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I need to generate a random sequence of a single letter and 6 digit combination, example: F841257

I was looking into `rand` crate, but something doesn't quite work.

```
extern crate rand;
```

```
fn main() {
    println!("{}:{}", rand::random::char());
}
```

prints something like '\u{6ae02}' and `println!("{}:{}", rand::random::char())` produces some weird glyph.

Can someone point me in the right direction of how I could achieve this?

- [random](#)
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asked May 27, 2015 at 16:11

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First, a working program:

```
extern crate rand;

use rand::Rng;

fn main() {
    let mut rng = rand::thread_rng();
    let letter: char = rng.gen_range(b'A', b'Z') as char;
    let number: u32 = rng.gen_range(0, 999999);
    let s = format!("{}{:06}", letter, number);
    println!("{}", s);
}
```

Next, an explanation.

`rand::random::char()` returns a random value from the whole `char` range, that is, it may return arbitrary Unicode code point. That's why you see weird glyphs - these are likely values from upper Unicode planes.

You need to define boundaries of what you need to generate. First, you need a letter, then you need six digits. A letter is any character between 'A' and 'Z', and six digits can be represented by a number from 0 to 999999 which is padded with zeros when printing.

So, first, we generate a `u8` which corresponds to a letter in ASCII and convert it to `char` (unfortunately, `rand` crate does not provide range distribution for `chars`, so we have to use such indirection).

Second, we generate a `u32` between 0 and 999999.

Then we print them in the desired format. Here are a few values which this program generates: V285490, Y865809, A704620.

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[edited May 27, 2015 at 16:30](#)

answered May 27, 2015 at 16:24

[Vladimir Matveev](#)

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Francis Gagné

[Francis Gagné](#) [Over a year ago](#)

Perhaps the reason that no range distribution is provided for `char` is that code points U+D800 to u+DFFF (which correspond to the surrogates) are not valid.

2015-05-28T02:22:39.99Z+00:00

1

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Sebastian

[Sebastian](#) [Over a year ago](#)

According to [the docs](#), `gen_range` generates in the range `[low, high)`, so not including high. How would I change the code to make Z999999 an option?

2016-04-20T10:51.343Z+00:00

0

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Vladimir Matveev

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@Sebastian, `rng.gen_range(0, 1000000)?`

2016-04-20T11:30:57.717Z+00:00

1

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That would work. And `rng.gen_range(b'A', b'Z'+1)` as `char` for the letter. I think a function with an inclusive range `[low, high]` would be nice to have...

2016-04-20T11:36:57.87Z+00:00

1

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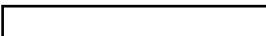
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