**JAVA PROGRAMMING**

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**Problem**

**Within the package named ‘primespackage’, define a class Primes which includes a method checkForPrime() for checking if the given number is prime or not. Define another class named TwinPrimes outside of this package which will display all the pairs of prime numbers whose difference is 2. (Eg, within the range 1 to 10, all possible twin prime numbers are (3,5), (5,7)). The TwinPrimes class should make use of the checkForPrime() method in the Primes class.**

**Code**

**Primes.java**

package primespackage;

public class Primes {

public boolean checkforPrime(int n)

{

int i,c=0;

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

{

if(n%i==0)

c++;

}

if(c==2)

return true;

else

return false;

}

}

**Twinprimes.java**

import primespackage.Primes;

import java.util.Scanner;

public class TwinPrimes {

public static void main(String[] args)

{

Primes pr=new Primes();

Scanner sc=new Scanner(System.in);

System.out.print("Enter starting number : ");

int s=sc.nextInt();

System.out.print("Enter ending number : ");

int e=sc.nextInt();

System.out.println("Twin primes in the given range are : ");

int i;

for(i=s;i<=e-2;i++)

{

int m=i;

int n=i+2;

if(pr.checkforPrime(m)&&pr.checkforPrime(n))

System.out.println("("+m+" , "+n+")");

}

}

}

**Output**

run:

run:

Enter starting number : 1

Enter ending number : 11

Twin primes in the given range are :

(3 , 5)

(5 , 7)

BUILD SUCCESSFUL (total time: 4 seconds)

**Screenshot**

