Module sui::bag

A bag is a heterogeneous map-like collection. The collection is similar to <u>sui::table</u> in that its keys and values are not stored within the <u>Bag</u> value, but instead are stored using Sui's object system. The <u>Bag</u> struct acts only as a handle into the object system to retrieve those keys and values. Note that this means that <u>Bag</u> values with exactly the same key-value mapping will not be equal, with —, at runtime. For example

At it's core, <u>sui::bag</u> is a wrapper around UID that allows for access to <u>sui::dynamic_field</u> while preventing accidentally stranding field values. A UID can be deleted, even if it has dynamic fields associated with it, but a bag, on the other hand, must be empty to be destroyed.

Creates a new, empty bag

Adds a key-value pair to the bag <u>bag</u>: & mut <u>Bag</u> Aborts with <u>sui::dynamic_field::EFieldAlreadyExists</u> if the bag already has an entry with that key k: K.

Immutable borrows the value associated with the key in the bag \underline{bag} : & \underline{Bag} . Aborts with $\underline{sui::dynamic_field::EFieldDoesNotExist}$ if the bag does not have an entry with that key k: K. Aborts with $\underline{sui::dynamic_field::EFieldTypeMismatch}$ if the bag has an entry for the key, but the value does not have the specified type.

Mutably borrows the value associated with the key in the bag bag: & mut Bag. Aborts with sui::dynamic_field::EFieldDoesNotExist if the bag does not have an entry with that key k: K. Aborts with sui::dynamic_field::EFieldTypeMismatch if the bag has an entry for the key, but the value does not have the specified type.

Mutably borrows the key-value pair in the bag bag: & mut Bag and returns the value. Aborts with sui::dynamic_field::EFieldDoesNotExist if the bag does not have an entry with that key k: K. Aborts with sui::dynamic_field::EFieldTypeMismatch if the bag has an entry for the key, but the value does not have the specified type.

Returns true iff there is an value associated with the key k: K in the bag bag: & Bag

Returns true iff there is an value associated with the key k: K in the bag bag: & Bag with an assigned value of type V

Returns the size of the bag, the number of key-value pairs

Returns true iff the bag is empty (if <u>length</u> returns 0)

Destroys an empty bag Aborts with EBagNotEmpty if the bag still contains values

Struct

```bash
```bash
Creates a new, empty bag
```bash
```bash
Adds a key-value pair to the bag \underline{bag} : & mut \underline{Bag} Aborts with $\underline{sui::dynamic_field::EFieldAlreadyExists}$ if the bag already has an entry with that key k: K.
```hash

```bash
Immutable borrows the value associated with the key in the bag \underline{bag} : & \underline{Bag} . Aborts with $\underline{sui::dynamic_field::EFieldDoesNotExist}$ if the bag does not have an entry with that key k: K. Aborts with $\underline{sui::dynamic_field::EFieldTypeMismatch}$ if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Mutably borrows the value associated with the key in the bag \underline{bag} : & mut \underline{Bag} . Aborts with $\underline{sui::dynamic_field::EFieldDoesNotExist}$ if the bag does not have an entry with that key k: K. Aborts with $\underline{sui::dynamic_field::EFieldTypeMismatch}$ if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Mutably borrows the key-value pair in the bag <u>bag</u> : & mut <u>Bag</u> and returns the value. Aborts with <u>sui::dynamic_field::EFieldDoesNotExist</u> if the bag does not have an entry with that key k: K. Aborts with <u>sui::dynamic_field::EFieldTypeMismatch</u> if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Returns true iff there is an value associated with the key k: K in the bag \underline{bag} : & \underline{Bag}
```bash
```bash
···
Returns true iff there is an value associated with the key k: K in the bag \underline{bag} : & \underline{Bag} with an assigned value of type V
```bash
```bash
Returns the size of the bag, the number of key-value pairs
```bash
```bash

