Practical 15

Code:

```
#include <stdio.h>


int main() {
  int i, j = 0, n, a[50], frame[10], no, k, flag, count = 0;


  printf("\nENTER THE NUMBER OF PAGES:\n");
  scanf("%d", &n);


  printf("\nENTER THE PAGE NUMBERS:\n");
  for (i = 0; i < n; i++) // Start loop from 0 for correct array indexing
    scanf("%d", &a[i]);


  printf("\nENTER THE NUMBER OF FRAMES:\n");
  scanf("%d", &no);


  // Initialize frames
  for (i = 0; i < no; i++)
    frame[i] = -1; // Use -1 to indicate an empty frame


  printf("\nPage Number\tFrames\n");


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

```
printf("%d\t\t", a[i]); // Print the current page number
flag = 0; // Reset flag for each page

// Check if page already exists in any frame
for (k = 0; k < no; k++) {
    if (frame[k] == a[i]) {
        flag = 1; // Page hit
        break;
    }
}

// If page fault occurs
if (flag == 0) {
    frame[j] = a[i];       // Replace page in FIFO order
    j = (j + 1) % no;      // Update frame pointer
    count++;              // Increment page fault count
}

// Print the frame status
for (k = 0; k < no; k++) {
    if (frame[k] != -1)
        printf("%d ", frame[k]);
    else
        printf("- "); // Empty frame display
        }
        printf("\n");
    }

    printf("\nTotal Page Faults: %d\n", count);
    return 0;
}
```