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A case study
In partial fulfillment of the requirements
for the course Operating Systems

Implementation of the Page Replacement Algorithms (FIFO, LRU and Optimal Algorithm)

jennytiglao/electron-boilerplate-main

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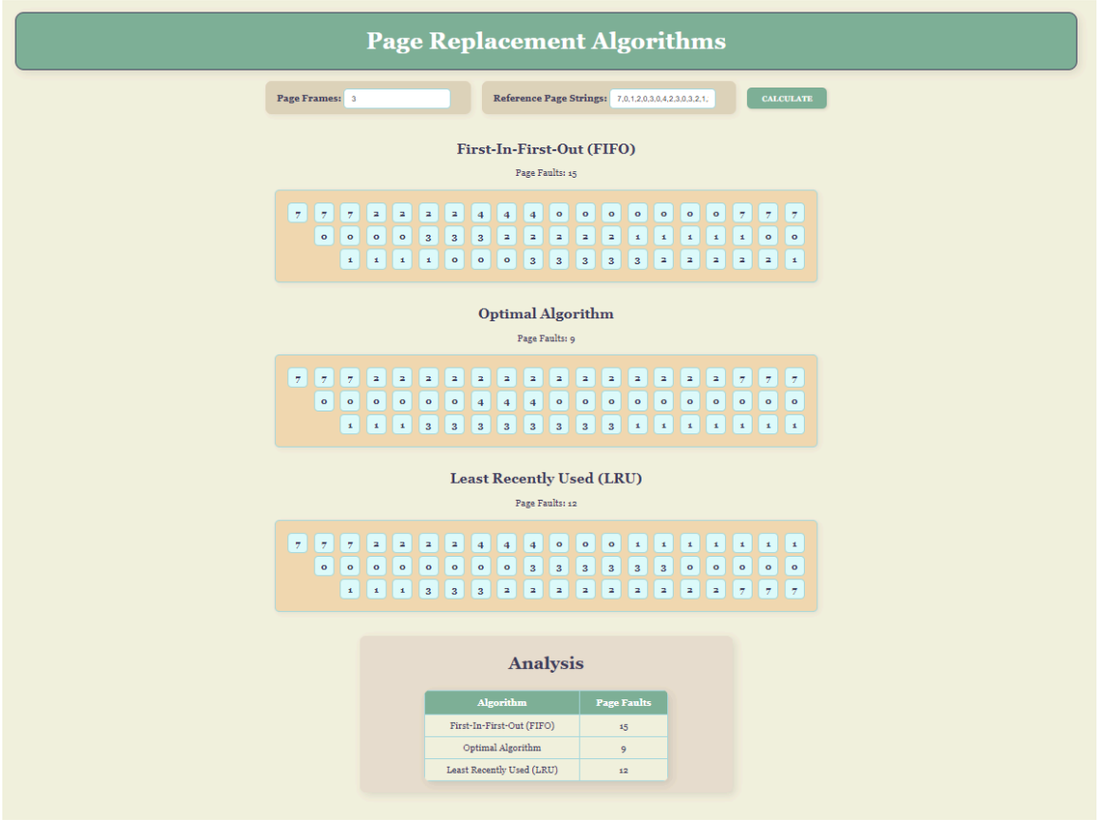
I. DOCUMENTATION

1. First Sample Input

Reference String: 7,0,1,2,0,3,0,4,2,3,0,3,2,1,2,0,1,7,0,1

Number of Page Frames: 3



Algorithm	Page Faults
First-In-First-Out (FIFO)	15
Optimal (OPT)	09
Least Recently Used (LRU)	12

