Level 1 Practice Programs

1. Write a program to find the age of Harry if the birth year is 2000. Assume the Current Year is 2024

I/P => NONE

O/P => Harry's age in 2024 is \_\_\_

// Creating Class with name Q1 indicating the purpose is to display age of Harry

class Q1

{

    public static void main(String args[])

    {

        // Create a int variable presentyear to indicate the present year

        int presentyear=2024;

        // Create a int variable birthyear to indicate the birth year

        int birthyear=2000;

        // Create a int variable age to indicate the age

        int age=presentyear-birthyear;

        // Display the age

        System.out.println("Harry's age in 2024 is "+age);

    }

}

1. Sam’s mark in Maths is 94, Physics is 95 and Chemistry is 96 out of 100. Find the average percent mark in PCM

I/P => NONE

O/P => Sam’s average mark in PCM is \_\_\_

// Creating Class with name Q2 indicating the purpose is to display the average mark in PCM of Sam

class Q2

{

    public static void main(String args[])

    {

        // Create a int variable maths to store the maths marks

            int maths=94;

            // Create a int variable physics to store the physics marks

            int physics=95;

            // Create a int variable chemistry to store the chemistry marks

            int chemistry=96;

            // Create a int variable average to store the average marks

            int average=(maths+physics+chemistry)/3;

            // Display the average marks

            System.out.println("Sam's average mark in PCM is "+average);

    }

}

1. Create a program to convert the distance of 10.8 kilometers to miles.

Hint: 1 km = 1.6 miles

I/P => NONE

O/P => The distance  \_\_\_ km in miles is \_\_\_

// Creating Class with name Q3 indicating the purpose is to display and convert the distance of 10.8 kilometers to miles

class Q3

{

    public static void main(String args[])

    {

        // Create a double variable distanceinkilometer to store the distance in kilometers

        double distanceinkilometer=10.8;

        // Create a double variable distanceinmiles to store the distance in miles

        double distanceinmiles=10.8\*1.6;

        // Display the distance in miles

        System.out.println("The distance "+distanceinkilometer+" km in miles is "+distanceinmiles);

    }

}

1. Create a program to calculate the profit and loss in number and percentage based on the cost price of INR 129 and the selling price of INR 191.

**Hint =>**

1. Use a single print statement to display multiline text and variables.
2. Profit = selling price - cost price
3. Profit Percentage = profit / cost price \* 100

**I/P =>** NONE

**O/P =>**

The Cost Price is INR \_\_\_ and Selling Price is INR \_\_\_

The Profit is INR \_\_\_ and the Profit Percentage is \_\_\_

// Creating Class with name Q4 indicating the purpose is to display and calculate the profit and loss

class Q4

{

    public static void main(String args[])

    {

        // Create a int variable costprice to store the cost price

        int costprice=129;

        // Create a int variable sellingprice to store the selling price

        int sellingprice=191;

        // Create a int variable profit to store the profit

        int profit=sellingprice-costprice;

        // Create a double variable profitpercentage to store the profit percentage

        double profitpercentage=(double)profit/costprice\*100.0;

        // Display the profit and profit percentage

        System.out.println("The Cost Price is INR "+costprice+" and Selling Price is INR "+sellingprice+" \nThe Profit is INR "+profit+" and the Profit Percentage is "+profitpercentage);

    }

}

1. Suppose you have to divide 14 pens among 3 students equally. Write a program to find how many pens each student will get if the pens must be divided equally. Also, find the remaining non-distributed pens.

**Hint =>**

1. Use Modulus Operator (%) to find the reminder.
2. Use Division Operator to find the Quantity of pens

**I/P =>** NONE

**O/P =>** The Pen Per Student is \_\_\_ and the remaining pen not distributed is \_\_\_

// Creating Class with name Q5 indicating the purpose is to display and divide the 14 pen in 3 students

class Q5

{

    public static void main(String args[])

    {

        // Create a int variable totalpen to store the total pen

        int totalpen=14;

        // Create a int variable totalstudent to store the total student

        int totalstudent=3;

        // Create a int variable pendivied to store the number of pen divided

        int pendivided=totalpen/totalstudent;

        // Create a int variable pen left to store the total pen left

        int penleft=totalpen%totalstudent;

        // Display the pen divided into per student and pen left

        System.out.println("The Pen Per Student is "+pendivided+" and the remaining pen not distributed is "+penleft);

    }

}

1. The University is charging the student a fee of INR 125000 for the course. The University is willing to offer a discount of 10%. Write a program to find the discounted amount and discounted price the student will pay for the course.

**Hint =>**

1. Create a variable named fee and assign 125000 to it.
2. Create another variable discountPercent and assign 10 to it.
3. Compute discount and assign it to the discount variable.
4. Compute and print the fee you have to pay by subtracting the discount from the fee.

