Day 2 - Java Assignment 1

Primitive Data Types

Task: Create a program that accepts age, height, and weight of a person and prints them with appropriate data types.

Sample Input:
Age: 25
Height: 5.9
Weight: 68.5

Sample Output:
Age: 25
Height: 5.9
Weight: 68.5

```
package day2Assignment;
import java.util.Scanner;
public class PrimitiveDataType {
public static void main(String[]args) {
Scanner s = new Scanner(System.in);
System.out.print("Enter your Age: ");
int Age = s.nextInt();
System.out.print("Enter your Height: ");
float Height = s.nextFloat();
System.out.print("Enter your Weight: ");
Double Weight = s.nextDouble();
System.out.println("Age: "+Age);
System.out.println("Height: "+Height);
System.out.print("Weight: "+Weight);
s.close();
}
}
```

Variables

Task: Declare and initialize different types of variables to store a student's information: ID, name, marks, and grade. Print them.

Sample Input:
ID: 101
Name: Arun Marks: 89.5 Grade: A

Sample Output:
Student ID: 101
Name: Arun Marks: 89.5 Grade: A

```
package day2Assignment;
import java.util.Scanner;
public class Variables {
public static void main(String[]args) {
Scanner s = new Scanner(System.in);
System.out.println("Enter the Student ID: ");
int ID = s.nextInt();
System.out.println("Enter the Student Name: ");
String Name = s.next();
System.out.println("Enter the Student Marks: ");
float Marks = s.nextFloat();
System.out.println("Enter the Student Grade: ");
char Grade = s.next().charAt(0);
System.out.println("Student ID: "+ID);
System.out.println("Name: "+Name);
System.out.println("Marks: "+Marks);System.t.println("Grade: "+Grade);
s.close();
}
}
```

Operators

Task: Accept two numbers and perform arithmetic, relational, and logical operations on them.

Sample Input:
Number1: 10
Number2: 20

Sample Output:
Addition: 30

```
package day2Assignment;
import java.util.Scanner;
public class Operators {
public static void main(String[]args) {
Scanner s = new Scanner(System.in);
System.out.println("Enter the Number1");
```

```
int num1 = s.nextInt();
System.out.println("Enter the Number2");
int num2 = s.nextInt();
System.out.println("Addition: "+(num1+num2));
// here we are taking the condition that num1!=num2
if(num1>num2) {
System.out.println("Greater number: "+num1);
}
else {
System.out.println("Greater number: "+num2);
}
if(num1>0 &&num2>0) {
System.out.println("Are both positive? "+true);
}
else {
System.out.println("Are both positive? "+false);
}
}
}
Greater number: 20
Are both positive? true
```

String Concatenation

Task: Create a greeting message using first name and last name entered by the user.

Sample Input:
First Name: Ravi Last Name: Kumar

Sample Output:
Hello, Ravi Kumar! Welcome to the system.

```
package day2Assignment;
import java.util.Scanner;
public class StringConcat {
public static void main(String[]args) {
Scanner s = new Scanner(System.in);
System.out.println("First Name: ");
String First = s.next();
System.out.println("Last Name: ");
String Last = s.next();
System.out.println("Hello, "+First+" "+Last+" ! Welcome to the
System");
s.close();
}
}
```

StringBuilder

Task: Accept a sentence and reverse it using StringBuilder.

Sample Input:
Input: Hello Java Learners

Sample Output:
Original: Hello Java Learners Reversed: srenraeL avaJ olleH

```
package day2Assignment;
import java.util.Scanner;
public class StringBuilderEx {
public static void main(String[]args) {
Scanner s = new Scanner(System.in);
System.out.print("Original: ");
String sentence = s.nextLine();
StringBuilder sb = new StringBuilder(sentence);
String reversed = sb.reverse().toString();
System.out.println("Reversed: "+reversed);
s.close();
}
}
```

String API

Task: Count how many times a specific character appears in a string.

Sample Input:
String: banana Character: a

Sample Output:
Character 'a' appears 3 times.

```
package day2Assignment;
import java.util.Scanner;
public class StringAPI {
public static void main(String[]args) {
Scanner s = new Scanner(System.in);
System.out.println("String: ");
String str = s.next();
System.out.println("Character: ");
char ch = s.next().charAt(0);
int count = 0;
for(int i=0;i<str.length();i++) {
if(str.charAt(i)==ch) {
```

```
count++;
}
}
System.out.println("Character '"+ch+"' appears " + count+" times");
}
}
```

Date, Time, and Numeric Objects

Task: Display the current date and format it as DD-MM-YYYY. Also, show a formatted currency value.

Sample Input:
Date: [current system date] Amount: 12345.678

Sample Output:
Current Date: 20-07-2025 Formatted Amount: ₹12,345.68

```
package day2Assignment;
import java.text.NumberFormat;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.Locale;
public class DateAndCurrency {
public static void main(String[] args) {
// Get current date
Date today = new Date();
// Format date as DD-MM-YYYY
SimpleDateFormat dateFormat = new SimpleDateFormat("dd-MM-yyyy");
String formattedDate = dateFormat.format(today);
// Format currency (Indian Rupees)
double amount = 12345.678;
NumberFormat currencyFormat = NumberFormat.getCurrencyInstance(new
Locale("en", "IN"));
String formattedAmount = currencyFormat.format(amount);
// Output
System.out.println("Current Date: " + formattedDate);
System.out.println("Formatted Amount: " + formattedAmount);
}
}
```

Flow Control

Task: Based on a number entered, print whether it's positive, negative, or zero.

