Institut for Matematik og Datalogi September 4, 2001
Syddansk Universitet – Odense Universitet JFB

Introduction to Information Technology
E01 – Lecture 1

Textbooks

An Invitation to Computer Science, Java Version by G.M. Schneider and J.L. Gersting, Brooks/Coke, 2000.
Calculus the Maple Way, 2nd Edition, by R.B. Israel, Addison-Wesley, 2000. Possibly available with your textbook for MM01.
Excel 2000 – Lær det selv by M.B. Karbo, IDG. Optional.

Format

Lectures will be on Fridays in weeks 36, 38, 44, 46, 48, 50. In week 40, the lecture will be on Monday, October 1, 16–18, in U45. Labs will be in weeks 37, 39, 41, 43, 45, 47, 49, 51. The course will be graded on a Pass/Fail basis, and satisfactory completion of all 8 laboratories is required to pass. If you miss one laboratory, come to another section to make it up (if there are not enough computers, you will have to share if you are not attending your own laboratory time). If you are unable to finish your lab, send it to your instructor before the next lab. The last laboratory assignment must be done by 12:00 on December 31, 2001. Your instructor will send you e-mail telling if your assignments are satisfactory or not. The lab sections are all held in the computer room, U26A, which is on Stenten up on the first floor (as an American, I call it the second floor). All students will be given an account at their first lab.

The weekly notes and other information about the course are available through the Worldwide Web. You will find out how to access this in your first lab.

Labs

For most of the labs, there will be an option of doing more advanced exercises, instead of some of basic exercises. You may choose to do them instead if the basic exercise seems too easy for you. By the end of the course, all students should be able to do the basic labs, since in other courses you take, it will be assumed that you can do them.

For all students, the portion of the lab you choose to do should be e-mailed to your lab instructor within two weeks (i.e. before the start of your next lab). At the following lab, your instructor will tell you if the lab from four weeks earlier was approved or not. If the lab is not approved, you will have one additional week to complete it correctly. You will be informed by e-mail about the last two labs, both by January 4, and you will have one week to redo them if necessary.

Bring your Excel booklet, if you have one, to the second and third labs. The lab manual, *Calculus the Maple Way* will be useful for all the later labs, except lab number 7. Please read through each laboratory assignment before coming to the lab, and remember to bring the description of the lab with you.

Goals for the course

- To become more comfortable with computers, generally.
- To be able to read documentation and help in programs used and on the Web.
- To get some experience with Excel, so that you can figure out how to use other features yourself.
- To get some experience with Excel, presenting data.
- To get some experience doing various common statistical calculations in Excel.
- To get some experience with Maple, especially functions used in Mat A.
- To get some experience doing various common statistical calculation in Maple.

- To gain some understanding as to what computer science is, including the difference between a programmer and a computer scientist.
- To gain some understanding of the fact that most problems have more than one algorithmic solution and that these solutions can differ greatly as to how practical they are.
- To gain some understanding of some of the social issues associated with the use of computers, especially privacy and cryptography.

Use of computer accounts

The computer accounts you get with the course are mainly meant for study use while you are a student at the university, but can also be used for some personal use. They may not be used for

- business
- anything illegal
- trying to get into others' accounts or computers, or causing any harm to others' accounts or computers
- violating copyright rules for CDs, etc.
- anything offensive

Any of the above could be cause for being expelled from the university.

Lecture, September 7

We begin with an introduction to the course and a definition of an algorithm. The concept of a tree structure will be introduced, motivated by the organization of files in folders. Chapter 1 and section 11.3.1 in the textbook.

Lecture, September 21

We will continue talking about algorithms from chapters 2 and 3 in the textbook (sections 2.1 through 2.3.1 and the algorithm from 3.5.3), and introduce spreadsheets from section 11.2. If you are not very familiar with Excel, read at least the first 5 sections (ending on page 20) in the pamphlet *Excel 2000 – Lær det selv* by M.B. Karbo.

NYT:

Fakultetet prøver for første gang at ansætte ældre studerende til konsulentbistand, lektiehjælp, opgavehjælp etc. Meningen er, at de på faste tidspunkter, typisk sent om eftermiddagen, er parat til at hjælpe med opgaver etc i de obligatoriske kurser over en bred front. Se opslag på instituttet for tidspunkter.

