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# int

The moonbitlang/core/int package provides essential operations on 32-bit integers.

## Basic Operations

This section shows the basic operations available for integers:

```
1
2  test "basic int operations" {
3
4      inspect(@int.abs(-42), content="42")
5      inspect(@int.abs(42), content="42")
6
7
8      inspect(@int.min_value, content="-2147483648")
9      inspect(@int.max_value, content="2147483647")
10 }
```

## Byte Conversion

The package provides methods to convert integers to their byte representation in both big-endian and little-endian formats:

```
1
2  test "byte conversions" {
3      let num = 258
4
5
6      let be_bytes = num.to_be_bytes()
7      inspect(
8          be_bytes.to_string(),
9          content=(
10             #|b"\x00\x00\x01\x02"
11             ),
12      )
13
14
15      let le_bytes = num.to_le_bytes()
16      inspect(
17          le_bytes.to_string(),
18          content=(
19             #|b"\x02\x01\x00\x00"
20             ),
21      )
22 }
```

## Method Syntax

All operations are also available using method syntax for better readability:

```

1
2  test "method syntax" {
3      let n = -42
4
5
6      inspect(n.abs(), content="42")
7
8
9      let be = n.to_be_bytes()
10     let le = n.to_le_bytes()
11     inspect(
12         be.to_string(),
13         content=(
14             #|b"\xff\xff\xff\xd6"
15         ),
16     )
17     inspect(
18         le.to_string(),
19         content=(
20             #|b"\xd6\xff\xff\xff"
21         ),
22     )
23 }

```

The package provides the foundations for 32-bit integer operations in MoonBit, essential for any numeric computation.