

Student projects and theses

Starting a student project or thesis

1. In case of Bachelor and Master theses, you must bring the completed form from the examination office. This form needs to be signed by a professor. Only after this signature, the thesis work can start.
2. Get your account from Stefan Teister. He needs your name and your university student account name. Also tell him the expected duration of the project.
3. Tell Peter Ochs to give you access to the building and the student room via your UniCard. He needs your name, your UB number (on the Unicard) and the expected duration of the project. Although you may do the project work at home, we highly recommend to do the work here at the university. You do not get distracted here so easily and you have short distances to other students and your supervisor to ask a quick question.
4. Tell Naveen (same room as Peter Ochs) to make an entry on the team webpage (thesis only).
5. You may use the kitchen equipment and the coffee machine. You need to prepay at least 5 Euro for your coffee. Pay the amount to Stefan Teister to be added to the coffee list. Mark your name in the list when you take a coffee. Any unused deposit will be paid back to you at any time you like. Keep everything clean, put your dishes into the dishwasher, and do not forget things in the fridge.

Stefan Teister is away until 20.10.2013. Please contact Patrick Hornecker (horneck@informatik.uni-freiburg.de) or Felix Ratzkowski (ratzkowf@informatik.uni-freiburg.de).

During a student project or thesis

- Watch your time management to make sure that there is enough progress to successfully finish the project in time. There are strict time rules for completing a thesis and you might get a very bad grade or even fail if you run out of time in the end. Consult your advisor regularly to help you with the time management.
- Plan the experiments together with your advisor in time. One of the most important issues in scientific work is the execution of well-planned experiments.
- Make sure that you start writing early enough. Most students underestimate the time that is needed for writing. Moreover, early writing can help you make your thoughts more precise.
- If you use ideas or material from other people, make sure that you clearly indicate the origin.

Finishing a student project or thesis

1. Submit the PDF of the final document, the source code, and other important results/material obtained during the project to your advisor. In case of a thesis, also submit the required number of exemplars to the examination office.
2. Get the refund for your coffee payments and return all books if applicable.
3. Your account and data on our server will be deleted after two weeks. If you want to keep some of the data, make sure that you make a copy in time.

Lab Course

Learning goals:

- Improve programming skills, in particular debugging skills
- Learn how and where to find additional information
- Take over responsibility to get things done in time
- Learn to give proper reference to used materials and related work

Required to pass:

- Bring the project to a successful end or develop good scientific arguments why the project could not be completed as planned
- Write a document that comprises: an introduction of the goal and background of the assigned task, the methods employed (incl. citations), the scientific results (e.g. experimental results), and a summary of the achievements. The document should have approx. 15 pages.

Bachelor Thesis, Student Project, Team Project

Learning goals:

- Improve programming skills, in particular debugging skills
- Learn how to answer scientific questions by setting up appropriate experiments
- Learn how and where to find additional information
- Take over responsibility to get things done in time
- Learn to give proper reference to used materials and related work
- Giving a concise oral presentation
- Learn how to coordinate work in a team (team project)

Required to pass:

- Bring the project to a successful end or develop good scientific arguments why the project could not be completed as planned
- Write a document that comprises: an introduction of the goal and background of the work, the methods employed (incl. citations), the contribution, and the experimental evaluation. The document should have approx. 30 pages.
- Give a presentation (20 minutes) in the Oberseminar

Master Thesis

Learning goals:

- Independent management of a small research project
- Answering scientific questions by setting up appropriate experiments
- Learn how and where to find useful information and material
- Develop strategies to analyze why something does not work as intended (code and approach debugging)
- Efficient screening of the literature and writing a literature overview
- Giving a concise oral presentation

Required to pass:

- Bring the project to a successful end or develop good scientific arguments why the project could not be completed as planned
- Write a document that comprises: an introduction of the goal and background of the work, related work (incl. citations), description of own approach, experimental evaluation, summary of findings. The document should have approx. 60-100 pages.
- Give a presentation (30 minutes) in the Oberseminar

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Introduction

This guide is a summary of useful information for a new member working in LMB department either as student (lab project, master project, theses) or as Hiwi. This information is aimed to help you get started smoothly but it is written as a guide, if you have particular needs or something does not work as expected contact your tutor or someone from technical support to help you (see contact section).

Get Access

Physical Access

You need to request access to lmb pool by sending an email with the following information:

- Name
- User name, it is the user name you use in the regular pool and that it is associated to your university email account (i.e. lastname@informatik.uni-freiburg.de).

Check the contact section of this guide to get the right contact person to send this email to.

With this access you can enter the pool and the building with your uni-card during off hours (i.e. weekends, holidays, etc).

Workstation Access

To log in the workstations in lmb pool you will be assigned a new account associated to your username but with a different password. Send an email to request it with the following information.

- User name, it is the user name you use in the regular pool and that it is associated to your university email account (i.e. lastname@informatik.uni-freiburg.de).
- Duration of your project. You can send either the length of the period you need the access (i.e. 6 months) or a fixed final date. After this period of time your account will expire and you will not be able to log in the workstations on lmb pool. If your account expires and you still need the access just contact directly someone from technical support to get an extension.

Check the contact section of this guide to get the right contact person to send this email to. After setting up your account you will be asked to go to the department to set your password.

Get Space

From the workstations in lmb pool you can access your regular home directory. If you need more space to save information of your project you have two options to request it depending on your needs.

Common storage area. You can request a folder in this area (/misc/student) where you ideally will store code, documents, backups, etc.

Massive storage area. You can request a folder on one of the RAIDs if you work with large amounts of data or your programs have frequent file access (e.g. log files, many small files). Ideally here you will store results, images, videos, bulk data, etc.

You can request space in both areas depending on your needs. Contact your tutor if you are not sure what to request. Data in these directories is only available from lmb pool or remotely using your lmb account.

Work Remotely

SSH

You can connect via SSH to all workstations and servers of lmb department from any lmb workstation or remotely.

From any workstation:

```
ssh -p 2122 name
```

name is the name of the workstation or server, usually workstation names can be found on the PC.

Remotely using an SSH client:

```
ssh -p 2122 132.230.167.81
```

Use your lmb credentials to log in as if you were in a workstation on lmb pool. You will log directly to gaston server, from there you can ssh to any workstation/server you need as you were in a lmb workstation.

FTP

You can access your files using any ftp client using the following.

- Server: 132.230.167.81
- Port: 2122
- Protocol: SFTP
- User/Account: lmb account

Servers

There are several servers available for you to work on and let processes running. They have different hardware and software specifications and therefore you should contact your tutor to define which ones better suit your needs and are available for you to use. Always start your processes with "nice" except for rare cases where you need accurate measurement of computation times (millisecond scale). If processes take a long time to finish, always start them with "nice".

Contact

- Technical support (Account Management).
 - *Stefan Teister (main contact, away until Oct. 20 2013).*
<http://lmb.informatik.uni-freiburg.de/people/teister/index.html>
 - Patrick Hornecker: horneck@informatik.uni-freiburg.de
 - Felix Ratzkowski: ratzkowf@informatik.uni-freiburg.de
- Physical access to lmb pool.
 - Peter Ochs
<http://lmb.informatik.uni-freiburg.de/people/ochs/index.html>