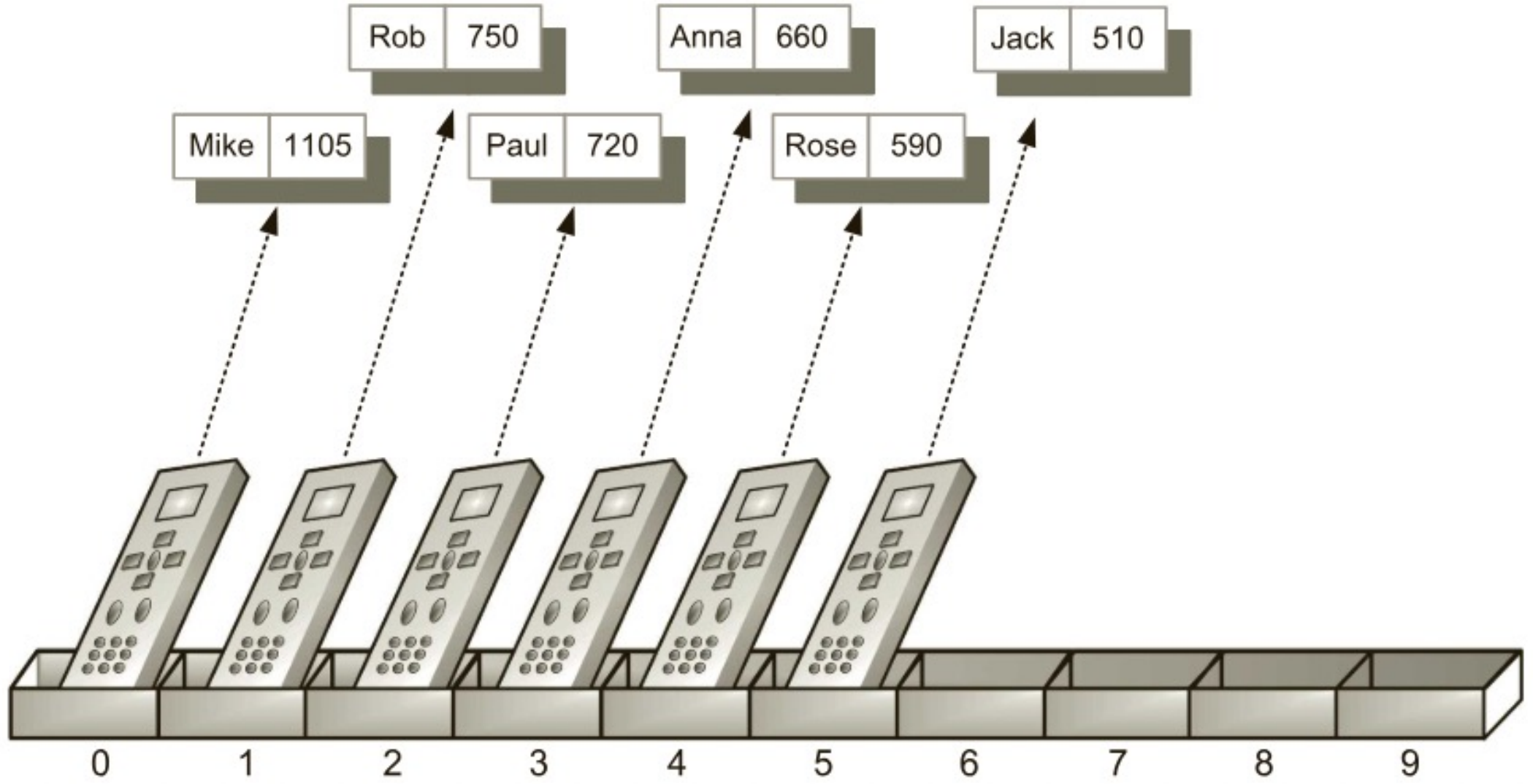
