  
(場所付き)

A doll with blonde hair, wearing a black and white plaid dress with a white lace collar and white lace trim at the hem, and brown lace-up boots, stands on a yellow mat. The background is a hallway with red walls and a grey floor.

# バッファ オーバーラン 検出

The background features a doll with blonde hair, wearing a black and white dress with a yellow and black patterned skirt and brown boots, standing on a yellow mat in a traditional Japanese shrine hallway with orange-brown wooden pillars and sliding doors.

未初期化  
メモリへの  
アクセス検出

アッ!?



# 行列



# 未初期化変数 アクセス

```
int* b = (int*)malloc(1*sizeof(int));  
if( b[0] ) {  
    int i=0; /* nop */  
}  
free(b);  
b[0] = 0;
```

# 未初期化変数を使った条件分岐

Conditional jump or move depends  
on uninitialised value(s)  
ソースコード上の位置

at 0x40066C: main (tes.cpp:7)

```
int* b = (int*)malloc(1*sizeof(int));  
if( b[0] ) {  
    int i=0; /* nop */  
}  
free(b);  
b[0] = 0;
```

解放後変数へのアクセス

# 無効な変数へのアクセス

Invalid write of size 4

at 0x400685: main (tes.cpp:11)  
どこで開放されたか

Address 0x5a15090 is 0 bytes inside  
a block of size 4 free'd  
by 0x400680: main (tes.cpp:10)



定期的に  
ヴァルちゃんして  
バグを潰そう♪

キラキラ

完璧だわ!!

