**public** **class** dynamicprogr {

**private** **static** **int** *myarray*[] = **new** **int**[] {1, 5, 8, 9, 10, 17, 17, 20};

**private** **static** **int** *costArray*[];

**private** **static** **int** *maxiProfit*;

**public** **static** **int**[] rodCutting(**int** price[],**int** n)

{

*costArray* = **new** **int**[n+1];

*costArray*[0] = 0;

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

{

**int** maximumcostArray = 0;

**for** (**int** j = 0; j < i; j++)

maximumcostArray = Math.*max*(maximumcostArray,

price[j] + *costArray*[i-j-1]);

*costArray*[i] = maximumcostArray;

// System.out.println("Maximum Value of cost for rod of length ["+i+"] is : "+costArray[i]);

}

// System.out.println();

**return** *costArray*;

}

// public static int[] subarray(int givenRodlen)

// {

// int n = givenRodlen;

// int[] subarray = new int[n];

// for(int i = 1; i<subarray.length; i++)

// {

// subarray[i] = costArray[i];

// }

// return subarray;

//

// }

**public** **static** **void** maxProfit(**int** givenRodlen)

{

**if**(givenRodlen<=*costArray*.length)

{

*maxiProfit* = *costArray*[givenRodlen];

/\*

while(givenRodlen>1)

{

int index = 0;

int maxi = 0;

int[] costsubarray;

// call function to give subarray

costsubarray = subarray(givenRodlen);

for(int i=1;i<costsubarray.length;i++)

{

System.out.println("value of"+i+" is :"+costsubarray[i]);

}

for(int i=1;i<costsubarray.length;i++)

{

if(costsubarray[i]>maxi)

{

maxi = costsubarray[i];

index = i;

}

}

maxiProfit = maxiProfit + maxi;

System.out.println("maxi is : "+maxi);

System.out.println("index is "+index);

System.out.println("maxiProfit is : "+maxiProfit);

givenRodlen = givenRodlen - index;

System.out.println("givenRodlen"+givenRodlen);

// maxiProfit = maxiProfit + costArray[1];

}

\*/

}

**else**

{

System.***out***.println("Hello");

}

}

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

**int** size = *myarray*.length;

**int** givenRodlen = 9;

*costArray* = *rodCutting*(*myarray*, size);

**for**(**int** i=1;i<*myarray*.length;i++)

{

System.***out***.println("Maximum Value of cost for rod of length ["+i+"] is " + *costArray*[i]);

}

*maxProfit*(givenRodlen);

System.***out***.println("Maximum Profit for Given Rod Length is : "+*maxiProfit*);

}

}