Lab 1 - for week 37

Logging into your computer.

First login to your computer. There is probably a message on your screen saying "Press Ctrl-Alt-Del to begin". Press all three keys at the same time ("Del" is "Delete"). Your instructor will have your user name and password. These should be typed in the labelled boxes, first the user name, then after hitting the **Tab** key, the password. (Note: If you first registered at the university before this year, you should already have a user name and password. Check that these work before coming to your lab section so that you can get it corrected before coming if there is a problem.) You will get a message saying "Your password has expired and must be changed"; just click on **OK**. Now you should change your password. Choose something fairly random, which no one else could guess. Use 8 characters, both letters and numbers, but do not use your birthday, CPR number, or any word which would appear in a dictionary. Write it down so that you can remember it, and do not lose it! You will now be asked for your password, which should be typed twice, in the two boxes. (Hit the **Tab** key after the first time to get to the next box.) (Note that the original password will be the one that works the first time you use **Outlook Express**, so do not throw that one out either.)

It will now take quite awhile before you actually get logged in, since your account is being set up. Just be patient.

In the following, there are fairly explicit directions for what you should do. In most cases, there are other ways to do exactly the same thing. If you know some other way, it is fine that you use it.

Start by removing the window which says "Getting Started", by clicking on the **x** in the upper right hand corner. Clicking on an **x** like that is a general means of killing programs and getting rid of windows you don't want. When you are in a *Dialog* window, clicking on that **x** will usually cancel that command, and you should click on **OK** instead. You can get the introduction which you just killed back by logging in again.

Now you will get an error message concerning the program PGP. Click on **Don't warn me again** and then on **Continue**.

To be consistent with the rest of the class, set your system so that it does some things in Danish. (You only have to do this once, not every time you login.) To do this, follow what your instructor says or click on **Start** at the bottom left corner of your screen. Click on **Settings** from that menu, and **Control Panel** from the next. This will produce a window. Find **Regional Options** in there and double click on it. By **Menus and Dialogs**, change to **dansk**, by clicking on the arrows pointing down and then clicking on **dansk** when you find it. Click on **OK**, and then click on **OK** in the dialog box. Now you need to logout and login again. To logout, choose **Log Off "brugernavn"** from the **Start** menu, and then tell the program that you really want to do it. :-)

Login again. Get rid of the window with "Oplev Windows 2000" and the **Control Panel** window which came up because you did not close it before logging out.

Using folders.

Double click on **Dokumenter**. This will open a window. Practice with general techniques for windows if you are not used to this. Click on the leftmost of the three buttons in the top right part of the window. This iconifies the window, so that it's out of your way for awhile. The **icon** for it is at the bottom of your screen in a rectangle labelled **Dokumenter**. Click on that icon and your window will return. Now try clicking on the middle of those three buttons. Your window should become larger. Click on that middle button again and it will get back to the original size. To move a window around, you move the mouse to the bar at the top of the window, and then drag it by moving the mouse while holding the left mouse button down. Try this.

Create a new folder in **Dokumenter** and call it *Excel files*. To do this, click on the menu button **File** on the top line. Click on **Ny** from the menu. This produces a new menu. Click on **Mappe** to get a new folder. Hit the **Backspace** key to erase the artificial name and type **Excel files**, followed by **Enter**. You can get rid of the folder (or any file) by dragging it to the **Papirkurv**. It is saved there until you empty the **Papirkurv**, which you can do by right clicking on it and then clicking on **Tøm papirkurv**. You will have to confirm with a **Ja**. (If you do this now, create a new folder with the same name again.)

In the **Dokumenter** window, double click on **Excel files**. This will open that folder. To get back to **Dokumenter** again, you can click on the left arrow by **Back** on the second line in your window. Clicking on the right arrow will get you back to **Excel files**.

Using the Internet.

