**Experiment-9**

**Page Replacement Algorithm (FIFO)**

**Code:**

#include <bits/stdc++.h>

using namespace std;

int main(){

int pageFrames, entries;

cout<<"Enter number of page frames: ";

cin>>pageFrames;

cout<<"Enter total number of entries: ";

cin>>entries;

int arr[entries];

int arr2[pageFrames];

for (int i=0;i<entries;i++){

cout<<"Enter entry-"<<(i+1)<<": ";

cin>>arr[i];

}

int currentCountOfElements = 0;

int miss = 0;

int pointer = 0;

for (int i=0;i<entries;i++){

int element = arr[i];

int flag = 1;

for (int j=0;j<currentCountOfElements;j++){

if (arr2[j] == element){

flag=0;

break;

}

}

//if element does not already exist in arr2

if (flag==1){

if (currentCountOfElements < pageFrames){

currentCountOfElements++;

}

miss++;

//add element in arr2

arr2[pointer] = element;

//update the pointer

pointer++;

pointer = pointer%pageFrames;

}

// cout<<"CurrentCountOfElements: "<<currentCountOfElements<<", Pointer: "<<pointer;

// cout<<"\n";

}

cout<<"\nQueue state at the end:";

for (int i=0;i<pageFrames;i++){

cout<<arr2[i]<<" ";

}

cout<<"\nHits: "<<(entries-miss)<<endl;

cout<<"Misses: "<<miss<<endl;

double hitRatio = double(entries-miss)/double(entries);

double missRatio = double(miss)/double(entries);

cout<<"Hit ratio: "<<hitRatio<<endl;

cout<<"Miss ratio: "<<missRatio<<endl;

return 0;

}

**Output:**

