y stem(as);

);

page fault);

23/8/23

1. Write a C-program to schedule page replacement using LRU & optimal.

```
#include<stdio.h>

void main(){
 int me[20], p[20], n,m,i,j,k,c,t,a,dis=0,b;
  printf("Enter memory size :");
  scanf("%d", &n)
   for(i=0; i<n; i++)
       me[i]=0;
  printf("Enter the no of process in queue:\n");
  scanf("%d",&m;
  printf("Enter %d process \n", m);
  for (i=0; i<m; i++)
        scanf("%d",&process[i]);

  j=0;
  i=0;

 printf("LRU);
  for(i=0;i<n; i++)
      me[i]=0;
  while(j!=m){
      k=0,c=0;
      while(k!=n){
         c++;
         if(me[k]==p[j]){
            j++;
            break
         }
         k++;
      }
      if(c==n){
        dis=0;
for(a=0;a<n;a++){
    b=99;
    z=j;
    while(z>=0){
       if (j-z) > dis)
         if(me[a]=p[z]){
           dis= (z-j);
         } b=z
       } z--;
    }
 }
 if (b==99)
    b=i;
 me(b)= p(j)
   i=(i+1)%n
}
printf("\n Memory:");
  for(z=0;z<n;z++)
        printf("%d", me[z]);
  } j++;
printf ("\n optimal:");
  for(i=0;i<n;i++)
        me[i]=0;
  i=0,j=0;
while (j!=n) {
  k=c=0;
  while (k!=n) {
      c++;
      if (me[k]==p[j]){
         i++;
         break;
      }
   } k++;
  if (c==n) {
     dis=0;
   for(a=0;a<n;a++){
        b=99;
        z=j;
```

```
while (z!=m){
    if((z-j)>di))
    if(me[a]==p[z]){
       di = (z-j);
        b = z
    }
    z++;
 }}
 if b==99) b=i;
  me[b]=p[j]
   i=(i+1)%n
}
printf("\n Memory:");
 for (z=0;z<n;z++)
      printf("%d",m[z]);
      j++;
} }
```

<u>output</u>

```
Enter memory size : 3
Enter memory process 5
Enter 5 process    6 4 1 5 2

 LRU:
 Memory : 6 0 0
        : 6 4 0
          6 4 1
          6 4 5
          6 2 5
```

<u>optimal</u>

```
 memory : 6 0 0
          6 4 0
          6 4 1
          5 4 1
          5 2 1
```