**O/P =>** The discount amount is INR \_\_\_ and final discounted fee is INR \_\_\_

// Creating Class with name Q6 indicating the purpose is to display discounted amount of fees

class Q6

{

    public static void main(String args[])

    {

        // Create a int variable fee to store the fees

        int fee=125000;

        // Create a double variable percent to store the percent

        double Percent=10.0;

        // Create a double variable discount to store the discount

        double discount=Percent/100.0\*fee;

        // Create a double variable finaldiscountedfee to store the final discounted fee

        double finaldiscountedfee=fee-discount;

        // Display the discount and the final discounted fee

        System.out.println("The discounted ammount is INR "+discount+" and final discounted fee is INR "+finaldiscountedfee);

    }

}

1. Write a Program to compute the volume of Earth in km^3 and miles^3

**Hint =>** Volume of a Sphere is (4/3) \* pi \* r^3 and radius of earth is 6378 km

**O/P =>** The volume of earth in cubic kilometers is \_\_\_\_ and cubic miles is \_\_\_\_

// Creating Class with name Q7 indicating the purpose is to display the volume of earth in km^3 and miles^3

class Q7

{

    public static void main(String args[])

    {

        // Create a int variable radiusinkilometers to store the distance in kilometers

        int radiusinkilometers=6378;

        // Create a double variable radiusinmiles to store the radius in miles

        double radiusinmiles=radiusinkilometers\*1.6;

        // Create a double variable volumeincubickilometer to store the volume in cubic kilometers

        double volumeincubickilometer=4/3.0\*22/7.0\*radiusinkilometers\*radiusinkilometers\*radiusinkilometers;

        // Create a double variable volumeincubicmiles to store the volume in cubic miles

        double volumeincubicmiles=4/3.0\*22/7.0\*radiusinmiles\*radiusinmiles\*radiusinmiles;

        // Display the volume in cubic kilometers and cubic miles

        System.out.println("The volume of earth in cubic kilometer is "+volumeincubickilometer+" and cubic miles is "+volumeincubicmiles);

    }

}

1. Create a program to convert distance in kilometers to miles.

**Hint =>**

1. Create a variable km and assign type as double as in double km;
2. Create Scanner Object to take user input from Standard Input that is the Keyboard as in Scanner input = new Scanner(System.in);
3. Use Scanner Object to take user input for km as in km = input.nextInt();
4. Use 1 mile = 1.6 km formulae to calculate miles and show the output

**I/P =>** km

**O/P =>** The total miles is \_\_\_ mile for the given \_\_\_ km

// Creating Class with name Q8 indicating the purpose is to display the converted distance from km to miles entered by the user

import java.util.\*;

class Q8

{

    public static void main(String args[])

    {

        Scanner input = new Scanner(System.in);

        System.out.println("Enter kilometer to convert it in miles");

        // Create a double variable km to store the distance in km from the user

        double km=input.nextDouble();

        // Create a double variable miles to store the distance in miles

        double miles=km/1.6;

        // Display the miles

        System.out.println("The total miles is "+miles+" for the given "+km+" km");

    }

}

1. Write a new program similar to the program # 6 but take user input for Student Fee and University Discount

**Hint =>**

1. Create a variable named fee and take user input for fee.
2. Create another variable discountPercent and take user input.
3. Compute the discount and assign it to the discount variable.
4. Compute and print the fee you have to pay by subtracting the discount from the fee.

**I/P =>** fee, discountPrecent

**O/P =>** The discount amount is INR \_\_\_ and final discounted fee is INR \_\_\_

// Creating Class with name Q9 indicating the purpose is to display discounted amount of fees of the user

import java.util.\*;

class Q9

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

        System.out.println("Enter Fee");

        // Create a int variable fee to store the fees of the user

        int fee=sc.nextInt();

        System.out.println("Enter discount Percent");

        // Create a double variable discountpercent to store the discount percent of the user

        double discountpercent=sc.nextDouble();

        // Create a double variable discount to store the discount

        double discount=discountpercent/100.0\*fee;

        // Create a double variable finalamount to store the final amount

        double finalamount=fee-discount;

        // Display the discount and the final ammount

        System.out.println("The discount amount is INR "+discount+" and final discounted fee is INR "+finalamount);

    }

}

1. Write a program that takes your height in centimeters and converts it into feet and inches

**Hint =>** 1 foot = 12 inches and 1 inch = 2.54 cm

**I/P =>** height

**O/P =>** Your Height in cm is \_\_\_ while in feet is \_\_\_ and inches is \_\_\_

// Creating Class with name Q10 indicating the purpose is to display your height in inches and feet

import java.util.\*;

class Q10

{

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

        System.out.println("Enter Height in cm");

        // Create a double variable heightcm to store the height of the user in cm

        double heightcm=sc.nextDouble();

        // Create a double variable heightinch to store the height of the user in inches

        double heightinch=heightcm/2.54;

        // Create a double variable heightfeet to store the height of the user in feet

        double heightfeet=heightinch/12.0;

        // Display the height in cm,inch and feet

        System.out.println("Your Height in cm is "+heightcm+" while in feet is "+heightfeet+" and inches is "+heightinch);

    }

}