//Problem-1

package com.day5;

import java.util.Scanner;

class UserMainCode{

static boolean ValidateDate(String s) {

try{

String[] a=s.split("-",3);

int date=Integer.parseInt(a[0]);

int month=Integer.parseInt(a[1]);

int year=Integer.parseInt(a[2]);

if(date<=31 & month<=12 & year<=2021 ) {

return true;

}

else {

return false;

}

}

catch(Exception e) {

//System.out.println(e);

return false;

}

}

}

public class IPL1 {

public static void main(String[] args) {

UserMainCode u=new UserMainCode();

UserMainCode v=new UserMainCode();

Scanner s=new Scanner(System.in);

System.out.println("Enter Date:");

String t;

t=s.nextLine();

//String s="02-06-2000";

//String t="05/04/2020";

boolean tf;

tf=u.ValidateDate(t);

if(tf==true) System.out.println("Valid");

else {

System.out.println("Invalid");

}

}

}

//Problem-2

package com.day5;

import java.util.Scanner;

class UserMainCode1{

static boolean validateCity(String str) {

int len=str.length(),flag=0;

boolean f1=Character.isLetter(str.charAt(0));

boolean f2=Character.isLetter(str.charAt(1));

boolean l1=Character.isLetter(str.charAt(len-1));

boolean l2=Character.isLetter(str.charAt(len-2));

for(int j=2;j<(len-2);j++){

if(str.charAt(j) != '\*') {

flag += 1;

}

}

if(f1 == true && f2 == true && l1 == true && l2 == true && flag == 0 )

{

System.out.println("Valid");

return true;

}

else

{

System.out.println("Invalid");

return false;

}

}

}

public class IPL2 {

public static void main(String[] args) {

System.out.println("Enter City Name:");

Scanner s =new Scanner(System.in);

String str=s.nextLine();

UserMainCode1.validateCity(str);

}

}

//Problem-3

package com.day5;

import java.util.Scanner;

class UserMainCode2{

static void validatePlayer(String name) {

int len=name.length();

int count=0;

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

if(name.charAt(i)=='a' || name.charAt(i)== 'A') {

count++;

}

}

if(count %2 != 0 || count ==0) {

System.out.println("valid");

}

else {

System.out.println("invalid");

}

}

}

public class IPL3 {

public static void main(String[] args) {

System.out.println("Enter Player Name:");

Scanner s = new Scanner(System.in);

String player =s.nextLine();

UserMainCode2.validatePlayer(player);

}

}

//Problem-4

package com.day5;

import java.util.Scanner;

class Shapeb{

protected String shapename;

public Shapeb(String shapename) {

super();

this.shapename = shapename;

}

double calculateArea() {

return 0;

}

}

class Square2 extends Shapeb{

private int side;

public Square2(String shapename, int side) {

super(shapename);

this.side=side;

}

public double calculateArea() {

return side\*side;

}

}

class Rectangle1 extends Shapeb{

private int length;

private int breadth;

public Rectangle1(String shapename, int length, int breadth) {

super("Rectangle");

this.length = length;

this.breadth = breadth;

}

double calculateArea() {

return length\*breadth;

}

}

class Circle1 extends Shapeb{

private int radius;

public Circle1(String circle, int radius) {

super(circle);

this.radius = radius;

}

double calculateArea() {

return 3.14\*radius\*radius;

}

}

public class Shape {

public static void main(String[] args) {

System.out.println("1. Rectangle \n2. Square \n3. Circle ");

System.out.println("Area calculator --- Enter your Shape:");

Scanner s = new Scanner(System.in);

int choice = s.nextInt();

if(choice == 1)

{

System.out.println("enter length:");

int length= s.nextInt();

System.out.println("Enter Breadth:");

int breadth = s.nextInt();

Rectangle1 r = new Rectangle1("Rectangle",length,breadth);

double a = r.calculateArea();

System.out.println("Area of Rectangle= "+a);

}

else if(choice == 2) {

System.out.println("Enter Side:");

int side=s.nextInt();

Square2 sq = new Square2("Square",side);

double a=sq.calculateArea();

System.out.println("Area of Square = "+a);

}

else if(choice==3) {

System.out.println("Enter Radius:");

int radius = s.nextInt();

Circle1 c = new Circle1("radius",radius);

double r=c.calculateArea();

System.out.println("Area of Circle= "+r);

}

else {

System.out.println("Wrong Choice");

}

}

}

//Exception-1

package com.day5;

import java.util.Scanner;

public class Exception1 {

public static void main(String[] args) {

try {

System.out.println("Enter the number of overs");

Scanner s=new Scanner(System.in);

int overs=s.nextInt();

int runs[]=new int[overs];

System.out.println("Enter the number of runs for each over");

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

runs[i]=s.nextInt();

}

System.out.println("enter the over number ");

int number =s.nextInt();

System.out.println(runs[number-1]);

}

catch(ArrayIndexOutOfBoundsException | NegativeArraySizeException e) {

System.out.println(e);

}

}

}

//Exception-2

package com.day5;

import java.util.Scanner;

class CustomException extends Exception{

public CustomException() {

super();

}

@Override

public String toString() {

return "CustomException:InvalidAgeRangeException";

}

}

public class Exception2 {

public static void main(String[] args) {

try {

System.out.println("Enter the player name");

Scanner s= new Scanner(System.in);

String name = s.nextLine();

System.out.println("Enter player age");

int age = s.nextInt();

if(age <19) {

throw new CustomException();

}

else {

System.out.println("Details are: ");

System.out.println("Player Name: "+name);

System.out.println("Player Age: "+age);

}

}catch(CustomException e) {

System.out.println(e);

}

}

}

//Exception-3

package com.day5;

import java.util.Scanner;

class TeamNameNotFoundException extends Exception{

TeamNameNotFoundException(String s){

super(s);

}

}

public class IplExc {

static void check(String teamName) throws TeamNameNotFoundException{

String[] teamList = new String[]{ "Chennai Super Kings","Deccan Chargers","Delhi Daredevils","Kings XI Punjab",

"Kolkata Knight Riders","Mumbai Indians","Rajasthan Royals","Royal Challengers Bangalore"};

boolean flag=true;

for (String element : teamList) {

if (element.equals(teamName)) {

flag=false;

break;

}

else {

flag=true;

}

}

if(flag)

{

throw new TeamNameNotFoundException("Entered team is not a part of IPL Season 4");

}

}

public static void main(String[] args) {

try{

Scanner s= new Scanner(System.in);

System.out.println("Enter the expected winner team of IPL Season 4 :");

String teamWinner = s.nextLine();

check(teamWinner);

System.out.println("Enter the expected runner Team of IPL Season 4 :");

String teamRunner = s.nextLine();

check(teamRunner);

System.out.println("Expected IPL Season 4 winner: " + teamWinner);

System.out.println("Expected IPL Season 4 runner: " + teamRunner);

}

catch(Exception e){

System.out.println(e);

}

}

}