ん



と、  
言いたい  
ところだが



こ苦労だった・・・と  
言いたいところだが

死ぬがよい。

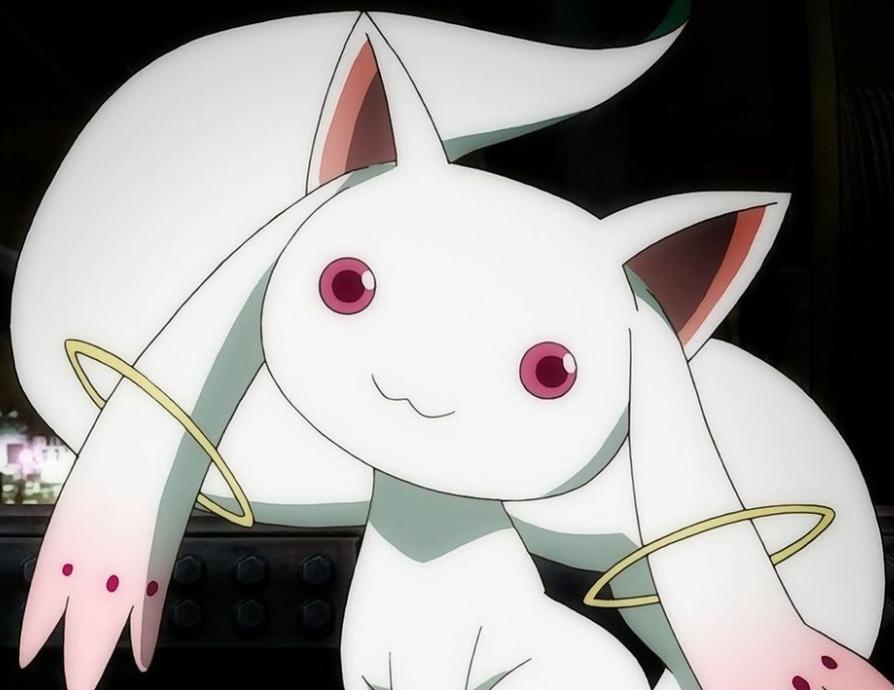
君等には消えてもらう。



最終鬼畜新党

<http://www.cave.co.jp/>

# 奇跡の代償



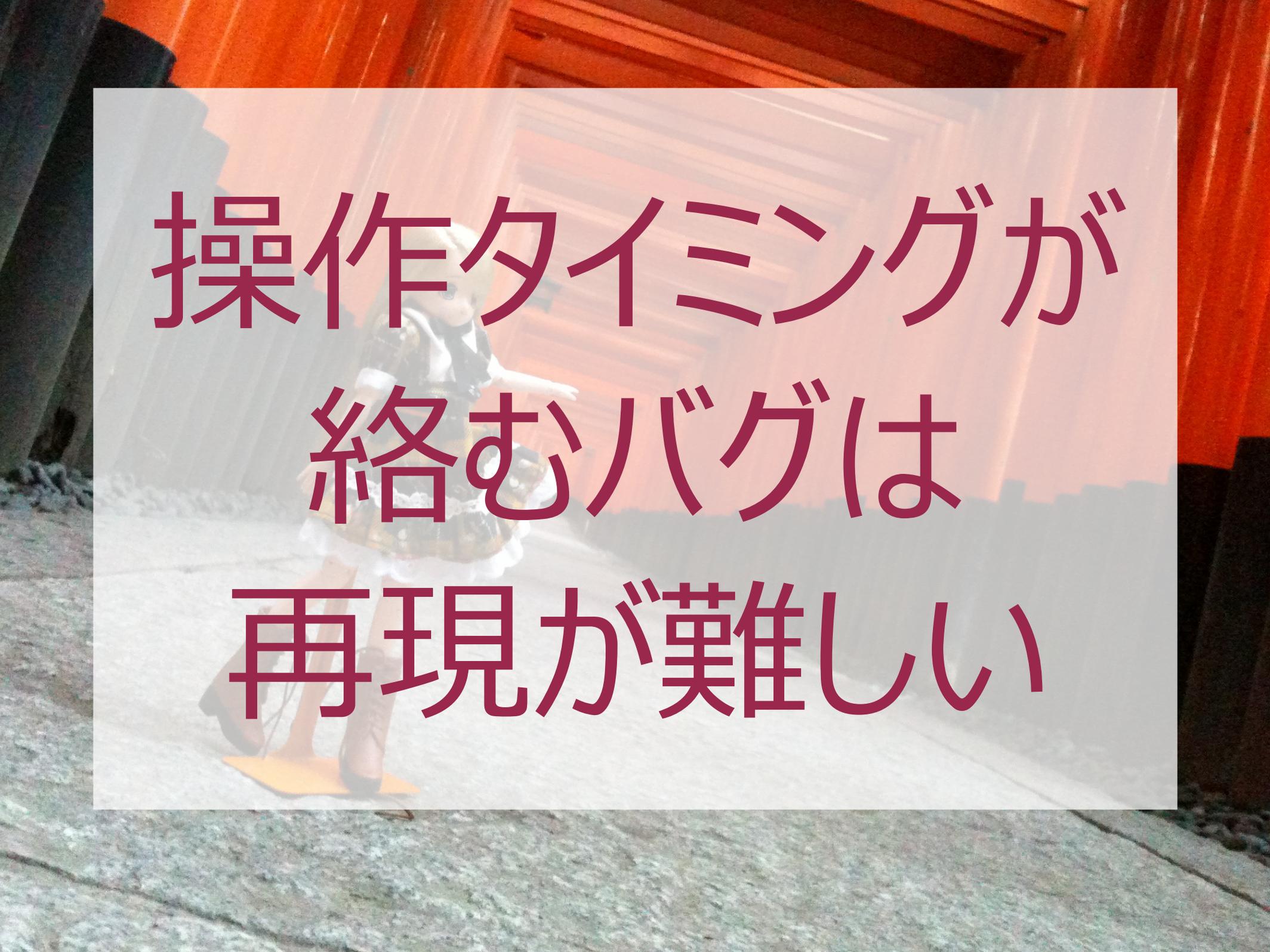
遅い



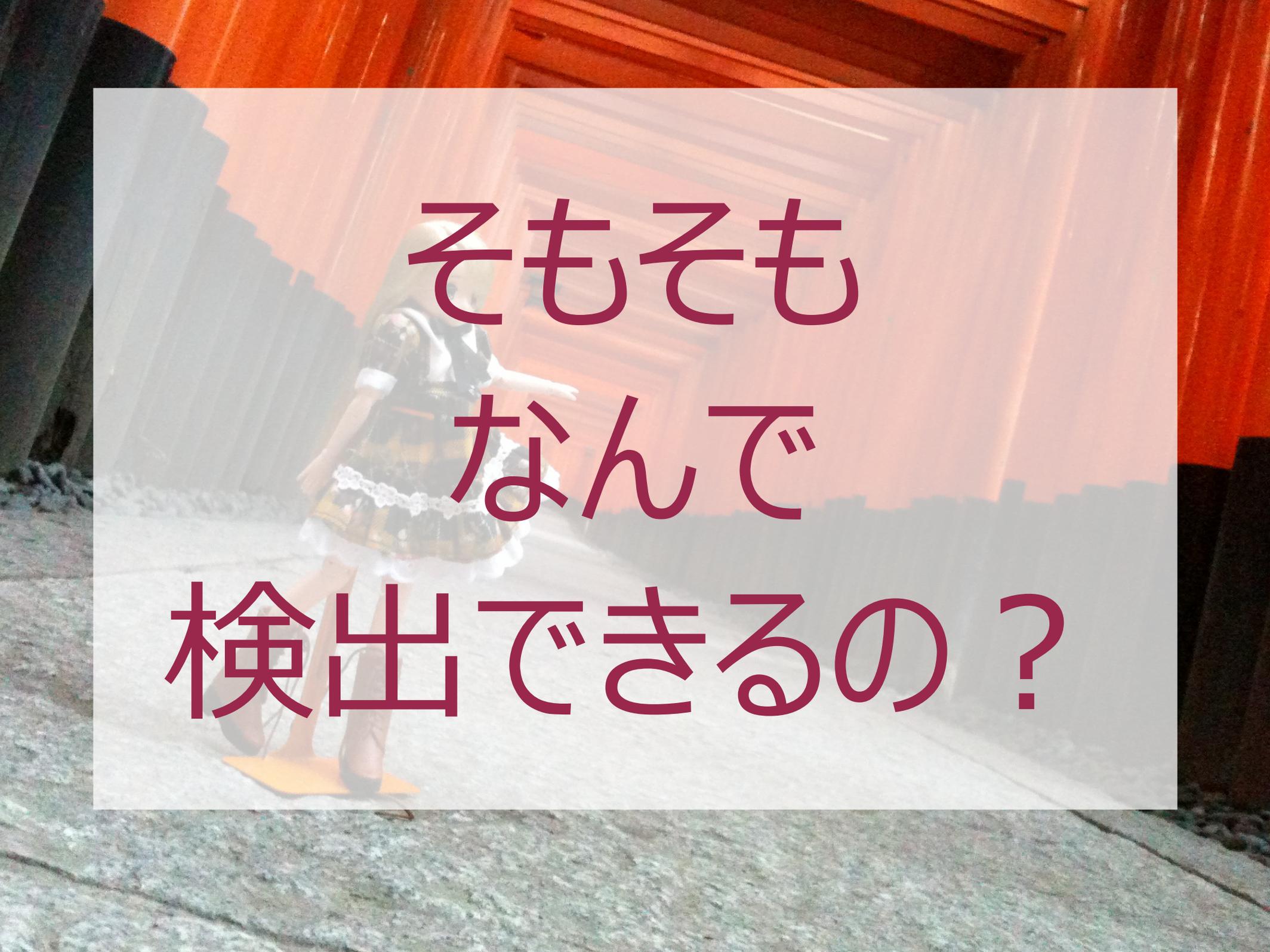
すごく

遅い、





操作タイミングが  
絡むバグは  
再現が難しい

A doll with blonde hair, wearing a black and white plaid dress with white lace trim and a white collar, stands on a yellow mat. The doll is positioned in front of a red torii gate, which is part of a larger structure made of red wood. The background is a bright, hazy sky. The text is overlaid on a semi-transparent white rectangular area.

そもそも  
なんで  
検出できるの？



x86実行コード



中間形式へ翻訳



全ての  
メモリアクセスに  
チェックコード挿入



再度x86に  
JITコンパイル

A doll with blonde hair, wearing a plaid dress with white lace trim and brown boots, stands on a yellow mat. The background is a red torii gate structure, slightly out of focus.

遅くない

わけがない

# もう一つの問題



# 詛咒爆發



# シングルトン



A doll with blonde hair, wearing a plaid dress and brown boots, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing the text 'キヤッツシユ' in a dark red font.

キヤッツシユ



# メモリーリーク として誤検出

そして



# クワッblob



A doll with blonde hair, wearing a dark dress with white lace trim and brown boots, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing Japanese text.

