

## Question example (8pt)

When writing a calendar/team-planning application, you get to the point of supporting appointments.

### Part A (5pt)

Implement a base class `Appointment` and subclasses `OneTime`, `Daily`, `Weekly`. An appointment has a description (for example `see the dentist`) and a (starting) date.

Write the methods:

- `occurs_on(date)` that checks whether the appointment occurs on that date
- `next_occurrence(date)` that returns the date of the next time the appointment occurs (or `None`), *after* the specified date.

Make a short list of various appointments and try out the methods. The *abstract* methods in the base class should have a *pydoc* string for documentation.

*Hint: Check the `datetime` module, particularly the `date` and `timedelta` classes*

### Part B (3pt)

Add a method `save(fid)` that saves the file's contents to an (already opened) file descriptor.

The following should work:

```
with open('calendar.data', 'w') as f:
    for appointment in appointments:
        appointment.save(f)
```

(check the file contents after you do this test)

The data should be stored as XML-tags, for example a weekly meeting with the study group would be:

```
<Appointment type="weekly" date="2015-4-13">
Study group meetup
</Appointment>
```