class Solution {

public:

int coinChange(vector<int>& coins, int amount) {

int n=coins.size();

int dp[n+1][amount+1];

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

dp[0][i]=INT\_MAX-1;

}

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

dp[i][0]=0;

}

for(int i=1;i<=amount;i++){

if(i%coins[0]==0)

dp[1][i]=i/coins[0];

else

dp[1][i]=INT\_MAX-1;

}

for(int i=1;i<=n;i++){

for(int j=1;j<=amount;j++){

if(coins[i-1]<=j){

dp[i][j]=min(dp[i][j-coins[i-1]]+1,dp[i-1][j]);

}else{

dp[i][j]=dp[i-1][j];

}

}

}

if(dp[n][amount]!=INT\_MAX-1)

return dp[n][amount];

return -1;

}

};