**DAY - 1 Solutions**

**Lab Exercise No:** 1

**Exercise Objective(s):** Simple java program

**Exercise:** Write a program with a class name “Welcome” and display a message as follows: “Welcome

to the world of Java”

**Solution:**

public class Welcome {

public static void main(String[] args) {

System.out.println(“Welcome\n to the world of Java”);

}

}

**Lab Exercise No:** 2

**Exercise Objective(s):** Compilation and execution from command line, Concept of object and class

**Exercise:** Write a program that takes a console input (Input given by the user while executing the

program in command line) and prints the same.

**Solution:**

public class Solution2 {

public static void main(String[] args) {

System.out.println(“Message: ” + args[0]);

}

}

**Lab Exercise No:** 3

**Exercise Objective(s):** Comments in java programs and java documentation

**Exercise:** Write a program with all the type of comments and execute it. User nested comments also.

**Solution:**

/\*\*---Author:Jayesh Chaudhari----

----Purpose: Displaying various comments-----\*/

//Class Definition

public class Solution3 {

public static void main(String[] args) {

/\*Basic print statements

//Printing “Welcome” and “Hello World!”

Each statement printed on separate lines\*/

System.out.println(“Welcome”);

System.out.println(“Hello World!”);

}

}

//End of code

**Lab Exercise No:** 4

**Exercise Objective(s):**Primitive data types and their range, Variables, Constants and literals,

Conventions

**Exercise:** Write a program which declares variables of int, float, double data types and a constant of long data type and displays all with an appropriate message. Follow the naming conventions for all the variables and literals*.*

**Solution:**

public class Solution4 {

public static void main(String[] args) {

int i = 25;

Float f = 2.5f;

double d = 4.56;//value can be written as 4.56d optionally

const long divideMod = 1000000009L;

System.out.println(“int value of a is “ + i);

System.out.println(“float value of f is “ + f);

System.out.println(“double value of d is “ + d);

System.out.println(“value of constant long variable is “ + divideMod);

}

}

**Lab Exercise No:** 5

**Exercise Objective(s):** Simple operators

**Exercise:** Write a program to get two numbers as input through command line and swap the values of

two numbers without using a temporary variable and display the same.

**Solution:**

public class Solution5 {

public static void main(String[] args) {

int num1 = Integer.parseInt(args[0]);

int num2 = Integer.parseInt(args[1]);

System.out.println(“The elements are ” + num1 + “ and ” + num2);

num1 = num1 ^ num2;

num2 = num1 ^ num2;

num1 = num1 ^ num2;

System.out.println(“The swapped elements are ” + num1 + “ and ” + num2);

}

}

**Lab Exercise No:** 6

**Exercise Objective(s):** Conditional statements

**Exercise:** Write a program to determine whether the given year is leap year or not(Get the input

through command line).

**Solution:**

public class Solution6 {

public static void main(String[] args) {

int year = Integer.parseInt(args[0]);

if(year%4==0):

System.out.println(“The year ” + year + “ is a leap year”);

else

System.out.println(“The year ” + year + “ is not a leap year”);

}

}

**Lab Exercise No:** 7

**Exercise Objective(s):**Conditional statements

**Exercise:** Write a program to determine the largest of three numbers.

**Solution:**

public class Solution7 {

public static void main(String[] args) {

int num1 = Integer.parseInt(args[0]);

int num2 = Integer.parseInt(args[1]);

int num3 = Integer.parseInt(args[2]);

System.out.println(“The largest number is ” +(num3>(num1>num2?num1:num2)?num3:((num1>num2?num1:num2))));

}

}

**Lab Exercise No:** 8

**Exercise Objective(s):** Loops

**Exercise:** Write a program to determine whether a number is a palindrome or not.

**Solution:**

public class Solution8 {

public static void main(String[] args) {

int num = 8778,revnum = 0, temp, rem;

temp = num;

while(num!=0)

{

rem = num%10;

revnum = revnum \* 10 + rem;

num /= 10;