Returns true iff the bag is empty (if <u>length</u> returns 0)
```bash
```bash
Destroys an empty bag Aborts with EBagNotEmpty if the bag still contains values
```bash
```bash
Constants
```bash
Creates a new, empty bag
```bash
```bash
Adds a key-value pair to the bag $\underline{bag}$ : & mut $\underline{Bag}$ Aborts with $\underline{sui::dynamic_field::EFieldAlreadyExists}$ if the bag already has an entry with that key k: K.
```bash
```bash
Immutable borrows the value associated with the key in the bag $\underline{bag}$ : & $\underline{Bag}$ . Aborts with $\underline{sui::dynamic_field::EFieldDoesNotExist}$ if the bag does not have an entry with that key k: K. Aborts with $\underline{sui::dynamic_field::EFieldTypeMismatch}$ if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Mutably borrows the value associated with the key in the bag $\underline{bag}$ : & mut $\underline{Bag}$ . Aborts with $\underline{sui::dynamic_field::EFieldDoesNotExist}$ if the bag does not have an entry with that key k: K. Aborts with $\underline{sui::dynamic_field::EFieldTypeMismatch}$ if the bag has an entry for the key, but the value does not have the specified type.

```bash

```
```bash

Mutably borrows the key-value pair in the bag bag: & mut Bag and returns the value. Aborts with
sui::dynamic field::EFieldDoesNotExist if the bag does not have an entry with that key k: K. Aborts with
sui::dynamic field::EFieldTypeMismatch if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash

