

FIFO:

```
#include <stdio.h>
```

```
#define MAX_PAGES 10
```

```
// Function to simulate FIFO page replacement
```

```
void fifoPageReplacement(int pages[], int n, int frameCount) {
```

```
    int frames[frameCount]; // Array to store pages in memory
```

```
    int pageFaults = 0; // Count of page faults
```

```
    int index = 0; // Pointer to the next page to be replaced
```

```
    // Initialize the frame with -1 (empty)
```

```
    for (int i = 0; i < frameCount; i++) {
```

```
        frames[i] = -1;
```

```
    }
```

```
    printf("\nPage\tFrame Status\n");
```

```
    // Process each page
```

```
    for (int i = 0; i < n; i++) {
```

```
        int page = pages[i];
```

```
        int pageFound = 0;
```

```
        // Check if page is already in memory
```

```
        for (int j = 0; j < frameCount; j++) {
```

```
            if (frames[j] == page) {
```

```
                pageFound = 1;
```

```
                break;
```

```
            }
```

```
        }
```

```
        // If page is not found in memory, replace the oldest page
```

```
        if (!pageFound) {
```

```
            frames[index] = page; // Replace the page
```

```
            index = (index + 1) % frameCount; // Move to the next frame
```

```
            pageFaults++; // Increment page fault count
```

```
        }
```

```
    // Display the current state of the frames
```

```
    printf("%d\t", page);
```

```
    for (int j = 0; j < frameCount; j++) {
```

```
        if (frames[j] == -1) {
```

```
            printf("-\t");
```

```

        } else {
            printf("%d\t", frames[j]);
        }
    }
    printf("\n");
}

printf("\nTotal page faults: %d\n", pageFaults);
}

int main() {
    int pages[] = {7, 0, 1, 2, 0, 3, 0, 4, 2, 3}; // Example page reference string
    int n = sizeof(pages) / sizeof(pages[0]); // Number of pages in the reference string
    int frameCount;

    // Get the number of frames from the user
    printf("Enter the number of frames: ");
    scanf("%d", &frameCount);

    // Call the FIFO page replacement function
    fifoPageReplacement(pages, n, frameCount);

    return 0;
}

```

```

Enter the number of frames: 3

Page   Frame Status
7   7   -   -
0   7   0   -
1   7   0   1
2   2   0   1
0   2   0   1
3   2   3   1
0   2   3   0
4   4   3   0
2   4   2   0
3   4   2   3

Total page faults: 9

```