Sample Input:
Number: -5

Sample Output:
The number is negative.

```
package day2Assignment;
import java.util.Scanner;
public class NumberCheck {
public static void main(String[] args) {
Scanner s = new Scanner(System.in);
System.out.print("Enter a number: ");
int number = s.nextInt();
if (number > 0) {
System.out.println("The number is positive.");
} else if (number < 0) {
System.out.println("The number is negative.");
} else {
System.out.println("The number is zero.");
}
s.close();
}
}
```

Conditions

Task: Accept marks and display the grade using if-else.

Sample Input:
Marks: 76

Sample Output:
Grade: B

```
package day2Assignment;
import java.util.Scanner;
public class GradeCalculator {
public static void main(String[] args) {
Scanner s = new Scanner(System.in);
System.out.print("Enter marks: ");
int marks = s.nextInt();
if (marks >= 90) {
System.out.println("Grade: A");
} else if (marks >= 75) {
System.out.println("Grade: B");
} else if (marks >= 60) {
System.out.println("Grade: C");
} else if (marks >= 40) {
System.out.println("Grade: D");
} else {
```

```
System.out.println("Grade: F");
}
s.close();
}
}
```

Switch

Task: Build a simple calculator using switch to perform operations (+, -, *, /).

Sample Input:
Number1: 10
Number2: 5 Operation: *

Sample Output:
Result: 50

```
package day2Assignment;
import java.util.Scanner;
public class SimpleCalculator {
public static void main(String[] args) {
Scanner s = new Scanner(System.in);
System.out.print("Enter first number: ");
double num1 = s.nextDouble();
System.out.print("Enter second number: ");
double num2 = s.nextDouble();
System.out.print("Enter operation (+, -, *, /): ");
char op = s.next().charAt(0);
switch (op) {
case '+':
System.out.println("Result: " + (num1 + num2));
break;
case '-':
System.out.println("Result: " + (num1 - num2));
break;
case '*':
System.out.println("Result: " + (num1 * num2));
```

Loops and Branching

Task: Print the first N even numbers using a loop.

Sample Input:
N = 5

Sample Output:
0 2 4 6 8

```
package day2Assignment;
import java.util.Scanner;
public class LoopsAndBranching {
public static void main(String[]args) {
Scanner s = new Scanner(System.in);
System.out.println("N = ");
int n = s.nextInt();
for(int i=0;i<n;i++) {
System.out.print(2*n+" ");
}
s.close();
}
}
```

Arrays

Task: Accept 5 numbers, store them in an array, and display their average.

Sample Input:
Numbers: 10, 20, 30, 40, 50

Sample Output:
Average: 30.0

```
package day2Assignment;
import java.util.Scanner;
public class ArrysEx {
public static void main(String[]args) {
Scanner s = new Scanner(System.in);
System.out.print("Numbers: ");
int n = s.nextInt();
int[] arr = new int[n];
for(int i=0;i<n;i++) {
arr[i] = s.nextInt();
}
int sum=0;
for(int i=0;i<n;i++) {
sum+=arr[i];
}
float Average = (float)sum/n;
System.out.println("Average: "+ Average);
}
}
```

Enum

Task: Create an enum for days of the week. Print a message depending on the day.

Sample Input:
Day: MONDAY

Sample Output:
Start of the work week!

```
package day2Assignment;
import java.util.Scanner;
public class DaysEnumExample {
enum Day{
MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, SUNDAY
}
public static void main(String[]args) {
Scanner sc = new Scanner(System.in);
String input = sc.next().toUpperCase();
try {
Day day = Day.valueOf(input);
switch(day) {
case MONDAY:
System.out.print("start of the work week!");
break;
case FRIDAY:
System.out.println("Almost weekend!");
break;
case SATURDAY:
case SUNDAY:
System.out.println("It's the weekend!");
break;
default:
System.out.println("It's a regular workday.");
}
} catch (IllegalArgumentException e) {
System.out.println("Invalid day entered!");
}
sc.close();
}
}
```

OOPs Concepts

Task: Create a Student class with fields for name and marks. Create an object and display its data.

Sample Input:
Name: Riya Marks: 87

Sample Output:
Student Name: Riya Marks: 87

```
package day2Assignment;
public class Student {
public String name;
public int marks;
public Student(String name, int marks) {
this.name = name;
this.marks = marks;
}
public static void main(String[]args) {
Student s1 = new Student("Riya",87);
System.out.println("Name: "+s1.name);
System.out.println("Marks: "+s1.marks);
}
}
```

Inheritance

Task: Create a class Employee and a subclass Manager that extends Employee and adds department information.

Sample Input: Name: Raj Salary: 50000 Department: Sales

Sample Output:
Name: Raj
Salary: 50000 Department: Sales

```
package day2Assignment;
// Base class
class Employee {
String name;
double salary;
Employee(String name, double salary) {
this.name = name;
this.salary = salary;
}
void displayDetails() {
System.out.println("Name: " + name);
System.out.println("Salary: " + salary);
```

```
}
}
// Subclass
class Manager extends Employee {
String department;
Manager(String name, double salary, String department) {
super(name, salary);
this.department = department;
}
@Override
void displayDetails() {
super.displayDetails();
System.out.println("Department: " + department);
}
}
// Main class
public class InheritanceExample {
public static void main(String[] args) {
Manager m = new Manager("Raj", 50000, "Sales");
m.displayDetails();
}
}
```