**Name: Kunal Porwal**

Lab exercise 1:

package com.hsbc.exercise1; //Package name

//Simple class file to print a message

public class Welcome {

//Main method

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Welcome\nto the world of Java"); //Simply print operation

}

}

Lab exercise 2:

package com.hsbc.exercise2; //Package name

//Class file for taking input from console

public class Sample {

//Main method

public static void main(String[] args) {

System.out.println("Number is::"+args[0]); //print from user input

}

}

Lab exercise 3:

package com.hsbc.exercise3; //Package name

//Class name

public class Comments {

//Main Method

public static void main(String[] args) {

// TODO Auto-generated method stub

//Datatypes

int a=9; //Integer Datatype

String d=""; //String Datatype

char c='d'; //Character Datatype

int MaxValue=9999; //Pascal case variable name

System.out.println("This is java program with Comments."); //Printing value on console

//Class, object and its method

PascalCaseClass p = new PascalCaseClass(); //Creating object of the class

p.otherMethod();

//Calling method of using object of that class Loop

for(int t=0;t<2;t++) { //for loop

System.out.println("The value of t is::"+t); //Printing values

}

}

}

//Class name as per Pascal Standard of naming conventions

class PascalCaseClass {

//Method name with camelCase standard of naming conventions

public void otherMethod() {

System.out.println("In other method with camelCase naming convention of the method");

}

}

Lab exercise 4:

package com.hsbc.exercise4; //Package name

//Class name

public class DataTypes {

//Main method

public static void main(String[] args) {

// TODO Auto-generated method stub

int h=98;

float t = 89.03f;

double f = 45.44;

long l = 0x0FL;

//Printing datatypes on console

System.out.println("Value of Integer is::"+h+"\nValue of Float is::"+t+"\nValue of Double is::"+f+"\nValue of Long is::"+l);

}

}

Lab exercise 5:

package com.hsbc.exercise5; //Package name

//Class name

public class Operators {

//Main method

public static void main(String[] args) {

// TODO Auto-generated method stub

//Printing command line arguments

System.out.println("Numbers before swap::"+args[0]+" , "+args[1]);

//Logic to swap numbers in integer form

args[0] = String.valueOf(Integer.valueOf(args[0]) + Integer.valueOf(args[1])) ;

args[1] = String.valueOf(Integer.valueOf(args[0]) - Integer.valueOf(args[1])) ;

args[0] = String.valueOf(Integer.valueOf(args[0]) - Integer.valueOf(args[1])) ;

//Printing numbers after swap

System.out.println("Numbers after swap::"+args[0]+" , "+args[1]);

}

}

Lab exercise 6:

package com.hsbc.exercise6; //Package name

//Class name

public class LeapYear {

//Main method

public static void main(String[] args) {

// TODO Auto-generated method stub

// If a year is multiple of 400 a, then it is a leap year

if (Integer.valueOf(args[0]) % 400 == 0)

System.out.println("Given year is a leap year!");

// Else If a year is muliple of 100, then it is not a leap year

else if (Integer.valueOf(args[0]) % 100 == 0)

System.out.println("Given year is not a leap year.");

// Else If a year is muliple of 4, then it is a leap year

else if(Integer.valueOf(args[0]) % 4 == 0)

System.out.println("Given year is a leap year!");

// it is not a leap year

else

System.out.println("Given year is not a leap year.");

}

}

Lab exercise 7:

package com.hsbc.exercise7; //Package name

//Class name

public class LargestNumber {

//Main method

public static void main(String[] args) {

// TODO Auto-generated method stub

// defining three numbers

int a=999,b=45,c=876,largest;

if(a>b) {

if(a>c)

largest=a;

else

largest=c;

}

else if(b>c) {

largest=b;

}

else

largest=c;

System.out.println("Largest of three numbers is::"+largest);

}

}

Lab exercise 8:

package com.hsbc.exercise8;

public class Palindrome {

public static void main(String[] args) {

int i,sum=0,temp;

int n=5008005;//It is the number variable to be checked for palindrome

temp=n;

while(n>0){

i=n%10; // remainder storing in variable i

sum=(sum\*10)+i;

n=n/10;

