**Practical :10**

**Aim: Implementation Of Best-Fit Memory Allocation Algorithm**

**Program:**

**#include<stdio.h>**

**int main()**

**{**

**int fragment[20],b[20],p[20],i,j,nh,np,temp,lowest=9999;**

**static int barray[20],parray[20];**

**char ans;**

**label:**

**printf("\n\t\tBest Fit");**

**printf("\nEnter the number of holes:");**

**scanf("%d",&nh);**

**printf("\nEnter the size of the hole:-\n");**

**for(i=1;i<=nh;i++)**

**{**

**printf("H%d:",i);**

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

**}**

**printf("Enter the number of processes:");**

**scanf("%d",&np);**

**printf("\nEnter the size of the processes :-\n");**

**for(i=1;i<=np;i++)**

**{**

**printf("Process P%d:",i);**

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

**}**

**for(i=1;i<=np;i++)**

**{**

**for(j=1;j<=nh;j++)**

**{**

**if(barray[j]!=1)**

**{**

**temp=b[j]-p[i];**

**if(temp>=0)**

**if(lowest>temp)**

**{**

**parray[i]=j;**

**lowest=temp;**

**}**

**}**

**}**

**fragment[i]=lowest;**

**barray[parray[i]]=1;**

**lowest=10000;**

**}**

**for(i=0;i<65;i++)**

**{**

**printf("-");**

**}**

**printf("\n|Process| Process\_size | Hole\_no | Size | Available |\n");**

**for(i=0;i<65;i++)**

**{**

**printf("-");**

**}**

**for(i=1;i<=np;i++)**

**{**

**if(parray[i]!=0)**

**{**

**printf("\n| P%d | %d | H%d | %d | %d |",i,p[i],parray[i],b[parray[i]],fragment[i]);**

**printf("\n------------------------------------------------------------------");**

**}**

**else**

**{**

**printf("\n| P%d | %d | N.A | 0 | 0 |",i,p[i],parray[i]);**

**printf("\n-------------------------------------------------------------------");**

**}**

**}**

**printf( "\nDo you want to continue (Y/N)?\n");**

**printf( "You must type a 'Y' or an 'N':");**

**scanf(" %c",&ans);**

**if( ans=='y' || ans=='Y')**

**{**

**goto label;**

**}**

**else**

**{**

**return 0;**

**}**

**}**

**Output:**

