Classes

TicketMachine	Sign	Backpack	Car	Window	Earbuds
Glasses	Eyeware	Newspaper	Plant	Fence	Tunnel
Tree	Bush	Post	Rock	Stream	Water
Box	Watch	Shirt	Footware	Phone	Handbag
Cement	Paint	Light	Trash	Cup	Cuptop
Number	Cup	Hair	Eyes	Ticket	Sticker
Pants	Mouth	Beard	Bottle	ArmChair	Head
Seat	Hook	Bench	Rail	Laundry	Window
Pipes	Arrow	Wheel	Leaf	Radio	Ticket
Station	Zone	Chip	Wall	Belt	Ear
Hand	Step	Grass	Dirt	Twig	Moss
Sneaker	Shoe	House	Door	Garage	Street
Tire	Flag	Plastic	Wire	SwitchBox	Letter
Word	Screen	Paper	Log	Speaker	Hubcap
Bundle	Spike	Direction	Speed	Heater	Metal
TowTruck	Board	Tank	Building	Fan	Terrace
Apartment	City	State	Flower	Root	Fish
Train	Scissor	Paper	Ruler	Pen	Napkin
Onion	Apple	Cake	Plumbing	Democracy	Peace
Electricity	Friendship	Telephone	LawnMower	Monitor	Freezer
Ink	Tea	Milk	Ice	Pudding	Seafood
Hotel	NewYears	Programmer	Student	Teacher	Deck
Card	Dice	Socks	FireTruck	BingoCard	BingoGame
Prize	SoftDrink	Atom	Molecule	Quark	Solution
Reactor	Formula	Number	Constant	Temperature	Pressure
Rate	Reaction	Bowl			

For each Class, write code, write test code, run test code, and show results to:

01) Define the class <CLASSNAME>, including instance variables, constructor(s), getters, setters and at least 3 public methods

02) Define a toString() method that displays <CLASSNAME> to the console

03) Describe the class <CLASSNAME>, as a class within a 5 level class hierarchy

04) Describe the class's public interface

05) Show the code that can create an object of type <CLASSNAME>

06) Define a class factory that produces <CLASSNAME> objects

07) Define a container factory that produces containers of <CLASSNAME> objects

08) Define a <CLASSNAME> container manager class with Create, Read, Update, Delete and Find methods

09) Define an interface for the <CLASSNAME> factory, container factory, and container manager

10) Define an abstract class for the <CLASSNAME> factory, container factory, and container manager

11) Define an class that is a parent class of <CLASSNAME>

13) Define an class that is a child class of <CLASSNAME>

14) Write an program that utlizes your class in a meaningful way

Define a method with the formal signature for:

01) long, boolean, Card and returns Plumbing

02) float, char, boolean, Float, String, Byte, Student, Byte and returns an array of Byte
03) Seat, boolean and returns char
04) Byte, array of double, Integer, Short, Byte, Float, byte, Float and returns String
05) Byte, Character, Double, Byte, Character, Train, long, int and returns Byte
06) array of short, Integer, short, String, Heater, char and returns boolean
07) array of char and returns Temperature
08) array of Boolean, Boolean and returns Bottle
09) Integer, Prize and returns Character
10) no arguments and returns Double
11) Boolean, short, SoftDrink and returns void
12) String, Integer, Short, double, int and returns double
13) no arguments and returns Platform
14) float, boolean, Integer and returns an array of long
15) Beard and returns Integer
16) no arguments and returns Step
17) Boolean, Leaf and returns Double
18) byte, Byte, Letter and returns Tunnel
19) Byte, int, double and returns byte
20) NewYears, array of Character, Short and returns float
21) int, House, long, Integer, double, SoftDrink, Bundle, Belt and returns String
22) Double, Friendship, long and returns char
23) Double and returns int
24) array of double, Pressure and returns char
25) Eyeware, long, array of double and returns Dice
26) Character, byte, Fan, char, Float and returns boolean
27) array of byte, Byte, Tank and returns void
28) Boolean, Pressure, float, Integer, long, String, Double, Water and returns void
29) float, String, Pressure, Garage, Boolean, Double and returns BingoCard
30) String, String and returns Byte
31) Bundle and returns Rock
32) long, Cake and returns Short
33) Boolean, Character and returns Character
34) Door, Float, Character, Boolean and returns short
35) array of short, long, short, String, Wheel, Float and returns an array of long
36) Byte, array of Byte, Socks, array of short, Float, float and returns Byte
37) char, Boolean, long, Boolean and returns Pen
38) Float, Apartment, Character, short and returns Hubcap
39) Boolean, Teacher, array of double, float, byte, Grass and returns Byte
40) no arguments and returns an array of Box
41) char, Float, Float, Telephone, Float, float, boolean and returns Window
42) byte, short, float, Byte, Character, Integer, Byte, Boolean and returns byte
43) long, String, Reaction, Boolean and returns an array of void
44) long, long, long, boolean, short, Double and returns Double
45) Float, long, Byte and returns Short

