***ASSIGNMENT-5***

***QUESTION NO.:-2***

***ALGORITHM:-***

//In this program we use a structure it define bellow

struct machine

{

long int D,P,R,G;

}; //

*SORT (n,m)*

Statement: This function take a structure array ‘m’ and number of machine ‘n’ as arguments.

Step 1: Initialize ‘i’ by 0

Step 2: Repeat step 3 to 10 while (i<n-1) do,

Step 3: Initialize ‘j’ by 0

Step 4: Repeat step 5 to 9 while (j<n) do,

Step 5: If (m[j].D<m[i].D) then go to step 6 to 8

Step 6: temp←m[i]

Step 7: m[i]←m[j]

Step 8: m[j]←temp

Step 9: j←j+1

Step 10: i←i+1

Step 11: END

*CALCULATE (m,n,c,d)*

Statement: This function take some arguments which are a structure array ‘m’ and three integers ‘n’, ‘c’, ‘d’ that takes for number of machine, restructuring cost and restructuring day.

Step 1: Initialize ‘i’ and ‘f’ by 0

Step 2: Repeat step 3 to 30 while (i<n-1) do,

Step 3: b←put the value of ‘m[i].D’

Step 4: e←put the value of ‘i’

Step 5: a←put the value of ‘c’

Step 6: If (m[i].P≤c) then go to step 7 to 26,

Otherwise go to step 27

Step 7: a←a-m[i].P

Step 8: j←i+1

Step 9: Initialize ‘k’ by b+1

Step 10: Repeat step 11 to 26 while (k≤d) do,

Step 11: If (j==n) then go to step 28

Step 12: If (k==m[j].D) then go to step 13 to 24,

Otherwise go to step 25

Step 13: If (m[j].P≤a and m[j].G≥m[e].G) then go to step 14 to 22,

Otherwise go to step 23

Step 14: If (m[j].G>m[e].G) then go to step 15 to 17,

Otherwise go to step 18

Step 15: a←a-m[j].P

Step 16: a←a+m[e].R

Step 17: e←put the value of ‘j’

Step 18: If (m[j].G=m[e].G and m[j]>m[e].R) then go to step 19 to 21,

Otherwise go to step 22

Step 19: a←a-m[j].P

Step 20: a←a+m[e].R

Step 21: e←put the value of ‘j’

Step 22: a←a+m[e].G

Step 23: a←a+m[e].G

Step 24: j←j+1

Step 25: a←a+m[e].G

Step 26: k←k+1

Step 27: Go to step 2 with i←i+1

Step 28: arr[f]←a+m[e].R+((d-k+1)\*m[i].G)

Step 29: f←f+1

Step 30: i←i+1

Step 31: If (m[i].P≤c) then go to step 32

Step 32: arr[f]←(c-m[i].P)+(d-m[i].D)\*m[i].G+m[i].R

Step 33: j←put the value of ‘arr[f]’

Step 34: Initialize ‘i’ by ‘f-1’

Step 35: Repeat step 36 to 38 while (i≥0) do,

Step 36: If (j<arr[i]) then go to step 37

Step 37: j←put the value of ‘arr[i]’

Step 38: i←i-1

Step 39: Display the value maximum profit ‘j’

Step 40: END

*MAIN ()*

Step 1: Input the number of machine, restructuring cost and restructuring day in ‘n’, ‘c’, ‘d’ respectively.

Step 2: Initialize ‘i’ by 0

Step 3: Repeat step 4 to 5 while (i<n) do,

Step 4: Input the selling days, brought price, sell price and profit of machine in ‘D’, ‘P’, ‘R’, ‘G’ respectively.

Step 5: i←i+1

Step 6: SORT (n,m) //call SORT function

Step 7: CALCULATE (m,n,c,d) //call CALCULATE function

Step 8: END