Practical 8

AIM: Write a program that implements the FIFO page-replacement algorithm.

CODE:

import java.util.HashSet;

import java.util.LinkedList;

import java.util.Queue;

class test

{

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++;

}

}

}

return page\_faults;

}

public static void main(String args[])

{

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

int capacity=4;

System.out.println(pageFaults(pages,pages.length,capacity));

}

}

OUTPUT:

[Running] cd "c:\Users\Atharva\Dropbox (Old)\PC\Documents\Practicals\Principles of Operating Systems\Practical 8\" && javac test.java && java test

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