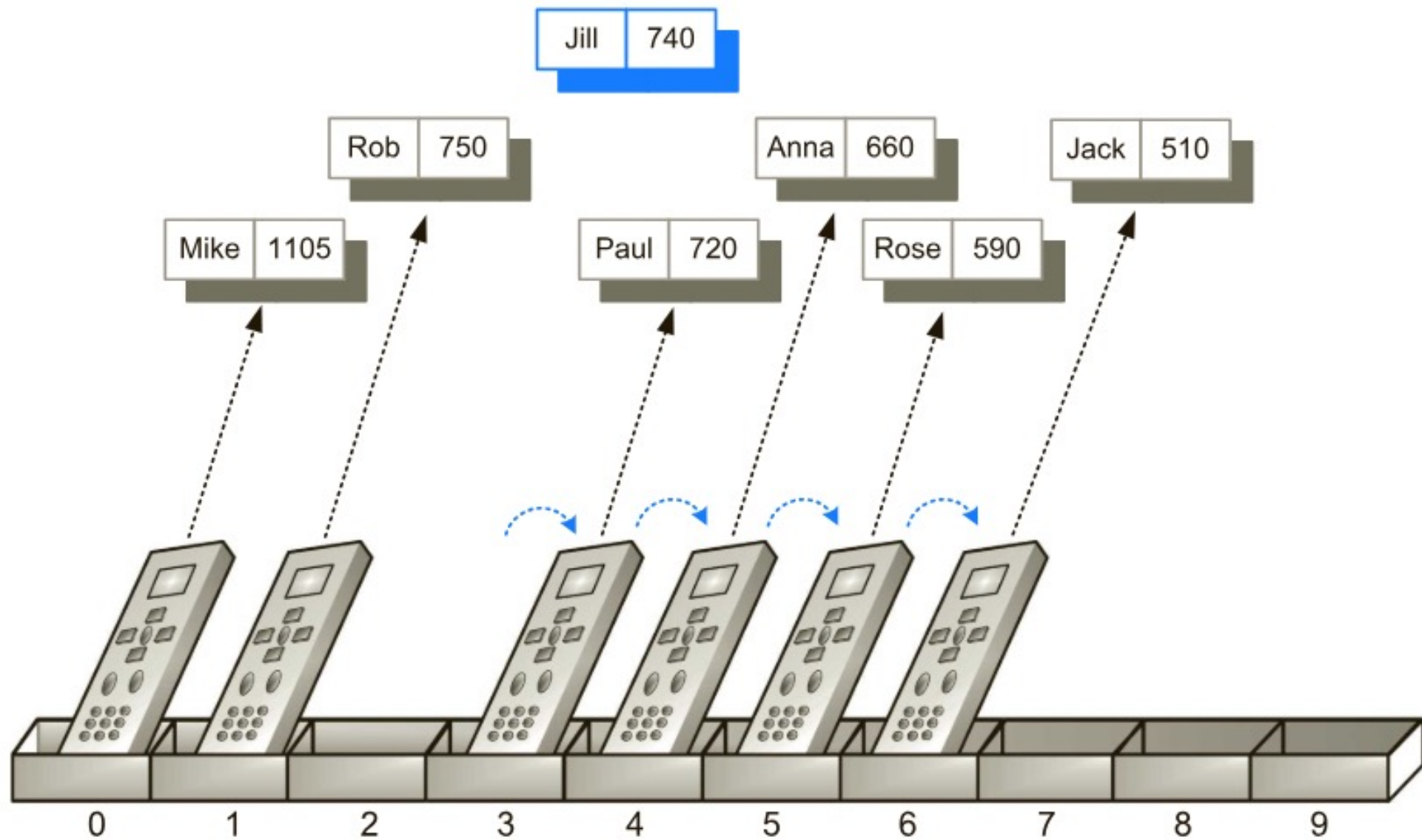


