Week 7

Question 1 –

#include<iostream>

using namespace std;

class word

{

public:

int n,m;

int \*\*vis;

string \*mat;

string s;

bool is\_poss(int i,int j)

{

if(i < 0 || j < 0 || i >= n || j >= m)

return 0;

else

return 1;

}

void calc(int i,int j,int c)

{

vis[i][j] = 1;

//cout<<mat[i][j]<<" ";

if(c == s.length()-1)

{

cout<<"Found\n";

return;

}

if(is\_poss(i,j+1) && !vis[i][j+1] && mat[i][j+1] == s[c+1])

calc(i,j+1,c+1);

else if(is\_poss(i+1,j) && !vis[i+1][j] && mat[i+1][j] == s[c+1])

calc(i+1,j,c+1);

else if(is\_poss(i,j-1) && !vis[i][j-1] && mat[i][j-1] == s[c+1])

calc(i,j-1,c+1);

else if(is\_poss(i-1,j) && !vis[i-1][j] && mat[i-1][j] == s[c+1])

calc(i-1,j,c+1);

else

vis[i][j] = 0;

}

word()

{

cin>>n>>m;

mat = new string[n];

vis = new int\*[n];

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

vis[i] = new int[m];

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

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

vis[i][j] = 0;

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

{

string temp;

cin>>temp;

mat[i] = temp;

}

cin>>s;

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

{

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

{

if(mat[i][j] == s[0])

{

//cout<<"{"<<i<<" , "<<j<<"}\n";

calc(i,j,0);

}

}

}

}

};

int main()

{

word w;

w;

return 0;

}

Output –

