

```
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 int present(int table_frame[], int nf, int page)
5 {
6     for (int i = 0; i < nf; i++)
7         if (page == table_frame[i])
8             return 1;
9     return 0;
10 }
11
12 void printtable(int table_frame[], int nf)
13 {
14     for (int i = 0; i < nf; i++)
15     {
16         if (table_frame[i] == -1)
17             printf("-- ");
18         else
19             printf("%2d ", table_frame[i]);
20     }
21     printf("||");
22 }
23
24 int main()
25 {
26     int n, nf, i, pos = 0;
27
28     printf("Enter number of frames\n");
29     cin>>nf;
30     int table_frame[nf];
31     for (i = 0; i < nf; i++)
32     {
33         table_frame[i] = -1;
34     }
35
36     printf("Enter total number of page requests\n");
37     cin>>n;
38     int pages[n];
39     printf("Enter reference string :\n");
40     for (i = 0; i < n; i++)
41     {
42         cin>>pages[i];
43     }
44
45     int count1 = 0;
46     printf("Position of frame table after each request\n\n");
47     for (i = 0; i < n; i++)
48     {
49         printf("Page table after request from %2d || ", pages[i]);
50         if (!present(table_frame, nf, pages[i]))
51         {
52             table_frame[pos] = pages[i];
53             pos = (pos + 1) % nf;
54             printtable(table_frame, nf);
55             printf("page fault\n");
56             count1++;
57             continue;
58         }
59     }
```

```
60     printtable(table_frame, nf);
61     printf("\n");
62 }
63 printf("\nNumber of page faults : %d\n\n", count1);
64 float average=(float)count1/(float)n;
65 printf("\nAverage page faults : %.4f\n\n", average);
66     return 0;
67 }
```

```
~/De/4th-semester/o/p13 on main !2 INT X at 10:00:51 am
cd "/home/anzal/Desktop/4th-semester/os lab/p13/" && g++ fifopage.cpp -o fifopage && "/home/anzal/Desktop/4th-semester/os lab/p13/"fifopage
Enter number of frames
4
Enter total number of page requests
13
Enter reference string :
7 0 1 2 0 3 0 4 2 3 0 3 2
Position of frame table after each request

Page table after request from 7 || 7 -- -- -- ||page fault
Page table after request from 0 || 7 0 -- -- ||page fault
Page table after request from 1 || 7 0 1 -- ||page fault
Page table after request from 2 || 7 0 1 2 ||page fault
Page table after request from 0 || 7 0 1 2 ||
Page table after request from 3 || 3 0 1 2 ||page fault
Page table after request from 0 || 3 0 1 2 ||
Page table after request from 4 || 3 4 1 2 ||page fault
Page table after request from 2 || 3 4 1 2 ||
Page table after request from 3 || 3 4 1 2 ||
Page table after request from 0 || 3 4 0 2 ||page fault
Page table after request from 3 || 3 4 0 2 ||
Page table after request from 2 || 3 4 0 2 ||

Number of page faults : 7

Average page faults : 0.5385

~/Desktop/4th-semester/os lab/p13 on main !2 took 33s at 10:01:26 am
```