

COMP11212 - Fundamentals of Computation

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Introduction

The building of real-life computing systems, e.g. mobile phone, tv/video remote control, internet shopping, air-traffic control, internet banking, etc., is always a complex task. Mistakes can be very annoying, costly and sometimes life threatening. Methods and techniques to support the building and understanding of such systems are essential. This course unit provides an introduction to the basic computer science ideas underlying such methods. It is also a part of, and an introduction to, the Modelling and Rigorous Development theme.

Aims

This course unit provides a first approach to answering the following questions. What methods are there that can help understanding complicated systems or programs? How can we make sure that a program does what we intend it to do? How do computers go about recognizing pieces of text? If there are two ways of solving the same problem, how can we compare them? How do we measure that one of them gives the solution faster? How can we understand what computers can do in principle, and are there problems that are not solvable by a computer?

Additional reading

None.

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