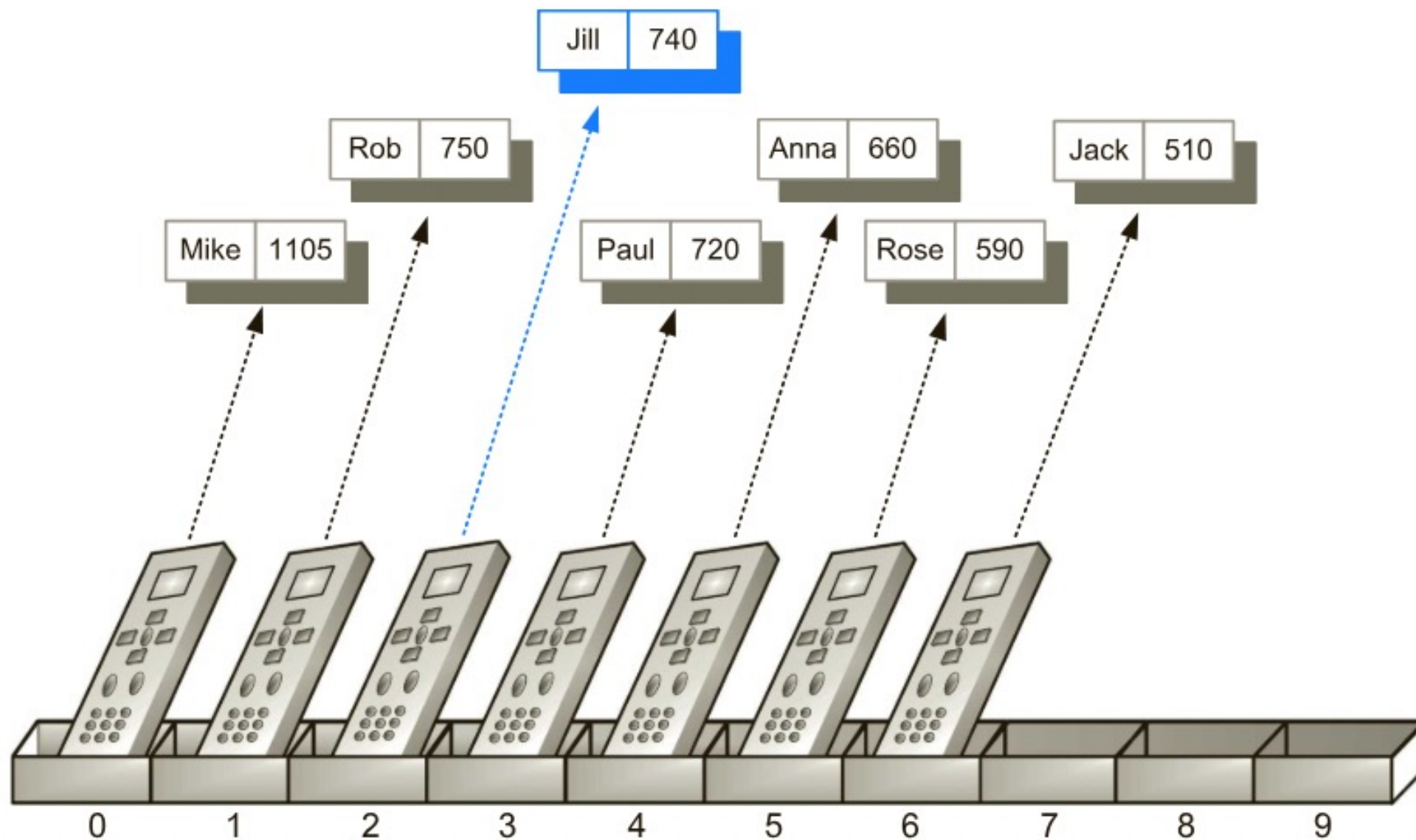


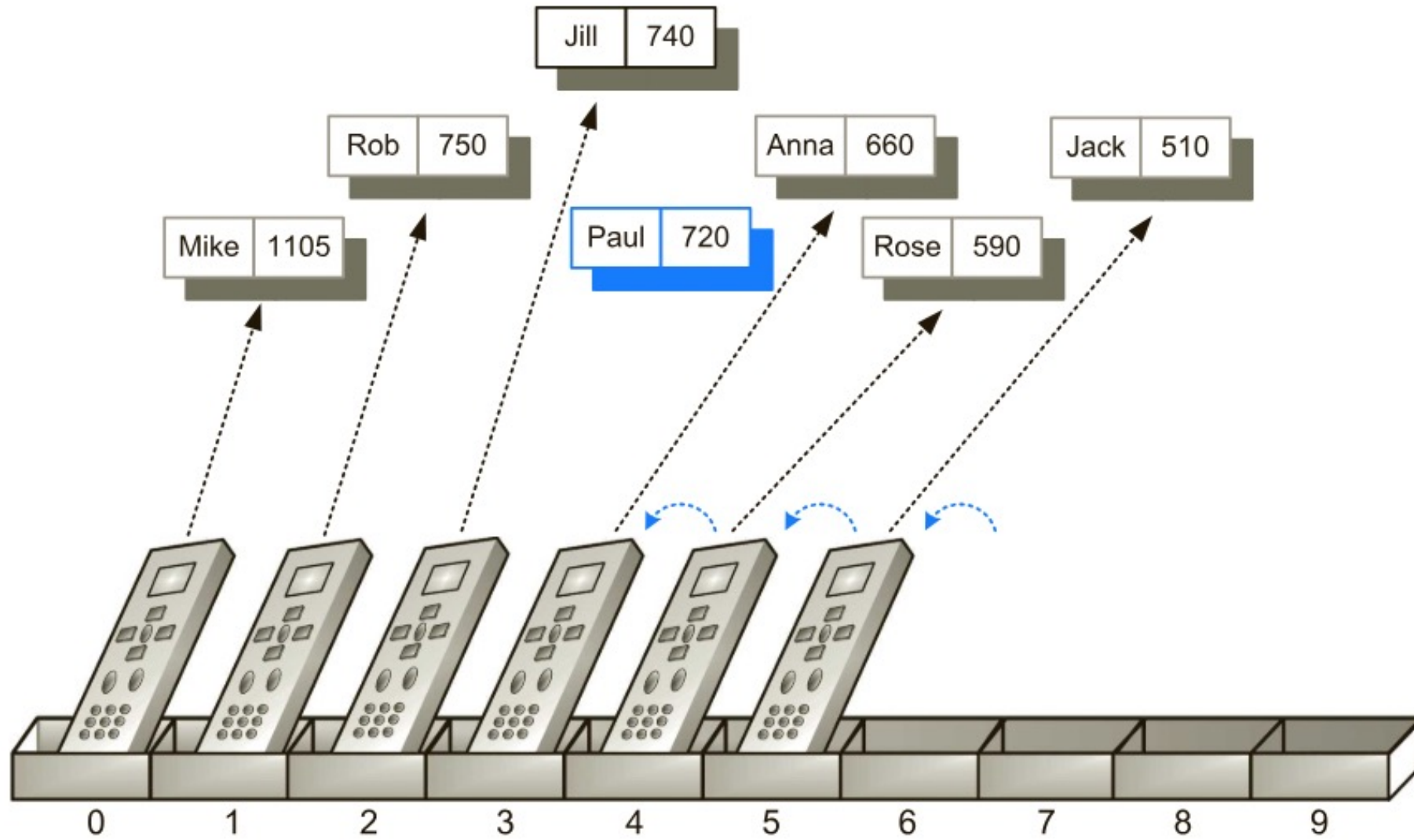
Scoreboard Data Visuals

W1D3 – Data Structures and Algorithms












Pseudocode

W1D3 – Data Structures and Algorithms



What is Pseudocode?



Pseudocode is a way of writing down the **steps of an algorithm** in a format that is **easy to read and understand**, using **plain language**.

