



# CHARACTER OPERATIONS FROM CHARACTER CLASS

zyBook 3.17,  
Oracle - Java Tutorial: Characters, Java Character API

# CHARACTER CLASS

- The Character class wraps a value of the primitive type char in an object.
- An object of type Character contains a single field whose type is char.



```
public static int getNumericValue(char ch)
```

- Parameters: ch – the character to be converted.
- Returns: the numeric value of the character, as a nonnegative int value;
  - 2 if the character has a numeric value but the value can not be represented as a nonnegative int value;
  - 1 if the character has no numeric value.
- For example,

```
Character.getNumericValue('6'); // 6
```



## public static boolean isDigit(int codePoint)

- Parameters: codePoint — the character (Unicode code point) to be tested.
- Returns: true if the character is a digit; false otherwise.
- For example,

```
Character.isDigit('X');    // false
```

```
Character.isDigit('9');    // true
```





`public static boolean isLetter(char ch)`

- Parameters: `ch` — the character to be tested.
- Returns: `true` if the character is a letter; `false` otherwise.
- For example,

```
Character.isLetter('X');    // true
```

```
Character.isLetter('9');    // false
```






`public static boolean isLowerCase(char ch)`

- Parameters: `ch` – the character to be tested.
- Returns: `true` if the character is lowercase; `false` otherwise.

`public static boolean isUpperCase(char ch)`

- Parameters: `ch` – the character to be tested.
- Returns: `true` if the character is uppercase; `false` otherwise.

For example,

- `Character.isLowerCase('Q');`      `\\ false`
  - `Character.isUpperCase('Q');`      `\\ true`
  - `Character.isLowerCase('n');`      `\\ true`
  - `Character.isUpperCase('n');`      `\\ false`
  - `Character.isUpperCase('!');`      `\\ false`
- 

## public static boolean toLowerCase(char ch)

- Parameters: ch – the character to be converted.
- Returns: the lowercase equivalent of the character, if any; otherwise, the character itself.

## public static boolean toUpperCase(char ch)

- Parameters: ch – the character to be converted.
- Returns: the uppercase equivalent of the character, if any; otherwise, the character itself.

For example,

- `Character.toLowerCase('Q');`      `// 'q'`
- `Character.toUpperCase('Q');`      `// 'Q'`
- `Character.toLowerCase('n');`      `// 'n'`
- `Character.toUpperCase('n');`      `// 'N'`
- `Character.toUpperCase('!');`      `// '!''`