Program Name	Software Development Project
Name ot the Student	Hansen
Roll Number	
Unit No & Title	
Assignment No.	
Date Due	
Date Submitted	

Unit Outcomes

Header 1	Evidence for the criteria	Feedback	Assesor's decision	Internal Verification
Develop a plan for a project to an agreed specification	design a plan for an agreed project			☐
	produce a project specification including complete user requirements and design specifications			☐
	select and use appropriate software planning tools			☐
Develop a solution for the project	select a suitable programming language			☐
	produce all algorithms, pseudo code, flowchart, data dictionary, programme coding, classes, methods as required			☐
	review, select and use appropriate testing techniques to validate the project			☐
	use appropriate software tools to develop project coding			☐
Implement the solution to the system	identify and implement system requirements			☐
	apply verification and testing required at all levels of the system			☐
	produce a clear and structured implementation plan			☐
Present and evaluate the project	present your solution in a structured and well organised format			☐
	produce documentation for all stages of a project and a full report			☐
	assess the quality of the product compared to the clients original requirements			☐
Pass grades awarded				
Merit grades awarded				
Distinction grades awarded				
Professors additional feedback and comments				
assessor's name		Date		
I hereby confirm that this assignment is my own work and not copied from any source. I have reference the sources from which from where information is obtained by me for this assignment	Students signiture			

NOTES TO STUDENTS

- Check carefully the submission date and the instructions given the assignment. Late assignments will not be accepted.

- Ensure that you give yourself enough time to complete the assignment by the due date.

- Do not leave things such as printing to the last minute excuse of this nature will not be accepted for failure to hand in the work on time.

- You must take responsibility for managing your own time effectively.

- If you are unable to hand in your assignment on time and have valid reason such as illness, you may apply (in writing) for extension.

- Failure to achieve PASS grade will results in REFERRAL grade being given

- Take great care that if you use other peoples work or ideas in your assignment, you probably reference them in your report.

- **NOTE : if you are caught cheated, you could have your grade reduced to zero, or at worst, you could be excluded from the course.**

GRADING

Pass

1. All criteria identified in the assignment are met.

2. The deadline to submit the design and final report have been met.

Merit

1. All criteria are meet with a good background research

2. Your soloutions are well planed and are aware of security and maintenance

Distinction

1. You implemented at least two different kinds of resources

2. The documentation and the presentation could be used by an untrained user

TITLE

Resource Information System

SCENARIO

A client of yours likes to put in place a service which provided an unspecified user the capability of getting Information about resources he usualy can not interact with.

It should be a simple commandline based tool. The software should be driven by the following principles:

1. **Usability** It should be easy to use even for an user who has no further IT-experience

2. **Reliability** It should be a stable, easy to maintain and reliable system

3. **Expendability** New features should be easy to implement in the software

To gather information there should be a dedicated software-piece to place it within the resource-area where it is supposed to gather information.

The software should include at least five resources in the monitoring system. Since our employees are not that big in computers you may offer us some possible resource information you have in mind. Maybe including these areas of interest:

- **Filesystem** Maybe free space, occupied space, swap used, etc.

- **Network** Internet available, ping time, ...

- **OS** What OS is running, some configurations

TASK

Task 1

Evaluate the following topics and decide founded on the research what your software will look like

Client/Server What are they suppose to be? How much 'inteligence' should either of them could have. What are the advantages and disadvantages of rich or small part?

Resources Pic at least five resources you want to monitor with this system.

Protocol   How should the two parts communicate? Define a the communication for the choosen resources.

Softare Planning Tool   Evaluate an appropiate Tool to keep track on your progress.

Task 2

Develop a soulution for the Project

- Evaluate at least three programing languages for the specifica this project provides

- Create pseudocode and class-diagram for the choosen resources.

- Review what you have achieved so far in terms of maintaiance and security.

Task 3

Implement the project in the choosen language

- Every step you take in the implementation should be tested. From the smallest fracture to the mixed modules.

- Create a plan which includes a timescale of the implementation states.

Task 4

documentation, presentation and review

- Create two documentations:

  - a documentation which contains all aspects of the users interaction (how it should be used).
  - a manual which contains informations for the administrator. What are the requirements, how to setup. Also provide a template to implement another resource.

- Present your solution in a structured and well organised format

- Have a critical view on your software. Try to work out the advantages and the disadvantages. Document known bugs. What would you change in

GUIDANCE

Languages

Consider that you are supposed to handle strings and to write a small, flexible piece of software.

Software Development Tools

Have a look at some mindmap-, gantgraph-tools and tools in which you can plan your class-modell.

Protocols

Consider the header/body-patern for your protocol and keep it simple.

REFERENCES

Languages

Have a look at the following programming languages.

bash `http://en.wikipedia.org/wiki/Bash_%28Unix_shell%29`

java `http://en.wikipedia.org/wiki/Java_%28programming_language%29`

python `http://en.wikipedia.org/wiki/Python_%28programming_language%29`

c/c++ `http://en.wikipedia.org/wiki/C_%28programming_language%29`

Software Development Tools

Protocols

`http://en.wikipedia.org/wiki/Head-Body_Pattern`

Assignments

Unit 1 - 03.09.2010

You have done good work on the Client-Server issue but you should not forget to have a look at the development tools.
The interface is as simple as it should be so it will be easy for the users to interact with the system.

Unit 2 - 15.09.2010

The comparision between the programming languages are quite detailed and well researched. You should redo the class-diagram in the UML formating as we talked about.
The pseudocode only shows what the clients output will be. You should produce the pseudocode for the deamon and the interaction as well. The client sends the request to the deamon, the deamon evaluates the request, send the reply to the client and the client shows the output. Multiple procedures you just have to do ones. Don't foret to review the outcomes you have produced so far as described in the Task2.

Unit 3 - 22.09.2010

Unit 4 - 28.09.2010