What is Pseudocode?



It looks similar to real programming code but does not follow any specific programming language's syntax rules.

What is Pseudocode?

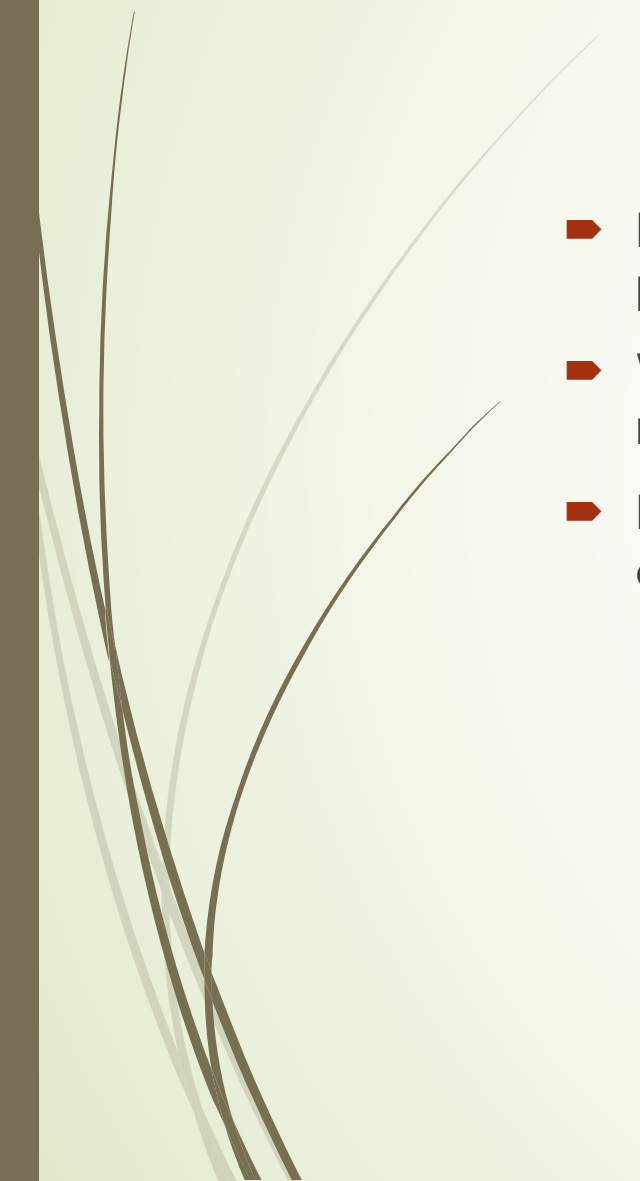


It looks similar to real programming code but does not follow any specific programming language's syntax rules.

What is Pseudocode?



Why Pseudocode?

- ▶ Pseudocode clearly shows an algorithm's logic without needing programming syntax.
 - ▶ Writing pseudocode can help break down a problem into smaller, manageable parts.
 - ▶ Effectively communicates algorithms between team members using different programming languages.
- 



Tips for Writing Pseudocode



1. Clearly define what the problem is and what you are trying to achieve.
2. Write in a way that is easy to understand. Avoid complex language or unnecessary details.
3. Use indentation and proper formatting to show the structure of the algorithm.
4. Use common programming constructs like loops (for, while), conditionals (if, else), and functions/procedures.
5. Include enough detail to convey the logic but not so much that it becomes confusing.



Let's create pseudocode for counting the total number of even numbers in an array.

Pseudocode

1. **Start:** Define the beginning of the algorithm.
2. **Initialize Variables:** Set up the array of numbers and a counter for even numbers.
3. **Iterate through the List:** Use a loop to go through each number in the array.
4. **Check for Even Numbers:** Use conditionals to check if a number is even.
5. **Update Counter:** Increment the counter if the number is even.
6. **Return Result:** Output the total count of even numbers.



Calculating the sum of all numbers in an array.

Let's create our own pseudocode.