Palindrome portioning

1)We have to cut the string in such a way that left part and the right part should be palindrome.

2)This problem comes under matrix chain multiplication.

3)for loop goes from I to j and we divide the string from I to k and k+1 to j and the recursion problem continues

class Solution {

public int minCut(String s)

{

int n=s.length();

int[][] dp=new int[n+1][n+1];

for (int[] row : dp)

Arrays.fill(row,-1 );

int i=0;

int j=n-1;

return solve(s,i,j,dp);

}

public int solve(String s ,int i,int j,int[][] dp)

{

if(i>=j)

return 0;

if(ispalindrome(s,i,j)==true)

return 0;

if(dp[i][j]!=-1)

return dp[i][j];

int min=Integer.MAX\_VALUE;

int left,right=0;

for(int k=i ;k<j ;k++ )

{

if(dp[i][k]!=-1)

{

left=dp[i][k];

}

else

{

left=solve(s,i,k,dp);

dp[i][k]=left;

}

if(dp[k+1][j]!=-1)

{

right=dp[k+1][j];

}

else

{

right=solve(s,k+1,j,dp);

dp[k+1][j]=right;

}

int temp=1 + left + right;

if(temp<min)

{

min=temp;

}

}

return dp[i][j]=min;

}

public boolean ispalindrome(String s,int i,int j)

{

if(i==j)

return true;

if(i>j)

return true;

while(i<j)

{

if(s.charAt(i)!=s.charAt(j))

return false;

i++;

j--;

}

return true;

}

}