//Hello Wold program in scala

object Main {

def main(args: Array[String]) {

println("Hello World!!");

}

}

//Get input from user

object Main {

def main(args: Array[String]) {

println("Enter a number");

var num = scala.io.StdIn.readInt();

println(num);

}

}

//Simple addition program

object Main {

def main(args: Array[String]) {

var num1:Int=25;

var num2:Int=34;

var sum:Int=0;

sum=num1+num2;

println("Sum of the number is:"+sum);

}

}

//Addition of two number using function without return

object Main {

def main(args: Array[String]) {

println("Enter a first number");

var num1=scala.io.StdIn.readInt();

println("Enter Second number");

var num2=scala.io.StdIn.readInt();

println("Addition of two number"+add(num1,num2));

}

def add(a:Int,b:Int){

var sum:Int=0;

sum=a+b;

println("Addition :"+sum)

// return sum;

}

}

//Addition of two number using function with return

object Main {

def main(args: Array[String]) {

println("Enter a first number");

var num1=scala.io.StdIn.readInt();

println("Enter Second number");

var num2=scala.io.StdIn.readInt();

println("Addition of two number"+add(num1,num2));

}

def add(a:Int,b:Int):Int={

var sum:Int=0;

sum=a+b;

return sum;

}

}

//Factorial of number using function

object Main {

def main(args: Array[String]) {

println("Enter a first number");

var num1=scala.io.StdIn.readInt();

println("Factorial of number:"+fact(num1));

}

def fact(a:Int):Int={

var fact:Int=1;

var i:Int=1;

for(i<- 1 to a)

{

fact=fact\*i;

}

return fact;

}

}

//To check number is palindrome or not

object MyClass {

def main(args:Array[String])

{

println("Enter a number");

var num=scala.io.StdIn.readInt();

palindrome(num);

}

def palindrome(n:Int)

{

var rem:Int=0;

var rev:Int=0;

var temp:Int=n;

while(temp>0)

{

rem=temp%10;

rev=rev\*10+rem;

temp=temp/10;

}

if(rev==n)

{

println("Number is palindrome");

}

else

{

println("Number is not palindrome");

}

}

}

//Fibonacci Series with function

object MyClass {

def main(args:Array[String])

{

println("Enter a number");

var n=scala.io.StdIn.readInt();

println("Fibonacci series:"+fibo(n));

}

def fibo(num:Int)

{

var num1:Int=0;

var num2:Int=1;

var num3:Int=0;

println(num1);

println(num2);

var i:Int=2;

for(i <- 2 to num-1)

{

num3=num1+num2;

println(num3);

num1=num2;

num2=num3;

}

}

}

//Power of number

object MyClass {

def main(args:Array[String])

{

println("Enter a number");

var num=scala.io.StdIn.readInt();

println("enter power of the number");

var pow=scala.io.StdIn.readInt();

power(num,pow)

}

def power(n:Int,p:Int)

{

var result:Int=1;

var i:Int=1;

for(i <- 1 to p)

{

result=result\*n;

}

println("Power of the number is:"+result);

}

}

//To check whether number is Perfect number or not

object MyClass {

def main(args:Array[String])

{

println("Enter a number");

var num=scala.io.StdIn.readInt();

perfect(num)

}

def perfect(n:Int)

{

var i:Int=1;

var temp:Int=n/2;

var count:Int=0;

for(i <- 1 to temp)

{

if(n%i==0)

{

count=count+i;

}

}

if(count==n)

{

println("Number is perfect");

}

else

{

println("Number is not perfect");

}

}

}

//Student record with maximum salary

class Student(id:Int, name:String)

{

var marks:Int = 0 //default value

def showDetails()

{

println(id+" "+name+" "+marks)

}

def this(id:Int, name:String,marks:Int)

{

this(id,name) // Calling primary constructor (see parameters in class decalration)

this.marks = marks

}

}

object MainObject

{

def main(args:Array[String])

