**LAB EXERCISE 14**

**DYNAMIC MEMORY ALLOCATION**

**BEST FIT STRATEGY**

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**//Code:**

#include<iostream>

using namespace std;

int main()

{

int h,p;

cout<<"Enter the number of holes:";

cin>>h;

int hole\_size[h];

cout<<"Enter the size of each hole:";

for(int i=0;i<h;i++)

cin>>hole\_size[i];

cout<<"Enter the number of processes:";

cin>>p;

int process\_size[h];

cout<<"Enter the size of each process:";

for(int i=0;i<p;i++)

cin>>process\_size[i];

cout<<"Hole No.\tHole Size\n";

for(int i=0;i<h;i++)

cout<<i<<"\t\t"<<hole\_size[i]<<"\t\t"<<endl;

cout<<endl;

int seq[h];

for(int i=0;i<h;i++)

seq[i]=-1;

int cur\_p=0;

for(int j=0;j<h;j++)

{

int smallest=-1;

for(int i=0;i<h;i++)

{

if(hole\_size[i]>=process\_size[cur\_p] && seq[i]==-1)

{

if(smallest==-1)

smallest=i;

else if(hole\_size[smallest]>hole\_size[i])

smallest=i;

}

}

if(smallest!=-1)

{

hole\_size[smallest]=hole\_size[smallest]-process\_size[cur\_p];

seq[smallest]=cur\_p;

}

cur\_p++;

}

cout<<"Hole No.\tHole Size\tProcess No.\n";

for(int i=0;i<h;i++)

cout<<i<<"\t\t"<<hole\_size[i]<<"\t\t"<<seq[i]<<endl;

return 0;

}

**//Output:**

