**EXPERIMENT-5**

**Aim:** Write a program to implement the First In First Out Page Replacement Algorithm.

**Theory:**

**Source Code:**

import java.util.HashSet;

import java.util.LinkedList;

import java.util.Queue;

class Main{

static int pageFaults(int pages[], int n, int capacity){

HashSet<Integer> s = new HashSet<>(capacity);

Queue<Integer> indexes = new LinkedList<>() ;

int page\_faults = 0;

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

if (s.size() < capacity){

if (!s.contains(pages[i])){

s.add(pages[i]);

page\_faults++;

indexes.add(pages[i]);

}

}

else{

if (!s.contains(pages[i])){

int val = indexes.peek();

indexes.poll();

s.remove(val);

s.add(pages[i]);

indexes.add(pages[i]);

page\_faults++;

}

}

System.out.print(pages[i] + "\t");

System.out.print(indexes + " \n");

}

return page\_faults;

}

public static void main(String args[])

{

int pages[] = {7,0,1,2,3,4,8,7,0,1};

int capacity = 3;

int len = pages.length;

int pageFaults = pageFaults(pages, len, capacity);

System.out.println("Page faults: " + pageFaults);

}

}

**Output:**

**A computer screen with white text

Description automatically generated**