To open your browser, double click on **Internet Explorer**. It looks like a fancy **e**. It should open up with your home page, which is the home page for this course. Notice the contents of this home page. Look in the **Address** field to find the URL (address) of your home page. Write this down and send it later in the e-mail you send your lab instructor. Click on the home button, which looks like a house, to be sure you have your home page active.

Now access a page by typing another URL in the **Address** field, as follows: Click twice at the end of what is there now. Then backspace to remove the **DM07/**. In place of that type **MM01/** and hit the **Enter** key. This should give you the home page for your math course. Add this page to your list of URLs which you expect to visit again (your bookmarks), called **Favorites**, by using the button on the second line, and choosing **Add...**. From there, choose **Create in>>** and then **New folder...**. This will let you create a new folder in your bookmarks so that you can save this URL there. You could call that folder something like *Courses*. Click on **OK** and then on **OK** in the "Add Favorite" box. Again, you have the possibility to keep things organized in folders. The **Back** button is the left arrow by **Back** . Click on this to get back to the DM07 page.

The first weekly note can be reached through a link on the DM07 home page. Find that weekly note and bring it up on your screen. Go through the pages one at a time (use the **Page** button) to practice using the program

(Ghostview) showing the weekly note. Close that program (use the **File** button).

Notice that there are links to all of your courses on this home page. Try clicking on them and coming back to the DM07 page after each one. Click on the link *statistics lab*, which will get you to the statistics lab, the third lab for this course. Go back to the DM07 page. You can come back to the statistics lab page now by clicking on the right arrow next to **Back**. Notice that a correct course description can be found through the DM07 page.

Notice the **Help** on the menu bar. Most programs you will be using have a **Hjælp** or **Help** menu, and they often can be used to find answers to your questions about the program. Click on **Help**, then on **Contents and Index**, then on **Søgning efter de ønskede Websider**, and then on **Søgning efter sider, du har besøgt for nyligt** . Follow the directions there to get back to the MM01 page. These directions are in Danish, and **Oversigt** is **History**. Close the help window.

Using e-mail.

First change the password on your e-mail account to the same as your new password for your computer account. To do this, use Internet Explorer. Go to the URL `http://mail.dou.dk/useradmin/`. Click on **Bruger konfig.**, type your login name and original password, and click on **OK**. (Note that some places your address will contain "sdu" and others "ou"; this is due to the name switch for the university. Give others the newer address, with "sdu", but when the system uses "ou", just leave it alone.) Click on **Ret kodeord**, and follow the directions there to change your original password to the one you chose for your computer account.

This will be your university e-mail account for now. If you prefer to read e-mail sent to this account from another account, you can set up forwarding for this account. (If not, skip the remainder of this paragraph.) Click on **Ret omadressering** and type in your usual e-mail address in the box for **Omadresser-til**.

Close the Internet Explorer.

Now try reading e-mail. Click on the envelope at the bottom of your screen to start Outlook Express, a program for handling e-mail. Click on **My Mail Account**, and answer **Yes** in the dialog box. You will be asked for your password and should type it. Mail you have received should be in an **Inbox** (the bottom one on the list), which is open. Click on **Go To** to get the contents of **Inbox**. You should have e-mail there. Try to read it. Right click on the e-mail you want to read. A menu will open showing you your possibilities. **Open** will open it in a window and show you all your options. In this case, do not **Reply to All**, which would theoretically send e-mail to everyone in this course! You can save e-mail by using the **File** menu, as with other programs. When you save e-mail, do it in an organized manner, in folders, so that you can find what you want again later. Get rid of the window with that e-mail. Now send e-mail to your instructor, who will give you his/her e-mail address. To do this click on the **New Mail** button just below the **File** menu button. You will get a window. Fill out the **To** box with the correct address. You can get to the next box using the **Tab** key. Type something in the **Subject** box, and then type some e-mail in the big box, including the URL you copied down earlier.

Close Outlook Express.

If you have time...

Open Internet explorer. From the home page for this course, follow the link to the statistics lab. Start reading some of the theory. This will be your third lab. It will be easier to do it if you understand what you are doing, and reading the theory will help.

Log-off the computer. Choose **Log af "brugernavn"** from the **Start** menu, and then tell the program that you really want to do it.