

## **Tutorial 1.1**

1. Create a program that reads the length and width of a farmer's field from the user in feet. Display the area of the field in acres. **Hint:** There are 43,560 square feet in an acre. Sample

```
import java.util.Scanner;

class Area{

    public static void main(String[] args){

        Scanner input=new Scanner(System.in);

        System.out.println("enter the length: ");

        double length = input.nextDouble();

        System.out.println("Enter the breath: ");

        double breadth = input.nextDouble();

        double area = (length * breadth)/43560;

        System.out.println(area);

        input.close();

    }

}
```

### **OUTPUT:**

Input 1000 1000

Sample Output 22.95684113865932 acres

2. An online retailer sells two products: widgets and gizmos. Each widget weighs 75 grams. Each gizmo weighs 112 grams. Write a program that reads the number of widgets and the number of gizmos from the user. Then your program should compute and display the total weight of the parts.

```
import java.util.Scanner;

class products{

    public static void main(String[] args){

        Scanner input=new Scanner(System.in);

        System.out.println("enter the length: ");

        int wid = input.nextInt();

        System.out.println("Enter the breadth: ");

        int giz = input.nextInt();

        int total = (wid*75 )+ (giz*112);

        System.out.println("The total weight of all these widgets and gizmos is" ,total, "grams");

    }

}
```

```
}
```

**OUTPUT:**

Sample Input: 10 20

Sample Output: The total weight of all these widgets and gizmos is 2990 grams.

3. In many jurisdictions, a small deposit is added to drink containers to encourage people to recycle them. In one particular jurisdiction, drink containers holding one liter or less have a \$0.10 deposit and drink containers holding more than one liter have a \$0.25 deposit. Write a program that reads the number of containers of each size (less and more) from the user. Your program should continue by computing and displaying the refund that will be received for returning those containers. Format the output so that it includes a dollar sign and always displays exactly two decimal places.

```
import java.util.Scanner;

class dollar{

    public static void main(String[] args){

        Scanner input=new Scanner(System.in);

        System.out.println("enter the number: ");

        int less=Math.abs(input.nextInt());

        System.out.println("enter the number: ");

        int more=Math.abs(input.nextInt());

        double n=(less*(1.0/10))+(more*(2.5/10));

        System.out.format("Your total refund will be "+"$"+"%0.2f",n);

    }

}
```

**OUTPUT:**

Sample Input 10 20

Sample Output Your total refund will be \$6.00.

4. Write a program to find whether the given input number is Odd. If the given number is odd, the program should return 2 else It should return 1.

```
import java.util.Scanner;

class odd{

    public static void main(String[] args){

        Scanner input=new Scanner(System.in);

        System.out.println("enter the number: ");
```

```

        int num=input.nextInt();
        if(num%2==0){
            System.out.println("1");
        }
        else{
            System.out.println("2");
        }
    }
}

```

**OUTPUT:**

Sample Input : 2

Sample Output : 1

5. Write a program that returns the last digit of the given number. Last digit is being referred to the least significant digit i.e. the digit in the ones (units) place in the given number. The last digit should be returned as a positive number.

For example,

if the given number is 197, the last digit is 7. if the given number is -197, the last digit is 7

```

import java.util.Scanner;
class digits{
    public static void main(String[] args){
        Scanner input=new Scanner(System.in);
        System.out.println("enter the number: ");
        int num=input.nextInt();
        int n=(num%10);
        System.out.println(Math.abs(n));
    }
}

```

**OUTPUT:**

Sample Input : -197

Sample Output : 7

6. Rohit wants to add the last digits of two given numbers.

For example,

If the given numbers are 267 and 154, the output should be 11.

Below is the explanation:

Last digit of the 267 is 7

Last digit of the 154 is 4

Sum of 7 and 4 = 11

Write a program to help Rohit achieve this for any given two numbers.

Note: Tile sign of the input numbers should be ignored.

if the input numbers are 267 and 154, the sum of last two digits should be 11  
 if the input numbers are 267 and -154, the sum of last two digits should be 11  
 if the input numbers are -267 and 154, the sum of last two digits should be 11  
 if the input numbers are -267 and -154, the sum of last two digits should be 11

```
import java.util.Scanner;
class digit{
    public static void main(String[] args){
        Scanner input=new Scanner(System.in);
        System.out.println("enter the number: ");
        int num1=Math.abs(input.nextInt());
        System.out.println("enter the number: ");
        int num2=Math.abs(input.nextInt());
        int n=(num1%10)+(num2%10);
        System.out.println(Math.abs(n));
    }
}
```

**OUTPUT:**

Sample Input : 267 154  
 Sample Output : 11

7. Complete the program to convert days into years, month and days. (Ignoring leap year and considering 1 month is 30 days)

```
import java.util.Scanner;
class year{
    public static void main(String[] args){
        Scanner input=new Scanner(System.in);
        System.out.println("enter the days: ");
        int year=input.nextInt();
        int y=year/365;
        int m=(year%365)/30;
        int d=(year%365)%30;
        System.out.println("YEAR:"+y+" "+"MONTH:"+m+" "+"DAYS:"+d);
    }
}
```

**OUTPUT:**

Input 375 Output YEARS: 1 MONTH: 0 DAYS: 10  
 Input 200 Output YEARS: 0 MONTH: 6 DAYS: 20

8. Write a program that returns the second last digit of the given number. Second last digit is being referred to the digit in the tens place in the given number. For example, if the given number is 197, the second last digit is 9. Note1 - The second last digit should be returned as a positive number. i.e. if the given number is -197, the second last digit is 9. Note2 - If the given number is a single digit number, then the second last digit does not exist. In such cases, the program should return -1. i.e. if the given number is 5, the second last digit should be returned as 0.

```
import java.util.Scanner;

class secDig{

    public static void main(String[] args){

        Scanner input=new Scanner(System.in);

        System.out.println("enter the number: ");

        int num=input.nextInt();

        if(num>=10){

            int a=num/10;

            int b=a%10;

            System.out.println(b);

        }

        else{

            System.out.println("-1");

        }

    }

}
```

**OUTPUT:**

Sample Input : -197

Sample Output : 9