15. Simulate Paging Technique of memory management

**AIM:**

Implementation of paging.

**DESCRIPTION:**

Paging is a memory management scheme that eliminates the need for contiguous allocation of physical memory. This scheme permits the physical address space of a process to be non – contiguous.

**ALGORITHM:**

**Step 1:** start

**Step 2:** declare a max variable with initializing value 50(use pre processor directives)

**Step 3:** declare necessary variables

Page[max], i, n, f, ps, off, pno of type integer

**Step 4:** read no of pages in memory(n)

Read page size(ps)

Read number of frames(f)

**Step 5:** for i <- 0 repeat to n

begin

Page[i] <- (-1)

end for

**Step 6:** write “enter the page table”

**Step 7:** write”enter page number as -1 if that page is not present in any frame”

**Step 8:** write”page number frame number”

**Step 9:** for i <- 0 repeat to n

begin

Write(1)

Read (page [i])

end for

**Step 10:** read page number(pno) and offset(off)

**Step 11:** if(page[pno]==-1)

Write ”the required page is not available in any one of the frame”

else

write “physical address(frame number and offset) ”page[pno],off

**Step 12:** stop

**SOURCE CODE:**

#include<stdio.h>

#define max 50

void main()

{

int page[max],i,n,f,ps,off,pno;

printf("enter no of pages in memeory\n");

scanf("%d",&n);

printf("enter page size\n");

scanf("%d",&ps);

printf("enter number of frames\n");

scanf("%d",&f);

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

{

page[i]=-1;

}

printf("enter the page table\n");

printf("enter page number as -1 if that page is not present in any frame\n");

printf("page number frame number\n");

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

{

printf("%d\t",i);

scanf("%d",&page[i]);

}

printf("page number \t offset\n");

scanf("%d%d",&pno,&off);

if(page[pno]==-1)

{

printf("the required page is not available in any one of the frame\n");

}

else

{

printf("physical address(frame number=%d\toffset=%d\n)",page[pno],off);

}

}

**OUTPUT:**

enter no of pages in memeory

5

enter page size

280

enter number of frames

10

enter the page table

enter page number as -1 if that page is not present in any frame

page number frame number

0 2

1 5

2 9

3 1

4 3

page number offset

1 200

physical address(frame number=5 offset=200)