{

var student:Array[Student]=new Array[Student](4)

student(0)=new Student(101,"Rama",20)

student(1)=new Student(10,"Ram",60)

student(2)=new Student(103,"Ramay",80)

student(3)=new Student(104,"Ram",100)

var max:Student=new Student(0,"",0) // a temporary object

max = student(0) //assigning first record/object to max

var maxmarks=student(0).marks // a temporary maxmarks variable to contain max value

for( i <-0 to 3)

{

if(student(i).marks>maxmarks)

{

maxmarks=student(i).marks

max=student(i)

}

}

println("student details with maximum marks is")

println(max.showDetails())

}

}

//Current Account

class CurrentAccount(ano:Int,nm:String,bal:Int,minbal:Int)

{

var accno:Int=ano;

var name:String=nm;

var balance:Int=bal;

var minbalance:Int=minbal;

def viewbalance()

{

println("Acc\_NO: "+accno +" Name: " +name+" balance: "+balance+" minbalance: "+minbalance);

}

def withdraw(w\_amount:Int)

{

var temp:Int=0;

temp=balance-w\_amount;

if(temp<minbalance)

{

println("Don't Withdraw");

}

else

{

balance=temp;

}

}

def deposit(d\_amount:Int)

{

balance=balance+d\_amount;

}

}

object MyClass {

def main(args: Array[String]) {

var customer=new CurrentAccount(12345,"Sakshi",10000,500);

customer.viewbalance();

customer.withdraw(1000);

customer.viewbalance();

customer.deposit(500);

customer.viewbalance();

customer.viewbalance();

}

}

//Abstract method cylinder and cube

abstract class shape

{

var length:Double=0

var pi:Double=3.142

var radius:Double=0

var height:Double=0

def volume()

def display()

}

class cube extends shape

{

var vol\_cube:Double=0

println("Enter length")

length=scala.io.StdIn.readDouble()

// length=5.2

def volume()

{

vol\_cube=length\*length\*length

}

def display()

{

println("Length:"+length)

println("Volume of cube:"+vol\_cube)

}

}

class cylinder extends shape

{

var vol\_cylin:Double=0

println("Enter radius")

radius=scala.io.StdIn.readDouble()

println("Enter Height")

height=scala.io.StdIn.readDouble()

// radius=4.6

//height=6.3

def volume()

{

vol\_cylin=pi\*radius\*radius\*height

}

def display()

{

println("Radius:"+radius)

println("Height:"+height)

println("Volume of cylinder:"+vol\_cylin)

}

}

object Mainobject

{

def main(args:Array[String])

{

var c=new cube()

c.volume()

c.display()

var cylin=new cylinder()

cylin.volume()

cylin.display()

    }

}

//printing array elements in scala

object MyClass {

def main(args: Array[String]) {

println("Enter how many numbers")

var num=scala.io.StdIn.readInt()

//declaration of array

var a=new Array[Int](num)

var i:Int=0

println("Enter the elements of array")

for(i<-0 to num-1)

{

a(i)=scala.io.StdIn.readInt();

}

println("Array elements are:")

for(i<-0 to num-1)

{

println(a(i))

}

}

}

//Maximum and minimum elements of an array

object MyClass {

def main(args: Array[String]) {

println("Enter how many numbers")

var num=scala.io.StdIn.readInt()

//declaration of array

var a=new Array[Int](num)

var i:Int=0

println("Enter the elements of array")

for(i<-0 to num-1)

{

a(i)=scala.io.StdIn.readInt();

}

println("Array elements are:")

for(i<-0 to num-1)

{

println(a(i))

}

var max:Int=a(0)

var min:Int=a(0)

for(i<- 0 to num-1)

{

if(a(i)>max)

{

max=a(i)

}

else if(a(i)<min)

{

min=a(i)

}

}

println("maximum:"+max)

println("Minimum:"+min)

}

}