}

if(temp==sum)

System.out.println("Given number is palindrome");

else

System.out.println("Given number is not a palindrome");

}

}

Lab exercise 9:

package com.hsbc.exercise9;

public class Fibonnaci {

public static void main(String[] args) {

// TODO Auto-generated method stub

int first = 0, t2 = 1;

System.out.print("Fibonacci numbers from 0 to 200 are:: ");

//While loop

while (first <= 200)

{

System.out.print(first + " "); //Printing number

int sum = first + t2; //Adding next term to the number

first = t2;

t2 = sum; //Maintaing sum count

}

}

}

Lab exercise 10:

package com.hsbc.exercise10; //Package name

import java.util.Arrays;

//Class name

public class ReverseWords {

//Main method

public static void main(String[] args) {

// TODO Auto-generated method stub

//Defining array of strings

String [] s = {"my","preference","java","HSBC"};

String [] result=new String[s.length];

//for loop to iterate over String array s

for(int i=0; i<s.length; i++) {

// getBytes() method to convert string into bytes[].

byte[] temp = s[i].getBytes();

byte[] res = new byte[temp.length];

// Store result in reverse order into the res byte[]

for (int j = 0; j < temp.length; j++)

res[j] = temp[temp.length - j - 1];

//Store word in reverse format to result array

result[i] = new String(res);

}

//Now sort array of words

Arrays.sort(result,String.CASE\_INSENSITIVE\_ORDER);

System.out.println("Final words are:: ");

for (int a = 0; a < result.length; a++) {

System.out.println(result[a]);

}

}

}

Lab exercise 11:

package com.hsbc.exercise11; //Package name

//Class name

public class SelectionSort {

// Main Method

public static void main(String args[]) {

//Defining class object

SelectionSort ob = new SelectionSort();

//Defining array of integers

int array[] = { 767, 56, 34, 1, 80 };

ob.sortCustom(array);

System.out.println("Sorted array is:");

//Print the elements of an array

int n = array.length;

for (int i = 0; i < n; ++i)

System.out.print(array[i] + " ");

System.out.println();

}

// Selection Sort Algorithm code

void sortCustom(int array[]) {

int n = array.length;

for (int i = 0; i < n - 1; i++) {

int min\_element = i;

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

if (array[j] < array[min\_element])

min\_element = j;

}

int temp = array[min\_element];

array[min\_element] = array[i];

array[i] = temp;

}

}

}

Lab exercise 12:

package com.hsbc.exercise12; //package name

import java.util.Scanner;

//Class Name

public class RetailProducts {

//Main method

public static void main(String[] args) {

// TODO Auto-generated method stub

//taking product values in double datatype

double p1\_Price = 22.50, p2\_price = 44.50, p3\_price = 9.98;

double totalAmount=0;

System.out.println("Enter number in pairs of Product number and Quantity (eg. 2 10)");

//taking input from user

Scanner sc = new Scanner(System.in);

for(int i=0; i<3; i++) {

int a=sc.nextInt();

double b=sc.nextInt();

//intArr[a] = b;

//Switch statment to decide price for each

switch(a) {

case 1:

totalAmount+= b \* p1\_Price;

break;

case 2:

totalAmount+= b \* p2\_price;

break;

case 3:

totalAmount+= b \* p3\_price;

break;

default:

break;

}

}

//Close scanner

sc.close();

System.out.println("Total retail value of all products is::"+totalAmount);

}

}

Lab exercise 13:

package com.hsbc.exercise13; //package name

import java.util.Scanner;

//Class name

public class SimpleOperators {

//Main method

public static void main(String[] args) {

// TODO Auto-generated method stub

int gross=0,dozen=0,left=0;

//taking number of eggs as input

System.out.println("Enter number of eggs::");

Scanner sc =new Scanner(System.in);

int n=sc.nextInt();

//Close scanner

sc.close();

//calculating in terms of gross, dozen, left out

gross = n / 144;

dozen = (n % 144) /12 ;

left = n - dozen \* 12 - 144 \* gross;

System.out.println("Your number of eggs is "+gross+" gross,"+dozen+" dozen,"+left+" left.");

}

}