

# RandomChar

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A collection of methods for generating random `char` and `string` data. Characters generated have a unicode value in the range **[0x0000, 0xD7FF]** or **[0xE000, 0x10FFFF]**. Each method has a unique and non-unique version, and optionally accept a list of `UnicodeCategory` or `ASCIICategory` enums to choose characters from.

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## Character Categories

Characters can be generated from two umbrella sets **ASCII** and **Unicode**. Each supports several sub-categories defined by enums `ASCIICategory` and `UnicodeCategory`, respectively.

### ASCII Categories

- [LowercaseLetter](#)
- [Number](#)
- [Punctuation](#)
- [UppercaseLetter](#)

### Unicode Categories

- [Control](#)
- [Format](#)
- [LowercaseLetter](#)
- [ModifierLetter](#)

- OtherLetter
- TitlecaseLetter
- UppercaseLetter
- SpacingCombiningMark
- EnclosingMark
- NonSpacingMark
- DecimalDigitNumber
- LetterNumber
- OtherNumber
- ConnectorPunctuation
- DashPunctuation
- ClosePunctuation
- FinalQuotePunctuation
- InitialQuotePunctuation
- OtherPunctuation
- OpenPunctuation
- CurrencySymbol
- ModifierSymbol
- MathSymbol
- OtherSymbol
- LineSeparator
- ParagraphSeparator
- SpaceSeparator

## Methods

### Append

Appends `count` random characters to `str`.

```
string Append(string str, int count)
```

Appends `count` random characters chosen from a set defined by `categories` to `str`.

```
string Append(string str, int count, ASCIICategory[] categories)
```

Appends `count` random characters chosen from a set defined by `categories` to `str`.

```
string Append(string str, int count, UnicodeCategory[] categories)
```

---

### AppendUnique

Appends `count` unique random characters to `str`.

```
string AppendUnique(string str, int count)
```

Appends `count` distinct random characters chosen from a set defined by `categories` to `str`.

```
string AppendUnique(string str, int count, ASCIICategory[] categories)
```

Appends `count` distinct random characters chosen from a set defined by `categories` to `str`.

```
string AppendUnique(string str, int count, UnicodeCategory[] categories)
```

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### Fill

Fills `chars` with random characters.

```
void Fill(char[] chars)
```

Fills `chars` with random characters chosen from the set defined by `categories`.

```
void Fill(char[] chars, ASCIICategory[] categories)
```

Fills `chars` with random characters chosen from the set defined by `categories`.

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```
void Fill(char[] chars, UnicodeCategory[] categories)
```

Fills `chars` with `count` random characters starting from `at`.

```
void Fill(char[] chars, int at, int count)
```

Fills `chars` with `count` random characters chosen from the set defined by `categories` starting from `at`.

```
void Fill(char[] chars, int at, int count, ASCIICategory[] categories)
```

Fills `chars` with `count` random characters chosen from the set defined by `categories` starting from `at`.

```
void Fill(char[] chars, int at, int count, UnicodeCategory[] categories)
```

Fills `chars` with random characters.

```
void Fill(Span<char> chars)
```

Fills `chars` with random characters chosen from the set defined by `categories`.

```
void Fill(Span<char> chars, ASCIICategory[] categories)
```

Fills `chars` with random characters chosen from the set defined by `categories`.

```
void Fill(Span<char> chars, UnicodeCategory[] categories)
```

Fills `chars` with `count` random characters starting from `at`.

```
void Fill(Span<char> chars, int at, int count)
```

Fills `chars` with `count` random characters chosen from the set defined by `categories` starting from `at`.

```
void Fill(Span<char> chars, int at, int count, ASCIICategory[] categories)
```

Fills `chars` with `count` random characters chosen from the set defined by `categories` starting from `at`.

```
void Fill(Span<char> chars, int at, int cout, UnicodeCategory[] categories)
```

---

### FillUnique

Fills `chars` with distinct random characters.

```
void FillUnique(char[] chars)
```

Fills `chars` with distinct random characters chosen from the set defined by `categories`.

```
void FillUnique(char[] chars, ASCIICategory[] categories)
```

Fills `chars` with distinct random characters chosen from the set defined by `categories`.