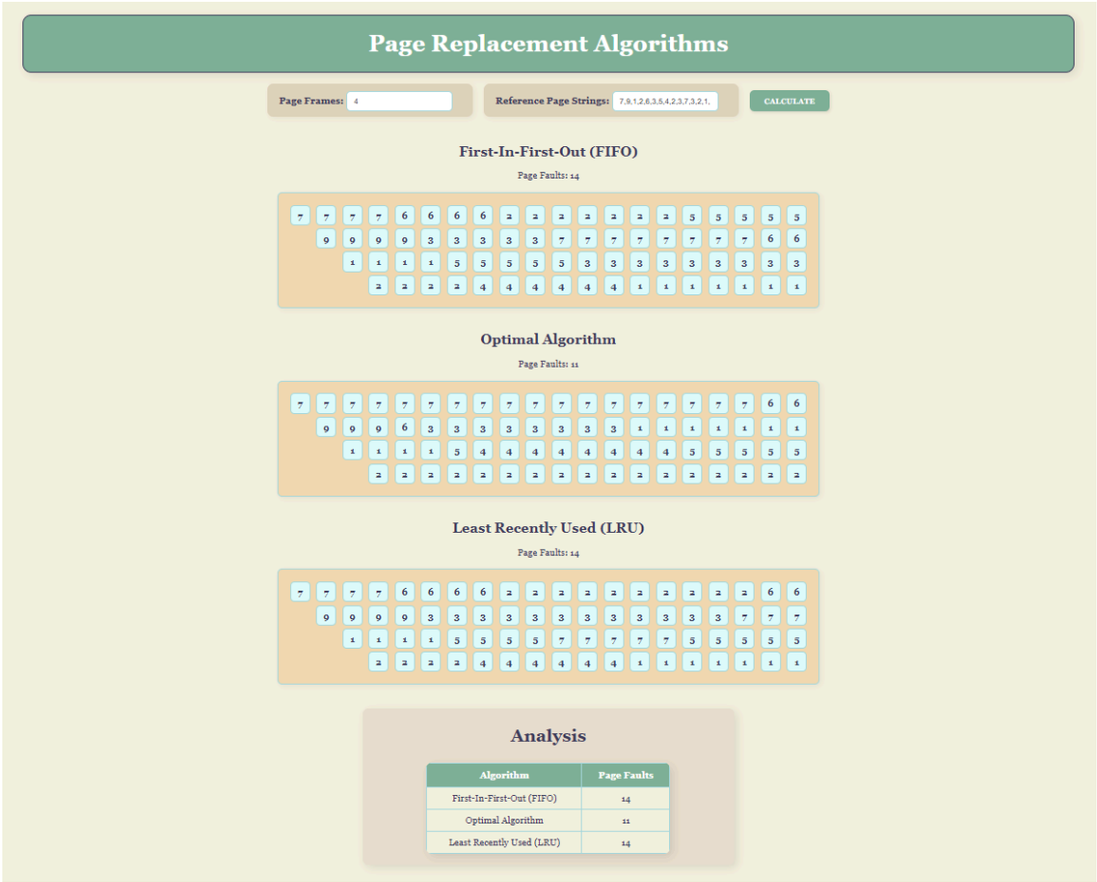
Table 1: First Input Results

Table 1 shows that the Optimal Algorithm has the fewest page faults (09). While the Least Recently Used (LRU) Algorithm had slightly more page faults (12), and the First-In-First-Out (FIFO) Algorithm ended up with the most page faults (15) overall.

2. Second Sample Input

Reference String: 7,9,1,2,6,3,5,4,2,3,7,3,2,1,2,5,1,7,6,1

Number of Page Frames: 4



Algorithm	Page Faults
First-In-First-Out (FIFO)	14
Optimal (OPT)	11
Least Recently Used (LRU)	14

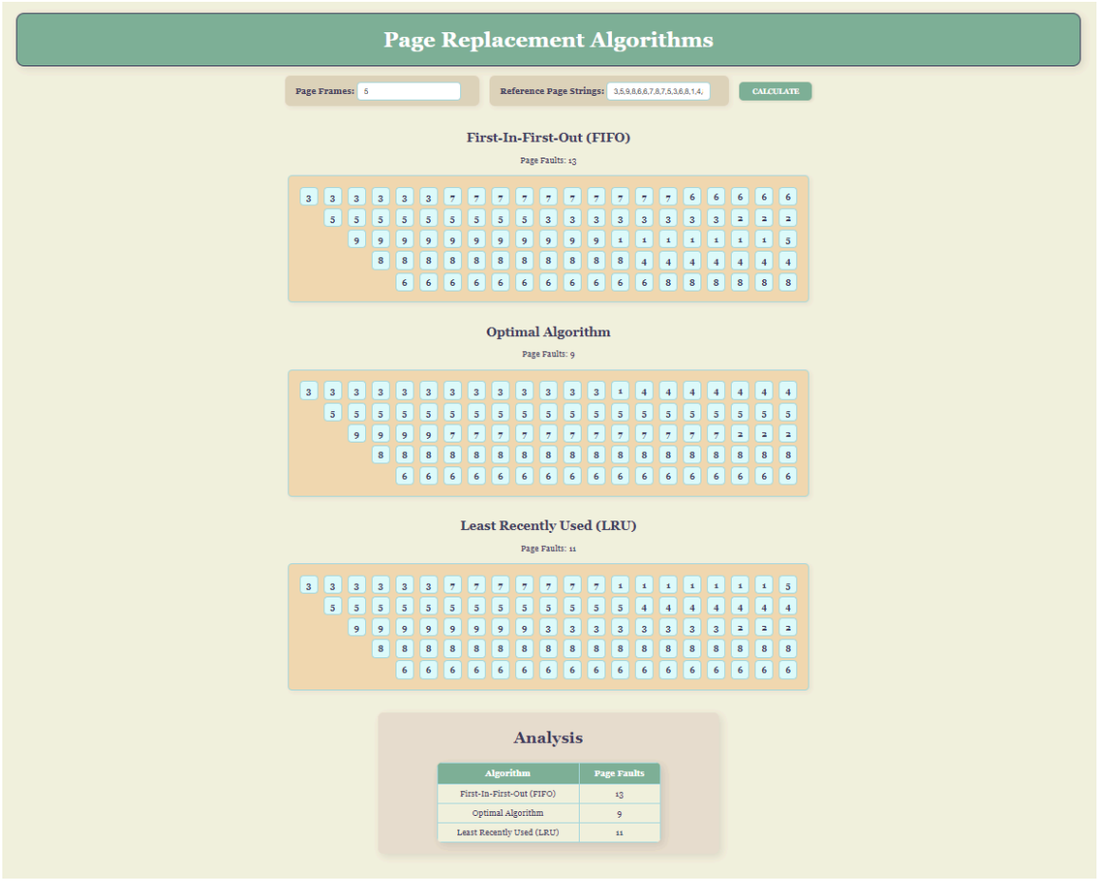
Table 2: Second Input Results

Table 2 shows that the Optimal Algorithm had the fewest page faults again (11). The Least Recently Used (LRU) Algorithm and the First-In-First-Out (FIFO) Algorithm had the same total of page faults (14).

3. Third Sample Input

Reference String: 3,5,9,8,6,6,7,8,7,5,3,6,8,1,4,8,6,8,2,4,5

Number of Page Frames: 5



Algorithm	Page Faults
First-In-First-Out (FIFO)	13
Optimal (OPT)	9
Least Recently Used (LRU)	11

Table 3: Third Input Results

Table 3 shows that the Optimal Algorithm wins with the least number of page faults (9). The Least Recently Used (LRU) Algorithm comes next with 11 total page faults, and the First-In-First-Out (FIFO) Algorithm comes last with 13 total page faults.