INF 3280, 2017

Mandatory Assignment 1-4

After these assignments, you should be able to

- develop learning material and
- teach, supervise and assess users.

The assignments build on each other and are to be carried out by pairs of students. These four assignments also concern the same topic, which you can choose.

The end result of these four assignments should be a training session consisting of two modules as shown below. The colour coding is

Assignment 1
Assignment 2
Assignment 3
Assignment 4

The parts for Assignments 1-3 are written deliverables. In addition, Assignment 1 and 4 include oral deliverables which consist of teaching for the tutor group, see below.

Module for Understanding

1. Introduction
    a. Usefulness of the learning objectives
    b. Explanation of new functionality and data structure
2. Practical hands-on exercises
    a. Exercise 1: follow instructions
    b. Exercises 2 and 3: somewhat different from the instructions
3. Summary
    a. Multiple choice question on new functionality / data structure
    b. Discuss functionality / data structure and confront misconceptions
    c. Discuss usefulness

Module for Problem solving

1. Introduction
    a. Usefulness of problem solving method
    b. Presentation of problem solving method
2. Practical hands-on exercise
    a. Exercise requiring problem solving
3. Summary
    a. Discuss problem solving approach

Assignment 1. Skill training. Written and oral

Select a topic for others to learn. You can freely choose the starting level of your IT learners' competence, and then pick a topic which they could learn in less than half an hour. The topic should be somewhat challenging for the user to understand, and it should introduce some new functionality and data structure.

Suitable sized topics (with possible functionality/data structure): setting up automated back-ups (back-up), advanced page numbering (sections), table of contents (heading styles), automatic mail filtering (filters), bibliography (references, citations), graphs in spread sheets (graph types, series, range), upload media files to internet sites (media formats), advanced searches (logical operators). Too small and trivial topics would be sending e-mails, formatting text with button choices, summarising columns in spreadsheets, converting a file to pdf-format, setting the alarm on a phone. A complete software tool like an office application would be too large, but an app or utility program with one main function could be OK.

It should be practically feasible to run the software in the classroom. If you choose software which is not installed there, make sure that it can be downloaded and installed on the students' private computers or phones.

Decide the starting level (prerequisites) and the learning objectives of the training.

Written deliverables:

- A Minimal Manual consisting of
  - Usefulness of the learning objective (Module for Understanding 1a)
  - Instructions (Module for Understanding 2a)

  The Minimal Manual could be on any media, including documents, web-pages, slides, video or a combination thereof. It should be short. On a projector presentation; one slide for the usefulness would be appropriate. Corresponding size for other media.

- Two exercises which differ somewhat from the instructions in the Minimal Manual. (Module for Understanding 2b)

Submit material on Devilry by *6 February*.

Oral deliverables:

Use the training material for training of the other students in the group during the class (Module for Understanding 1a, 2 and 3c). The students are supposed to behave like being on the starting level which you assumed as the prerequisites for your training.

During the practical hands-on exercises, supervise the learners by walking around in the classroom helping out those who are stuck or have questions.

The training should take around 15 minutes in total, and the practical hands-on exercises should occupy more than half of this time. It can be terminated when all students have completed the first exercise or when time has passed 15 minutes.

The discussion of usefulness (3c) should be a conversation between the teacher and the class. No written material is required specifically for this part, although reusing the material for 1a might be favourable.

Assignment 2. Functionality and data structure. Written

Select 1-3 functionalities and data structures which are

- new to the learners
- central to your topic

- somewhat challenging to learn

Written deliverables:

- A presentation of possible learning challenges for each of the new functionalities / data structures. ½ - 1 page, **not** to be used during training.
- Training material:
    - A functional and a structural model (Module for Understanding 1b)
    - A multiple choice question testing understanding of one of the new functionalities / data structures (Module for Understanding 3a)

Submit on Devilry by *21 February*.

Assignment 3. Material for learning problem-solving. Written

Make an exercise which requires the user finding out more about the software than presented in the Module for Understanding. Choose a problem solving approach which you think will be efficient for finding out how to do the exercise and which can be carried out in the lab during the session.

Written deliverables:

- Training material:
    - Presentation of the problem solving approach. Size: approximately one slide and corresponding size for other media (Module for Problem solving 1)
    - Presentation of the usefulness of the problem solving approach also outside of the current exercise. Size: maximum one slide and corresponding size for other media (Module for Problem solving 1)
    - Exercise requiring problem solving (Module for Problem solving 2)

Submit on Devilry by *28 February.*

Assignment 4. Training for transfer. Written and oral

Revise the material from Assignment 1 – 3 according to feedback. Combine it into a coherent set of material suited for training aimed at maximising transfer of competence from training to work.

Written deliverables:

- The complete set of training material for Module for Understanding (1, 2 and 3) and Module for Problem solving (1, 2 and 3) modules.

Submit on Devilry by *6 March*.

Oral deliverables:

1. Train the tutor group with Module for Understanding 1 and 3 (skip Practical hands-on exercises 2) and Module for Problem solving 1, 2 and 3.

The training should take around 20 minutes in total.