PAGE REFERENCE

```c
#include<stdio.h>

#include<stdlib.h>

int n,nf;

int ref[30];

int p[50];

int hit=0;

int i,j=0,k;

int pgfaultcnt=0;

void getData()

{

printf("Enter the length of page reference sequence:\n");

scanf("%d",&n);

printf("Enter the number of frames:\n");

scanf("%d",&nf);

printf("Enter the page reference sequence:\n");

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

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

}

void initilize()

{

pgfaultcnt=0;

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

p[i]=9999;

}

int ishit(int data)

{

hit=0;

for(j=0;j<nf;j++)

{
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if(p[j]==data)

{

hit=1;

break;

}

}

return hit;

}

void dispages()

{

for(k=0;k<nf;k++)

{

if(p[k]!=9999)

printf("%d",p[k]);

}

}

void lru()

{

initilize();

int least[50];

printf("\tPAGE\tFRAMES\tFAULTS\n");

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

{

printf("\n\t%d\t",ref[i]);

if(ishit(ref[i])==0)

{

for(j=0;j<nf;j++)

{

int pg=p[j];

int found=0;

for(k=i;k>=0;k--)
```

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{
if(pg==ref[k])
{
least[j]=k;
found=1;
break;
}
else
found=0;
}
if(!found)
least[j]=-9999;
}
int min=9999;
int repindex;
for(j=0;j<nf;j++)
{
if(least[j]<min)
{
min=least[j];
repindex=j;
}
}
p[repindex]=ref[i];
dispages();
printf("\tPage Fault %d",pgfaultcnt);
pgfaultcnt++;
}
else
{
dispages();
```

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printf("\tNo pages fault!");

}

}

printf("\nTotal no of pages faults in lru is: %d",pgfaultcnt);

}

void fifo()

{

int j=0;

initilize();

printf("\tPAGE\tFRAMES\tFAULTS\n");

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

{

printf("\n\t%d\t",ref[i]);

if(ishit(ref[i])==0)

{

p[j]=ref[i];

j++;

dispages();

printf("\tpage fault %d",pgfaultcnt);

pgfaultcnt++;

}

else

{

dispages();

printf("\t No pages fault");

}

if(j==nf)

j=0;

}

printf("\nTotal no of page faults in FIFO is %d",pgfaultcnt);

}
```

```c
int main()
{
    int choice,yn;
    do
    {
        printf("Page Replacement Algorithm\n");
        printf("1.Enter data 2.FIFO 3.LRU 4.Exit\n");printf("Enter your choice:\n");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:
                getData();break;
            case 2:
                fifo();break;
            case 3:
                lru();break;
            case 4: exit(0);
        }
        printf("\nDo you want to continue?\n if yes press 1\n if no press 0\n");scanf("%d",&yn);
    }
    while(yn==1
    );return(0);
}
```