はつきり言うと

# グラボのドライバ

RADEON  
DRIVERS

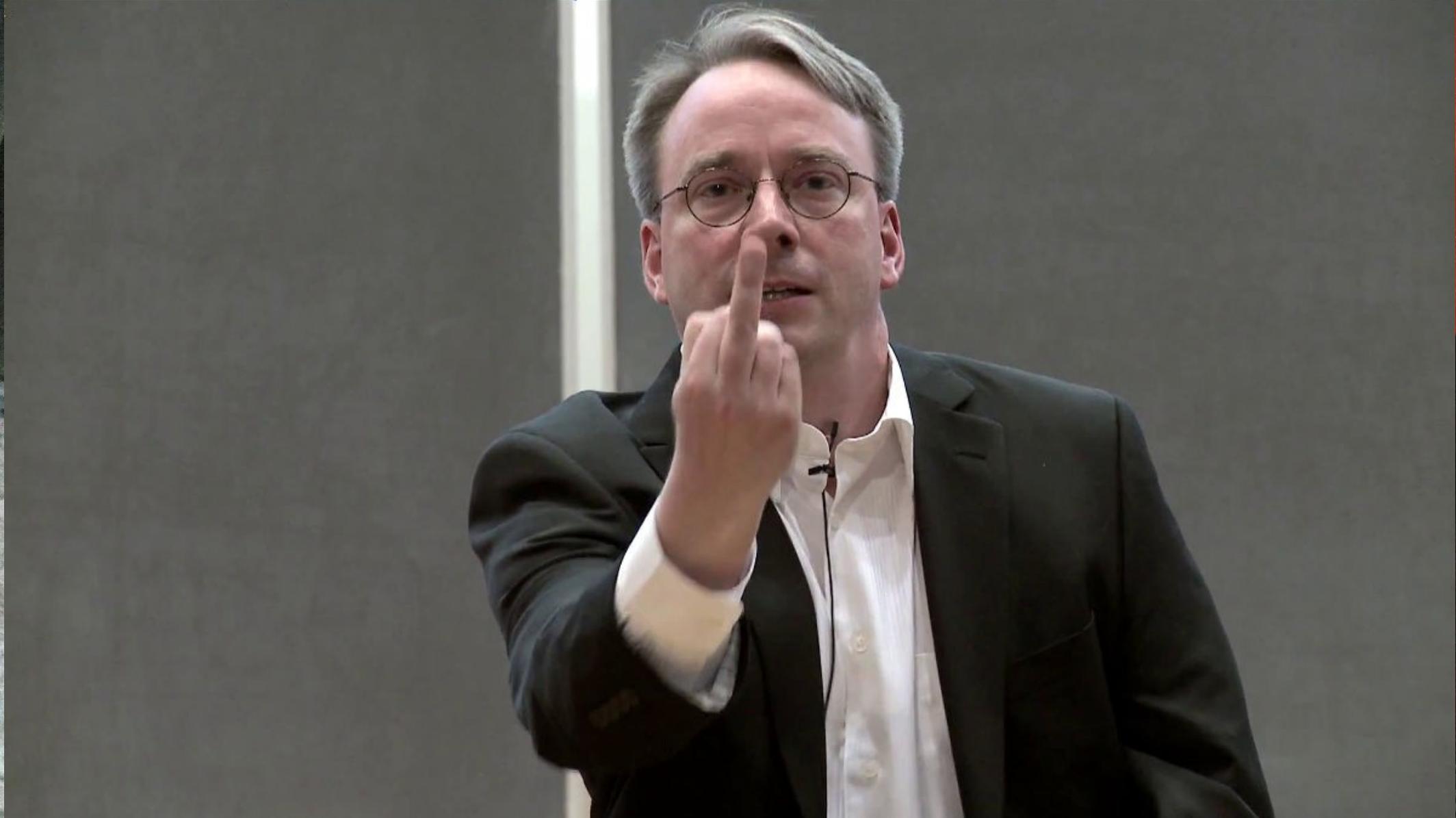
AMD



※プライバシー保護のため、モザイク処理を掛けています

A person dressed as a maid in a yellow and black plaid dress with a white apron and a white bow in their hair stands in a hallway. The hallway features a repeating pattern of orange-brown wooden doors, creating a strong sense of perspective. The floor is made of grey stone tiles. A semi-transparent white rectangular box is overlaid on the center of the image, containing Japanese text in a dark red color.