```
void FillUnique(char[] chars, UnicodeCategory[] categories)
```

Fills `chars` with `count` distinct random characters starting from `at`.

```
void FillUnique(char[] chars, int at, int count)
```

Fills `chars` with `count` distinct random characters chosen from the set defined by `categories` starting from `at`.

```
void FillUnique(char[] chars, int at, int count, ASCIICategory[] categories)
```

Fills `chars` with `count` distinct random characters chosen from the set defined by `categories` starting from `at`.

```
void FillUnique(char[] chars, int at, int count, UnicodeCategory[] categories)
```

Fills `chars` with distinct random characters.

```
void FillUnique(Span<char> chars)
```

Fills `chars` with distinct random characters chosen from the set defined by `categories`.

```
void FillUnique(Span<char> chars, ASCIICategory[] categories)
```

Fills `chars` with distinct random characters chosen from the set defined by `categories`.

```
void FillUnique(Span<char> chars, UnicodeCategory[] categories)
```

Fills `chars` with `count` distinct random characters starting from `at`.

```
void FillUnique(Span<char> chars, int at, int count)
```

Fills `chars` with `count` distinct random characters chosen from the set defined by `categories` starting from `at`.

```
void FillUnique(Span<char> chars, int at, int count, ASCIICategory[] categories)
```

Fills `chars` with `count` distinct random characters chosen from the set defined by `categories` starting from `at`.

```
void FillUnique(Span<char> chars, int at, int cout, UnicodeCategory[] categories)
```

---

## GetCharacter

Generates a random character

```
char GetCharacter()
```

Generates a random character chosen from the set defined by `categories`.

```
char GetCharacter(ASCIICategory[] categories)
```

Generates a random character chosen from the set defined by `categories`.

```
char GetCharacter(UnicodeCategory[] categories)
```

---

## GetCharacters

Generates `count` random characters

```
char[] GetCharacters(int count)
```

Generates `count` random characters chosen from the set defined by `categories`.

```
char[] GetCharacters(int count, ASCIICategory[] categories)
```

Generates `count` random characters chosen from the set defined by `categories`.

```
char[] GetCharacters(int count, UnicodeCategory[] categories)
```

---

## GetUniqueCharacters

Generates `count` distinct random characters

```
char[] GetUniqueCharacters(int count)
```

Generates `count` distinct random characters chosen from the set defined by `categories`.

```
char[] GetUniqueCharacters(int count, ASCIICategory[] categories)
```

Generates `count` distinct random characters chosen from the set defined by `categories`.

```
char[] GetUniqueCharacters(int count, UnicodeCategory[] categories)
```

---

## GetString



Generates a random string with `length` characters.

```
string GetString(int length)
```

Generates a random string with `length` characters chosen from the set defined by `categories`.

```
string GetString(ASCIICategory[] categories)
```

Generates a random string with `length` characters chosen from the set defined by `categories`.

```
string GetString(UnicodeCategory[] categories)
```

---

## GetUniqueString

Generates a random string with `length` distinct characters.

```
string GetUniqueString(int length)
```

Generates a random string with `length` distinct characters chosen from the set defined by `categories`.

```
string GetUniqueString(ASCIICategory[] categories)
```

Generates a random string with `length` distinct characters chosen from the set defined by `categories`.

```
string GetUniqueString(UnicodeCategory[] categories)
```

---

## Prepend

Prepends `count` random characters to `str`.

```
string Prepend(string str, int count)
```

Prepends `count` random characters chosen from the set defined by `categories` to `str`.

```
string Prepend(string str, int count, ASCIICategory[] categories)
```

Prepends `count` random characters chosen from the set defined by `categories` to `str`.

```
string Prepend(string str, int count, UnicodeCategory[] categories)
```

---

### PrependUnique

Prepends `count` distinct random characters to `str`.

```
string PrependUnique(string str, int count)
```

Prepends `count` distinct random characters chosen from the set defined by `categories` to `str`.

```
string PrependUnique(string str, int count, ASCIICategory[] categories)
```

Prepends `count` distinct random characters chosen from the set defined by `categories` to `str`.

```
string PrependUnique(string str, int count, UnicodeCategory[] categories)
```