

CHALMERS

## Example: resource handler

**Problem:** Write a protected object `One_Resource` that handles an exclusive resource.

- The protected object should have two entries, **Acquire** and **Release**.
- Via entry **Acquire** a task should be able to request access to the resource. If the resource is already being used, the task calling **Acquire** should be blocked.
- Via entry **Release** a task should be able to notify that it no longer needs the resource.

CHALMERS

## Resource handler for one resource

```
protected type One_Resource is
  entry Acquire;
  procedure Release;
private
  Busy : Boolean := false;
end One_Resource;

protected body One_Resource is
  entry Acquire when not Busy is
  begin
    Busy := true;
  end Acquire;
  procedure Release is
  begin
    Busy := false;
  end Release;
end One_Resource;
.
.
```

CHALMERS

## Resource handler for one resource

```
..
..
R : One_Resource;      -- instance of the resource

task User1, User2;    -- tasks using the resource

task body User1 is
begin
  ..
  R.Acquire;
  ..
  R.Release;          -- statements using the resource
end User;

task body User2 is
begin
  ..
  R.Acquire;
  ..
  R.Release;          -- statements using the resource
end User;
```