Returns true iff there is an value associated with the key k: K in the bag \underline{bag}: & \underline{Bag}
```bash
...
```bash
Returns true iff there is an value associated with the key k: K in the bag bag: & Bag with an assigned value of type V
```bash
```bash
Returns the size of the bag, the number of key-value pairs
```bash
***
```bash
Returns true iff the bag is empty (if length returns 0)
```bash
```bash
Destroys an empty bag Aborts with EBagNotEmpty if the bag still contains values
```bash
***
```bash
```

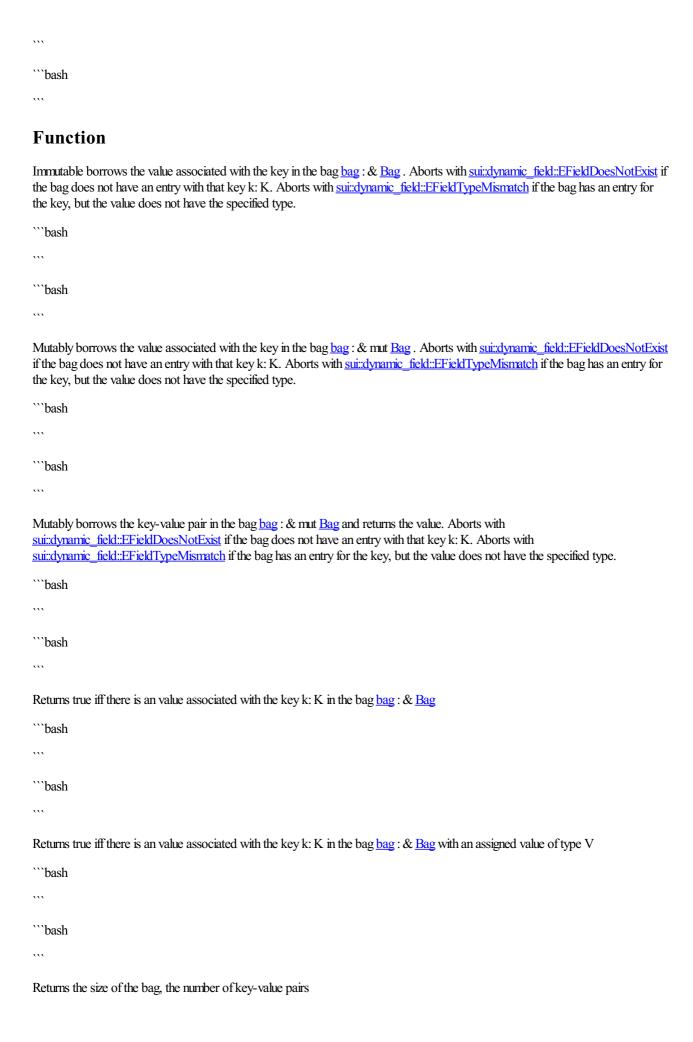
## **Function**

Creates a new, empty bag
```bash
```bash
···
Adds a key-value pair to the bag $\underline{bag}$ : & mut $\underline{Bag}$ Aborts with $\underline{sui::dynamic_field::EFieldAlreadyExists}$ if the bag already has an entry with that key k: K.
```bash
```bash
Immutable borrows the value associated with the key in the bag $\underline{bag}$ : & $\underline{Bag}$ . Aborts with $\underline{sui::dynamic_field::EFieldDoesNotExist}$ if the bag does not have an entry with that key k: K. Aborts with $\underline{sui::dynamic_field::EFieldTypeMismatch}$ if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Mutably borrows the value associated with the key in the bag $\underline{bag}$ : & mut $\underline{Bag}$ . Aborts with $\underline{sui::dynamic_field::EFieldDoesNotExist}$ if the bag does not have an entry with that key k: K. Aborts with $\underline{sui::dynamic_field::EFieldTypeMismatch}$ if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Mutably borrows the key-value pair in the bag bag: & mut Bag and returns the value. Aborts with sui::dynamic_field::EFieldDoesNotExist if the bag does not have an entry with that key k: K. Aborts with sui::dynamic_field::EFieldTypeMismatch if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
***
Returns true iff there is an value associated with the key k: K in the bag bag: & Bag
"bash
UdSII
```bash

```
Returns true iff there is an value associated with the key k: K in the bag bag: & Bag with an assigned value of type V
```bash
```bash
,,,
Returns the size of the bag, the number of key-value pairs
```bash
```bash
***
Returns true iff the bag is empty (if length returns 0)
```bash
```bash
Destroys an empty bag Aborts with EBagNotEmpty if the bag still contains values
```bash

```bash
Function
Adds a key-value pair to the bag bag: & mut Bag Aborts with sui::dynamic field::EFieldAlreadyExists if the bag already has an
entry with that key k: K.
```bash
```bash
Immutable borrows the value associated with the key in the bag bag: & Bag. Aborts with sui::dynamic_field::EFieldDoesNotExist if
the bag does not have an entry with that key k: K. Aborts with sui::dynamic field::EFieldTypeMismatch if the bag has an entry for
the key, but the value does not have the specified type.
```bash
```bash
٠.,
```

Mutably borrows the value associated with the key in the bag \underline{bag} : & mut \underline{Bag} . Aborts with $\underline{sui::dynamic_field::EFieldDoesNotExist}$ if the bag does not have an entry with that key k: K. Aborts with $\underline{sui::dynamic_field::EFieldTypeMismatch}$ if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Mutably borrows the key-value pair in the bag <u>bag</u> : & mut <u>Bag</u> and returns the value. Aborts with <u>sui::dynamic_field::EFieldDoesNotExist</u> if the bag does not have an entry with that key k: K. Aborts with <u>sui::dynamic_field::EFieldTypeMismatch</u> if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Returns true iff there is an value associated with the key k: K in the bag \underline{bag} : & \underline{Bag}
```bash
```bash
Returns true iff there is an value associated with the key k: K in the bag \underline{bag} : & \underline{Bag} with an assigned value of type V
```bash
```bash
Returns the size of the bag, the number of key-value pairs
```bash
```bash
Odsii
vasii vasii
Returns true iff the bag is empty (if <u>length</u> returns 0)
Returns true iff the bag is empty (if length returns 0) "bash
Returns true iff the bag is empty (if length returns 0) "bash "
Returns true iff the bag is empty (if length returns 0) "bash ""bash



```bash
```bash
Returns true iff the bag is empty (if length returns 0)
```bash
```bash
Destroys an empty bag Aborts with EBagNotEmpty if the bag still contains values
```bash
```bash
Function
Mutably borrows the value associated with the key in the bag \underline{bag} : & mut \underline{Bag} . Aborts with $\underline{sui::dynamic_field::EFieldDoesNotExi}$ if the bag does not have an entry with that key k: K. Aborts with $\underline{sui::dynamic_field::EFieldTypeMismatch}$ if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Mutably borrows the key-value pair in the bag <u>bag</u> : & mut <u>Bag</u> and returns the value. Aborts with <u>sui::dynamic_field::EFieldDoesNotExist</u> if the bag does not have an entry with that key k: K. Aborts with <u>sui::dynamic_field::EFieldTypeMismatch</u> if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
···
Returns true iff there is an value associated with the key k: K in the bag bag: & Bag
```bash
```bash