クソblob内の  
クソバグ検出で  
埋め尽くされる



A doll with blonde hair, wearing a black and white outfit with a yellow and black plaid skirt, stands on a yellow mat in a hallway of red torii gates. The scene is overlaid with a semi-transparent white rectangle containing Japanese text.

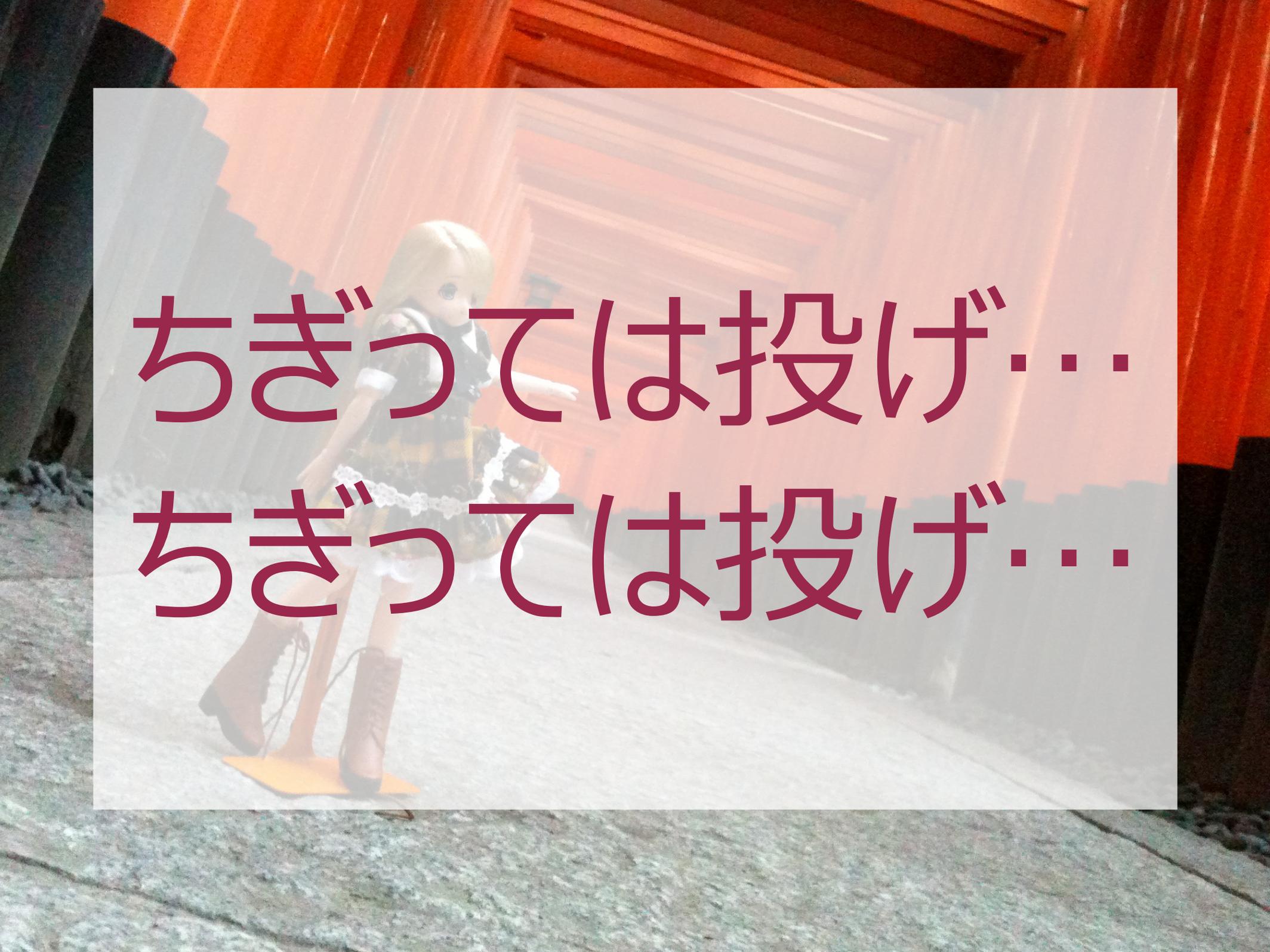
「無視」  
機能はあるので

A doll with blonde hair, wearing a black and white dress with a yellow plaid skirt and brown boots, stands on a yellow scale. The scene is set within a series of red torii gates, creating a perspective effect. The background is slightly blurred, emphasizing the doll and the scale.

