

Lab 2: Searching and Sorting

Write functions to demonstrate the following algorithms:

1 Searching

- Sequential Search
- Binary Search

Advance:

- Sequential Search (with sentinel)
- Recursive Binary Search
- Interpolation Search

2 Sorting

- Selection Sort
- Insertion Sort
- Bubble Sort
- Interchange Sort

Advance:

- Insertion Sort (with sentinel)
- Binary Insertion sort
- Improved Bubble Sort
- Shaker Sort

3 Practical problem

Given the file "Players.txt" file a contains information about football players. Each player's information is described on one line, with the format:

Position/Name/Year of birth/National team/Club

Demonstrate the following actions:

- Find all players born in 1994.
- Find all players play for Manchester United club.
- Find all FW play for Manchester City.
- Sort the players ascendingly by their year of birth and last name.