Informatik - Exercise Session Classes and Iterators

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```
class PrivateAccess {
                                              struct PrivateAccess {
    int a;
                                                  private:
                           is the same as
};
                                                       int a;
                                              }:
Or the other way around:
class PublicAccess {
                                              struct PublicAccess {
    public:
                                                  int a;
                           is the same as
                                              };
         int a;
};
```

When to use . vs ::

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It is also used to access members of classes or structs:

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class Foo {
    void bar();
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void Foo::bar() {
    // ...
}
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void Foo::bar() {
    // ...
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This is not the same as the dot . operator, which is used to access members of *objects* (instances of classes):

```
int main() {
    Foo f = Foo();
    f.bar();
}
```

 $\label{eq:lists} https://en.cppreference.com/w/cpp/container lists all containers in the C++ standard library (e.g. list, set, unordered set, ...).$

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Iterators are used to move through (\rightarrow "iterate" over) elements in a container without knowing how the data is stored. Usage:

it = c.begin() points to the first element.

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- it = c.begin() points to the first element.
- it = c.end() points behind the last element.
- *it accesses the element where the iterator currently points.
- ++it advances the iterator by one element.