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I have the following struct in one of the crates that I'm using.

```
pub struct Set<'a, 'b: 'a, 'c: 'a + 'b> {
    sockets: ManagedSlice<'a, Option<Item<'b, 'c>>>,
}

impl<'a, 'b: 'a, 'c: 'a + 'b> Set<'a, 'b, 'c> {
    pub fn new<SocketsT>(sockets: SocketsT) -> Set<'a, 'b, 'c>
    where
        SocketsT: Into<ManagedSlice<'a, Option<Item<'b, 'c>>>>,
    {
        let sockets = sockets.into();
        Set { sockets: sockets }
    }
}
```

I need to have struct Set as one of the fields in another struct:

```
pub struct foo {
    sockets: Set,
}

impl foo {
    pub fn init(&mut self) {
        self.sockets = Set::new(vec![]);
    }
}
```

This results in the following error:

```
21 |     sockets: Set,
    |           ^^^^^^^ expected 3 lifetime parameters
```

I read about advanced lifetimes, but could not figure out how to work this out. How to correctly set the lifetimes here?

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3

Orthogonal to this issue: remember that struct names are conventionally in `PascalCase`: `foo` should preferably be `Foo`.

E_net4 – [E_net4](#)

2018-04-05 14:37:50 +00:00

Commented Apr 5, 2018 at 14:37

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2

You need to add lifetime annotations to struct:

```
pub struct Foo<'a, 'b: 'a, 'c: 'a + 'b> {  
    sockets: Set<'a, 'b, 'c>,  
}
```

and also to impl, ensuring lifetimes annotation constraints:

```
impl<'a, 'b: 'a, 'c: 'a + 'b> Foo<'a, 'b, 'c> {  
    ...  
}
```

For example, a possible implementation:

```
impl<'a, 'b: 'a, 'c: 'a + 'b> Foo<'a, 'b, 'c> {  
    pub fn init(&mut self, v: &'a mut Vec<Option<Item<'b, 'c>>>) {  
        self.sockets = Set::new(ManagedSlice::Borrowed(v));  
    }  
}
```

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answered Apr 5, 2018 at 12:24

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2

That depends on how you intend to use `Foo`. It may be that setting all lifetimes to `'static` will work for you. Otherwise, you will need to add at least one lifetime parameter to `Foo` itself and use that. Depending on your use case, this may be enough:

```
pub struct Foo<'a> {  
    sockets:Set<'a, 'a, 'a>,  
}
```

or you might need to add two or three lifetime parameters:

```
pub struct Foo<'a, 'b: 'a, 'c: 'a + 'b> {  
    sockets:Set<'a, 'b, 'c>,  
}
```

PS: As a side note, your `foo` struct should be capitalized: `Foo`.

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answered Apr 5, 2018 at 6:34

[Jmb](#)

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