}

if(temp==revnum)

System.out.println(temp + “ is a palindrome”);

else

System.out.println(temp + “ is not a palindrome”);

}

}

**Lab Exercise No:** 9

**Exercise Objective(s):** Loops

**Exercise:** Write a program to display the Fibonacci series starting from 0 till 200.

**Solution:**

public class Solution9 {

public static void main(String[] args) {

int sum = 0, a = 0, b = 1;

System.out.println(“Fibonacci Series :”);

while(sum<=200)

{

System.out.print(sum + “ ”);

a = b;

b = sum;

sum = a + b;

}

}

}

**Lab Exercise No:** 10

**Exercise Objective(s):** Constants and literals, Loops

**Exercise:** Write a program to declare a set of 5 words and reverse each word and arrange the resulting

words in alphabetical order and display the same.

**Solution:**

import java.util.\*;

import java.util.Arrays;

public class Solution10 {

public static void main(String[] args) {

String[] arr = {“Amethyst”, “Ruby”,“Sapphire”,“Diamond”,“Emerald”};

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

{

StringBuffer ip = new StringBuffer(arr[i]);

ip.reverse();

arr[i] = ip.toString();

}

Arrays.sort(arr);

System.out.println(Arrays.toString(arr));

}

}

**Lab Exercise No:** 11

**Exercise Objective(s):** Constants and literals, Loops

**Exercise:** Write a program to arrange an array of elements in ascending order using selection sort algorithm.

**Solution:**

public class Solution11 {

public static void main(String[] args) {

int[] arr = {64, 54, 31, 78, 56};

int n = arr.length;

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

int min = i;

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

if(arr[j]<arr[min])

min = j;

int temp = arr[min];

arr[min] = arr[i];

arr[i] = temp;

}

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

System.out.print(arr[i] + “ ”);

System.out.println();

}

}

**Lab Exercise No:** 12

**Exercise Objective(s):** Conditional statements, Loops

**Exercise:** A shopkeeper sells three products whose retail prices are as follows:

Product 1 - 22.50

Product 2 - 44.50

Product 3 - 9.98

Write an application that reads a series of pairs of numbers as follows:

a) Product number

b) Quantity sold

The application should use a switch statement to determine the retail price for each product. It

should calculate and display the total retail value of all products sold.

**Solution:**

import java.util.Scanner;

public class Solution12 {

public static void main(String[] args) {

Scanner sc =new Scanner(System.in);

double totalRetail=0;

while(true){

System.out.println("1 - Product 1, $22.50");

System.out.println("2 - Product 2, $44.50");

System.out.println("3 - Product 3, $9.98");

System.out.println("4 - Exit program");

System.out.print("Enter product number: ");

int productnumber=sc.nextInt();

if(productnumber==4){

break;

}

System.out.print("Enter quantity sold: ");

int quantitySold=sc.nextInt();

switch(productnumber){

case 1:

totalRetail+=22.50\*quantitySold;

break;

case 2:

totalRetail+=44.50\*quantitySold;

break;

case 3:

totalRetail+=9.98\*quantitySold;

break;

}

System.out.println("\nThe total retail value of all products sold: $"+totalRetail);

}

}

}

**Lab Exercise No:** 13

**Exercise Objective(s):** Simple operators, Conditional statements, Loops

**Exercise:** Consider user has N eggs. Then display the no of eggs in gross (144 eggs make one gross) and

no of eggs in dozen (12 eggs make one dozen) and the no of eggs that is left out remaining.

The total no of eggs can be got as input through command line. The program should display

how many gross, how many dozen, and how many left over eggs the user has.

**Solution:**

public class Solution13 {

public static void main(String[] args) {

int n = Integer.parseInt(args[0]);

int gross,remgross,dozen,rem;

gross = n/144;

remgross = n%144;

dozen = remgross/12;

rem = remgross%12;

System.out.println(“The amount of eggs are : ” + gross + “ gross, ” + dozen + “ dozen and ” + rem + “ remaining eggs.” );

}

}