ひたすら  
誤検出を

ちぎっては投げ...





ちぎっては投げ...

ちぎっては投げ...

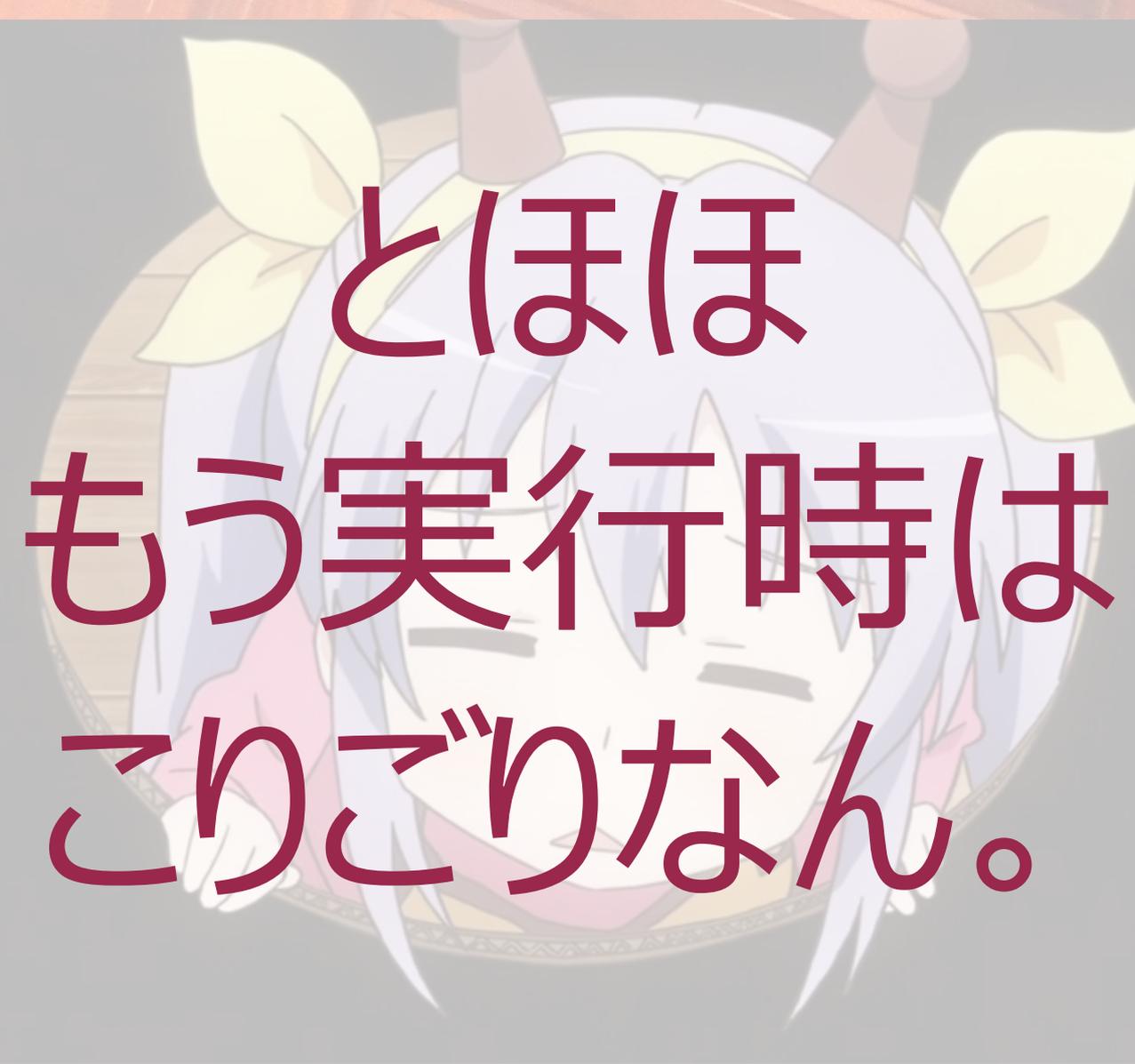


# 出来上がった 無視ファイル





TOKYO MX



とほほ  
もう実行時は  
ごりごりなん。

