Name : Lakhan Kumawat.

Roll No : 1906055.

CSL4403

Lab-05 / Assignment -05

Problem Statement : Write a program to implement Job Sequencing with Deadlines .

Job Sequencing With Deadlines

Final Deadline 3

Job Id	Profit	Deadline
1.	100	1
2.	50	1
3.	30	2
4.	70	2
5.	30	3
Total Profit	200	

Program Code C++ :

```
#include <iostream>
#include <bits/stdc++.h>
using namespace std;

//1.Sort the profit in decreasing order
//2.set the job just before of before deadline Time.

struct Job{
   int JobNo;
```

```
int deadL;
int profit;
};

bool comparison(Job a, Job b)
{
    return (a.profit > b.profit);
}

void JobSchedulingUsingDeadline(Job a[],int n, int finaldead){
sort(a,a+n,comparison);

int result[n],totalprofit=0;
bool slot[n];

for(int j=0;j<n;j++)
   slot[j]=false;

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

  for(int j=min(n,a[i].deadL)-1;j>=0;j--){
   if(slot[j]==false){
      totalprofit+=a[i].profit;
       result[j] = i;  // Add this job to result
          slot[j] = true; // Make this slot occupied
          break;
   }
  }
}
cout<<"Jobs Sequencing Order : ";
for(int o=0;o<n;o++)
   if(slot[o]){
   cout<< a[result[o]].JobNo+1<<" ";
   }
   cout<<"Total Profit : "<<totalprofit;
}

int main(){
 int no,finaldead;

   cout<<"Enter Total Jobs: ";
cin>>no;
cout<<"Enter Your Final Deadline: ";
  cin>>finaldead;
Job Arr[no];
cout<<" Profit  Deadline"<<"\n";
for(int i=0;i<no;i++){
```

```
 cin>>Arr[i].profit>>Arr[i].deadL;
    Arr[i].JobNo = i;
}

JobSchedulingUsingDeadline(Arr,no,finaldead);
}
```

Outputs : Job sequencing and Profit