Define a class with private instance variables, getters/setters, and a Constructor for:
char, boolean, boolean
String, array of Character, double, Speaker, Character, array of Byte, Byte, short
boolean, byte
Cake, String, String, Tank, Byte, Double, int, Integer
Wire, byte, double, Tire, long, int, boolean, Integer
short, array of float, char, Formula, float, byte
array of boolean
Democracy, Newspaper
short, Integer
double, Byte, BingoCard, Phone, float, short
Integer, Hotel, long
Double, boolean, float, Byte, short
TicketMachine, Byte, Train
Integer, Float, boolean
Byte
String, array of Character, NewYears, char, array of Float, Water, double, array of Short
Direction, Double

boolean, char, Boolean
double, float, Byte
double, long, long
int, double, Float, long, array of Byte, short, long, short
array of Monitor, Double, array of String
String
boolean, float
Byte, Float, Programmer
byte, Byte, Float, int, byte
Byte, double, Footware
array of Rate, array of char, array of int, array of Double, array of Window, long, char, Boolean
float, Integer, boolean, String, Integer, Integer
array of Float, Float
Dirt
short, float
Boolean, boolean
int, Tea, Ice, Stream
String, short, long, Integer, Boolean, Integer
Integer, Short, long, long, short, long
Integer, Double, Paint, Float
long, array of Integer, Double, Boolean
long, double, Integer, byte, int, Reaction
Byte, double, boolean
int, double, Float, Byte, long, boolean, Twig
double, int, Short, Float, Double, boolean, short, long
Character, Byte, byte, short
byte, Byte, int, Integer, Double, String
array of Integer, Character, Character

Java Exercises

01) Write a POJO(s) to calculate the prime numbers between 2 and N (N<1000).
02) Write a POJO(s) to calculate the prime numbers between M and N (N<1000).
03) Write a POJO(s) to check whether two numbers are coprime where M & N are <100.
04) Write a POJO(s) to generate random numbers between given ranges.
05) Write a POJO(s) to check whether a number is an emrip number.
06) Write a POJO(s) to check whether a number is an ugly number.
07) Write a POJO(s) to check whether a number is a Kaprekar number.
08) Write a POJO(s) to check whether a number is a palindromic number.
09) Write a POJO(s) to check whether a number is an equidigital number.
10) Write a POJO(s) to check whether a number is a factorion number.
11) Write a POJO(s) to check whether a number is an extravagant number.
12) Write a POJO(s) to check whether a number is a narcissistic number.
13) Write a POJO(s) to check whether a number is an Osiris number.
14) Write a POJO(s) to check whether a number is a trimorphic number.
15) Write a POJO(s) to check whether a number is a sum-product number.
16) Write a POJO(s) to check whether a number is an Evil number.
17) Write a POJO(s) to check whether a number is an Harshad number.
18) Write a POJO(s) to check whether a number is an Pronic number.
19) Write a POJO(s) to check whether input number is EVEN or ODD.
20) Write a POJO(s) to print all Armstrong numbers between given range.
21) Write a POJO(s) to produce the first 20 Smith numbers.
22) Write a POJO(s) to produce a set of Vampire numbers.
23) Write a POJO(s) to check if a number is positive, negative or zero.
24) Write a POJO(s) to print a 16 row Floydâ\200\231s triangle.
25) Write a POJO(s) to generate permutation of the digits in a number.
26) Write a POJO(s) to find the squares of 1 to N.
27) Write a POJO(s) to find the cubes of 1 to N.
28) Write a POJO(s) to find the factorials of 1 to N.
29) Write a POJO(s) to find the Longest Sequence of 1â\200\231s in a 64 bit binary number.
30) Write a POJO(s) to find sum and average of eight positive integers.
31) Write a POJO(s) to that swaps two numbers
32) Write a POJO(s) to print the uppercase and lowercase alphabets.

33) Write a POJO(s) to print Pascal’s triangle.
34) Write a POJO(s) to count total positives, negatives and zeros from an array.
35) Write a POJO(s) to find the sum of all digits of a number.
36) Write a POJO(s) to find the mean of the digits in a given integer.
37) Write a POJO(s) to build a calculator.
38) Write a POJO(s) to calculate compound interest.
39) Write a POJO(s) to read strings with different methods.
40) Write a POJO(s) to validate input as integer value only.
41) Write a POJO(s) to check whether a given character is in an alphabet.
42) Write a POJO(s) that uses all th Java primatives.
43) Write a POJO(s) that demonstrates all forms of casting primatives.
44) Write a POJO(s) to print the first 32 triangle numbers.
45) Write a POJO(s) to convert a String to Boolean.
46) Write a POJO(s) to convert a String to Double.
47) Write a POJO(s) to convert a String to int.
48) Write a POJO(s) to convert an Integer to int.
49) Write a POJO(s) to convert an int to a Integer.
50) Write a POJO(s) to convert a double to Double.
51) Write a POJO(s) to convert an int to Double.
52) Write a POJO(s) to count the factors of a given number.
53) Write a POJO(s) to find the higest of five numbers.
54) Write a POJO(s) to find the lowest of five numbers.
55) Write a POJO(s) to calculate the area of Hexagon.
56) Write a POJO(s) to find the perimeter of a rectangle.
57) Write a POJO(s) to find occurrences of palindrome words in a string.
58) Write a POJO(s) to swap first and last character of each word in a string.
59) Write a POJO(s) to divide two numbers and catch the exception, if divisor is 0.
60) Write a POJO(s) to check whether given IMEI Number is valid using the Luhn algorithm.
61) Write a POJO(s) to find the smallest element in an array.
62) Write a POJO(s) to find the larget element in an array.
63) Write a POJO(s) to convert an integer of seconds to hours, minutes and second.
64) Write a POJO(s) to convert a float represetation of hours to hours, minutes and second
s.
65) Write a POJO(s) to convert a float represetation of minutes to hours, minutes and seco
nds.
66) Write a POJO(s) to find the largest number among four numbers.
67) Write a POJO(s) to find the largest number among sixteen numbers.
68) Write a POJO(s) to check if an integer year is Leap year.