Returns true iff there is an value associated with the key k: K in the bag \underline{bag} : & \underline{Bag} with an assigned value of type V

```
```bash
...
```bash
Returns the size of the bag, the number of key-value pairs
```bash
```bash
Returns true iff the bag is empty (if length returns 0)
```bash
,,,
```bash
Destroys an empty bag Aborts with EBagNotEmpty if the bag still contains values
```bash
```bash
Function
Mutably borrows the key-value pair in the bag bag: & mut Bag and returns the value. Aborts with
sui::dynamic_field::EFieldDoesNotExist if the bag does not have an entry with that key k: K. Aborts with
sui::dynamic field::EFieldTypeMismatch if the bag has an entry for the key, but the value does not have the specified type.
```bash
```bash
Returns true iff there is an value associated with the key k: K in the bag bag: & Bag
```bash
```bash
Returns true iff there is an value associated with the key k: K in the bag bag: & Bag with an assigned value of type V
```bash
```

```
```bash
***
Returns the size of the bag, the number of key-value pairs
```bash

```bash
***
Returns true iff the bag is empty (if length returns 0)
```bash

```bash
Destroys an empty bag Aborts with <a href="EBagNotEmpty">EBagNotEmpty</a> if the bag still contains values
```bash

```bash
***
Function
Returns true iff there is an value associated with the key k: K in the bag \underline{bag}: & \underline{Bag}
```bash

```bash
Returns true iff there is an value associated with the key k: K in the bag bag: & Bag with an assigned value of type V
```bash

```bash
Returns the size of the bag, the number of key-value pairs
```bash

```bash
***
```

```
Returns true iff the bag is empty (if length returns 0)
```bash

```bash
***
Destroys an empty bag Aborts with EBagNotEmpty if the bag still contains values
```bash
```bash
Function
Returns true iff there is an value associated with the key k: K in the bag bag: & Bag with an assigned value of type V
```bash
```bash
Returns the size of the bag, the number of key-value pairs
```bash

```bash
Returns true iff the bag is empty (if <u>length</u> returns 0)
```bash

```bash
Destroys an empty bag Aborts with EBagNotEmpty if the bag still contains values
```bash

```bash
```

Function

Returns the size of the bag, the number of key-value pairs

```
```bash

```bash
Returns true iff the bag is empty (if length returns 0)
```bash

```bash
***
Destroys an empty bag Aborts with <a href="EBagNotEmpty">EBagNotEmpty</a> if the bag still contains values
```bash

```bash
Function
Returns true iff the bag is empty (if length returns 0)
```bash
```bash
Destroys an empty bag Aborts with <a href="EBagNotEmpty">EBagNotEmpty</a> if the bag still contains values
```bash
```bash
Function
Destroys an empty bag Aborts with <a href="EBagNotEmpty">EBagNotEmpty</a> if the bag still contains values
```bash
```bash
...
```