1) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc=new Scanner (System.in);

int a=sc.nextInt();

int temp=a;

int sum=0;

int rem=0;

while(temp!=0){

rem = temp % 10;

sum+=rem;

temp /= 10;

}

if (a % sum ==0) {

System.out.println("Harshad Number");

} else {

System.out.println("Not Harshad Number");

}

}

}

2) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int sum = 0;

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

if(n%i==0){

sum+=i;

}

}

if(sum>n){

System.out.println("Abundant Number");

} else {

System.out.println("Not Abundant Number");

}

}

}

3) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int sum = 0;

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

if(n%i==0){

sum+=i;

}

}

if(sum>n){

System.out.println("Abundant Number");

} else {

System.out.println("Not Abundant Number");

}

}

}

4) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

int N=sc.nextInt();

int M=sc.nextInt();

int a=0;

int b=1;

double sum=0;

int fib=0;

if((N >= 1 && N<=20 )&&(M >= 1 && M <=20)){

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

if(i==1){

fib=a;

}else if(i==2){

fib=b;

}else{

fib=a+b;

a=b;

b=fib;

}

if(i>=N){

sum+=fib;

}

}

System.out.println("The Sum of Fibonacci value is " + sum);

}else{

System.out.println("Invalid Input");

}

}

}

5) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n = scanner.nextInt();

int a=0;

if (n < 1 || n > 9) {

System.out.println("Invalid Input");

}else{

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

a=n\*i;

System.out.println(n +" x " + i + " = " + a);

}

}

}

}

6) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int m=sc.nextInt();

int sum=0;

if(n>0 && m<30 && n<m){

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

if(i%2==0){

sum+=i;

}

}

System.out.println(sum);

}

else{

System.out.println("Invalid Input");

}

}

}

7) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

long n=sc.nextLong();

int count=0;

if(n>=1 && n<=10000000){

while (n != 0) {

n/=10;

count++;

}

System.out.println("The count of the given integer is: "+count);

}

else

{

System.out.println("Enter a Valid Input");

}

}

}

8) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (n < 0 || n > 9) {

System.out.println("Invalid Input");

} else {

char letter = 'A';

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

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

System.out.print(letter + " ");

letter++;

}

System.out.println();

}

}

}

}

9) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

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

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

System.out.print(" ");

}

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

System.out.print((char) ('A' + j) + " ");

}

System.out.println();

}

for (int i = n - 1; i >= 1; i--) {

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

System.out.print(" ");

}

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

System.out.print((char) ('A' + j) + " ");

}

System.out.println();

}

}

}