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.

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# 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;
.
.
.
```

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# 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;
  ...                    -- statements using the resource
  R.Release;
  ...
end User;

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