Week - 8
(10 August 2023)
Experiment - 8

Question:
Write a C program to simulate paging technique of memory management.

Program:

```
#include<stdio.h>
#define MAX 50
int main()
{
   int page[MAX],i,n,f,ps,off,pno;
   int choice=0;

   printf("Enter the number of pages in memory: ");
   scanf("%d",&n);

   printf("\nEnter Page size: ");
   scanf("%d",&ps);

   printf("\nEnter number of frames: ");
   scanf("%d",&f);
   for(i=0;i<n;i++)
      page[i]=-1;

   printf("\nEnter the Page Table\n");

   printf("(Enter frame no as -1 if that page is not present in any frame)\n\n");

   printf("\nPage No\t\tFrame No\n-------\t\t-------");
   for(i=0;i<n;i++)
   {
      printf("\n\n%d\t\t",i);
      scanf("%d",&page[i]);
   }

   do
   {
      printf("\n\nEnter the logical address(i.e,page no & offset):");
      scanf("%d%d",&pno,&off);

      if(page[pno]==-1)
         printf("\n\nThe required page is not available in any of frames");
      else
         printf("\nPhysical address(i.e,frame no & offset):%d,%d",page[pno],off);

      printf("\n\nDo you want to continue(1/0)?:");
```

```
        scanf("%d",&choice);
    }while(choice==1);

    return 1;
}
```

Output:

```
Enter the number of pages in memory: 4

Enter Page size: 10

Enter number of frames: 4

Enter the Page Table
(Enter frame no as -1 if that page is not present in any frame)


Page No         Frame No
-------         -------

0               -1


1               8


2               5


3               2
```

```
Enter the logical address(i.e,page no & offset):0 100

The required page is not available in any of frames

Do you want to continue(1/0)?:1

Enter the logical address(i.e,page no & offset):1 25

Physical address(i.e,frame no & offset):8,25

Do you want to continue(1/0)?:1

Enter the logical address(i.e,page no & offset):2 352

Physical address(i.e,frame no & offset):5,352

Do you want to continue(1/0)?:1

Enter the logical address(i.e,page no & offset):3 20

Physical address(i.e,frame no & offset):2,20

Do you want to continue(1/0)?:0
```

Observation Book Pictures:

PAGE NO :
DATE : 10/8/2023

Experiment - 11

Write a C program to simulate paging technique of memory management.

Program:

```
#include<stdio.h>
#define MAX 50

int main()
{ int page[MAX], i, n, f, ps, off, pno;
  int choice = 0;

printf("Enter the number of pages in memory: ");
scanf("%d", &n);

printf("\n Enter the Page size: ");
scanf("%d", &ps);

printf("\n Enter number of frames: ");
scanf("%d", &f);
for(i=0; i<n; i++)
    page[i] = -1;

printf("\n Enter the Page Table\n");
printf("(Enter frame no. as -1 if that page is not
        present in any frame)\n\n");
printf("\n Page No.\t\t Frame No.\n-------\t\t-------");
for(i=0; i<n; i++)
{ printf("\n\n %d\t\t", i);
  scanf("%d", &page[i]);
}
```

```
do
{ printf("\n\n Enter the logical address (i.e
        page no. & offset):");
  scanf("%d%d", &pno, &off);

  if (page[pno] == -1)
    printf("\n\n The required page is not
          available in any of the frames");
  else
    printf("\n Physical address (i.e frame no. &
          offset): %d%d", page[pno], off);

  printf("\n\n Do you want to continue (1-yes/0-no)?:");
  scanf("%d", &choice);
} while (choice == 1);

return 1;

}
```

Output:

Enter the number of pages in memory : 4

Enter page size : 10

Enter page table:

(Enter frame no. as -1 if that page is not present in any frame)

Page No	Frame No.
0	-1
1	8
2	5
3	2

PAGE NO :
DATE :

Enter the logical address (i.e. page no & offset) : 0 100
The required page is not available in any of the frames

Do you want to continue (1/0)? : 1

Enter the logical address (i.e. page no & offset) : 1 25
Physical address (i.e. frame no & offset) : 8, 25

Do you want to continue (1/0)? : 1

Enter the logical address (i.e. page no & offset) : 2 352
Physical address (i.e. frame no & offset) : 5, 352

Do you want to continue (1/0)? 1

Enter the logical address (i.e page no & offset) : 3, 20
Physical address (i.e. frame no & offset) : 2, 20

Do you want to continue (0/1) ? 0
Exit.

10/10
10/8/23