University of Nottingham
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Session 5 Recap

CELEN087

Please check your learning outcomes by working on Lab Worksheet 5 and Homework Exercise Sheet 5.

Learning outcomes:

1. Know the principle of all the methods used in exercises:
   - Bisection method
   - Fixed point iteration method
   - Linear search
   - Binary search
   - Bubble sort

   In (final) exams, you should be able to explain the idea of each method in your own words, and design MATLAB program (function) for it.
2. **Develop programming skills:**
   - Familiarize yourself with the general process of program design based on a given method.
   - Design different test cases to test your program.
   - Package the code as a MATLAB function for specific use.
   - Adjust the complete function to fulfill other related need.

   We have done with all the MATLAB sessions. You now have more time to digest the knowledge, and do the actual practice to improve your proficiency in programming.

Open questions (AI tools are allowed/recommended in your learning process):

1. We have covered two classical methods for searching in an array. However, when it comes to sorting an array, there are more methods. What are the ideas of them? Can you design suitable programs for them using the techniques you have learned?
2. If you want more programming exercises with suitable difficulty levels to practice, where to find them?

The following key words will be frequently used in our teaching and assessment. Knowing the meaning of each will help your learning in MATLAB.

Vocabularies:

- control flow
- test case
- debug
- reccurence/frequency
- accuracy/error tolerance
- linear/binary search
- bisection method
- fixed point iteration method
- bubble sort method
- ascending/descending order