University Of Portsmouth
BSc (Hons) Computer Science
First Year

Comp Tutorial Level 4

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0 Credits

Thomas Boxall
up2108121@myport.ac.uk

Contents

Session 1

Introduction

26-09-22 14:00 Nadim RB LT1

Being good at computing is not about being scientific but being good at a bunch of arts.

Basic Concepts

Human Practices

Human practices are anything humans do, this includes and is not limited to: working, studying and having parties.

Complex Situations

Other than the nervousness, the thing which is different to a student delivering a lecture and Nadim delivering the lecture is his experience and knowledge.
Experience and knowledge mean you get the Concepts.
Everything is complex, having experience and knowledge means we can understand situations and work out what to do in them.
Will get lots of knowledge from University but won't get as much experience unless you do a placement year.

Goal Directed

Means something has a purpose. This can be applied to computing in that everything to do with computing is purpose driven.

Complex Problems

Studying at university involves lots of information being given to students, some of which isn't as useful as other parts. A complex problem is to take on board that information and work out what is worth spending time to understand and what can be forgotten about immediately.

Situational Complexity

Situations can be used to analyze problems as well as solve them.
A situation is something which you are experiencing as well as problems. They can include things like: being in a group of friends, being in a lecture, going to talk to a bank manager.

Step 1

All human activity, behavior occurs in contexts.
When you understand someone, you always understand what they are doing and thinking in relation to a context.

Step 2

All human activity, behavior is a response to context. This is true for all living beings.

Development

All developments arise out of problems generated by contexts. Understand these contexts and you gain an insight into the subject.
Everything studied has a historical development, to arrive at where it is now. To understand something, you have to understand why it came about, where it came from, why it was developed and who developed.
Survival means something is able to respond to a context correctly.
Learning is then a process of working out how context works (using concepts, theories and rules) and how those who work in them respond ot the demands of those contexts.

Session 2

A system of learning by thinking

03-10-22 14:00 Nadim RB LT1

This lecture introduces a system of learning by thinking (meaning construction), which Nadim has used for a long while and he feels it helps him to study and understand a variety of subjects. Most of these subjects are not computing related subjects.
The system is outlined below

1. Start with the first thing which you need to learn about the subject the find as much information on this which comes from different perspectives as possible. It is a good idea to start with introductory texts to the subjects (if they are good, then they will cover the key concepts well) so that you can build a framework. This framework can then be filled in at a later date.
2. Don't leave the first piece of knowledge until you are sure what is going on with it and understand it. Part of the understanding process can involve adding more knowledge and application of the knowledge to a number of different settings and to be able to vary it. You will initially get everything wrong but over time this improves and you will gain an understanding. If you do not begin to understand, return to the beginning and start again with the same content.
3. Start the process again with different content to learn.

Session 3

Managing Exams and Assessments

05-12-22 14:00 Nadim RB LT1

Whilst preparing for assessments, we have to switch between lots of different things in order to get things done. This is much the same as a CPU in a modern device. The CPU has to do many different things at once, each of which at a different priority level and needing different amounts of time for it.
If you don't effectively switch between tasks, some tasks will not get done.

Reverse Engineering Deadlines

Not only is this useful to use now for exams and coursework deadlines, it is a good thing to do for the final year project.

1. Have a calendar which shows when deadlines are.
2. The few days before the deadline are used for proof-reading the project and getting ready for submission.
3. The middle part of the timeline (largest) is for the majority of the work to be completed in
4. The firsts stage (relatively small) is there to be used to test things/ try things out then to plan the middle phase.

Session 4

Exams

12-12-22 14:00 Nadim RB LT1

Most of the exams we will sit will be computer based, however there are still some paper based.
Computer based tests (CBT) will be done through Moodle. The order of questions is randomised for each candidate.
There are multiple types of question in the paper, easy and difficult. Approximately 1/3 of the paper should be easy, 1/3 should be in the middle and 1/3 should be more difficult. Difficult questions will often yield more marks.

How To Sequence CBT Questions

It is recommended to take a Two Pass System approach to exams. There are two approaches which can be taken.

Approach 1

This approach picks out the difficult questions and completes them first then completes the remaining questions. The remaining questions should be the easier questions. An issue with this is timing; in that if you stick on the difficult questions, you will run out of time.

Approach 2

This approach skims through the paper and answers the easy questions first. Then return to the start and complete the difficult questions.

Approach 3

This approach takes a equally divided time approach. In that the time allocated for the paper is divided between the number of questions equally and after the 'timer' runs out for a questions, you move onto the next question.

Which Approach to Take?

Knowing about these different approaches raises the question of which approach to take. This first year can be used as a testing ground to see which approach works well for an individual person.

Revision

Revision strategies are similar to exam strategies.
The most consistently helpful revision strategy is the backward planning discussed last week.
There are a number of different methods which can be used to revise content.

Method 1

This method revises the difficult subject first then revise the simple content last.

Method 2

This method revises the easy subject first then the difficult content last.

Method 3

Generate test questions yourself. Then use those questions to test yourself. This method is particularly useful at University as there is a lack of questions available compared to A-Levels.

Method 4

Get Magic Whiteboard Paper which you can tear sheets off and stick on walls. Then draw on this with things you need to learn. Don't pay attention consciously to it then. You will subconsciously absorb the information which is on them.

Session 5

Metacognition

2023-01-30 14:00 Nadim RB LT1

Metacognition

Thinking about Thinking

There are four basic categories of types of things you need to learn.

Practical: performing a task; following instructions/ protocols; mastery of tools; and applied theory.

Cognitive: theory; analysis and problem solving; and creativity.

Social/ Communication: collaboration; and working in teams.

Affective: emotion/ mentality; adaptability; motivation; and attitude. Often this will also include making mistakes.