1.Primitive Data Types

```
package Day1Task;

import java.util.Scanner;

public class PersonDetails {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);

      // Input age as integer
      System.out.print("Enter Age: ");
      int age = scanner.nextInt();

      // Input height as float
      System.out.print("Enter Height: ");
      float height = scanner.nextFloat();

      // Input weight as double
      System.out.print("Enter Weight: ");
      double weight = scanner.nextDouble();

      // Output the values
      System.out.println("\nAge: " + age);
      System.out.println("Height: " + height);
      System.out.println("Weight: " + weight);

      scanner.close();
   }
}
```

2.Variables

```
package Day1Task;

public class StudentInfo {
   public static void main(String[] args) {
      // Declare and initialize student information
      int id = 101;               // Integer for ID
      String name = "Arun";       // String for name
      double marks = 89.5;        // Double for marks
      char grade = 'A';           // Char for grade
```

```
        // Print the student information
        System.out.println("Student ID: " + id);
        System.out.println("Name: " + name);
        System.out.println("Marks: " + marks);
        System.out.println("Grade: " + grade);
    }
}
```

3.Operators

```
package Day1Task;

import java.util.Scanner;

public class NumberOperations {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Input two numbers
        System.out.print("Enter Number1: ");
        int number1 = scanner.nextInt();

        System.out.print("Enter Number2: ");
        int number2 = scanner.nextInt();

        // Arithmetic operation
        int addition = number1 + number2;

        // Relational operation
        int greater = (number1 > number2) ? number1 : number2;

        // Logical operation
        boolean bothPositive = (number1 > 0) && (number2 > 0);

        // Output results
        System.out.println("\nAddition: " + addition);
        System.out.println("Greater number: " + greater);
        System.out.println("Are both positive? " + bothPositive);

        scanner.close();
    }
}
```

4.String Concatenation

```
package Day1Task;

import java.util.Scanner;

public class GreetingMessage {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);

      // Input first name
      System.out.print("Enter First Name: ");
      String firstName = scanner.nextLine();

      // Input last name
      System.out.print("Enter Last Name: ");
      String lastName = scanner.nextLine();

      // Output greeting
      System.out.println("\nHello, " + firstName + " " + lastName + "! Welcome to the
system.");

      scanner.close();
   }
}
```

5.StringBuilder

```
package Day1Task;

import java.util.Scanner;

public class ReverseSentence {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);

      // Input sentence
      System.out.print("Input: ");
      String sentence = scanner.nextLine();

      // Reverse using StringBuilder
      StringBuilder sb = new StringBuilder(sentence);
      String reversed = sb.reverse().toString();

      // Output
```

```
        System.out.println("\nOriginal: " + sentence);
        System.out.println("Reversed: " + reversed);

        scanner.close();
    }
}
```

6.String API

```
package Day1Task;

import java.util.Scanner;

public class CharacterCount {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Input string
        System.out.print("Enter a string: ");
        String input = scanner.nextLine();

        // Input character to count
        System.out.print("Enter a character to count: ");
        char ch = scanner.next().charAt(0);

        // Count occurrences
        int count = 0;
        for (int i = 0; i < input.length(); i++) {
            if (input.charAt(i) == ch) {
                count++;
            }
        }

        // Output result
        System.out.println("\nCharacter '" + ch + "' appears " + count + " times.");

        scanner.close();
    }
}
```

7.Date, Time, and Numeric Objects

```
package Day1Task;

import java.text.NumberFormat;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.Locale;

public class DateAndCurrencyFormat {
   public static void main(String[] args) {
      // Get current date
      Date currentDate = new Date();
      SimpleDateFormat sdf = new SimpleDateFormat("dd-MM-yyyy");
      String formattedDate = sdf.format(currentDate);

      // Amount to format
      double amount = 12345.678;

      // Format currency for India
      NumberFormat currencyFormatter = NumberFormat.getCurrencyInstance(new
Locale("en", "IN"));
      String formattedAmount = currencyFormatter.format(amount);

      // Output
      System.out.println("Current Date: " + formattedDate);
      System.out.println("Formatted Amount: " + formattedAmount);
   }
}
```

8.Flow Control

```
package Day1Task;

import java.util.Scanner;

public class NumberCheck {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);

      // Input number
      System.out.print("Enter a number: ");
      int number = scanner.nextInt();
```

```
        // Check if number is positive, negative, or zero
        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.");
        }

        scanner.close();
    }
}
```

9.Conditions

```
package Day1Task;

import java.util.Scanner;

public class GradeCalculator {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Input marks
        System.out.print("Enter your marks: ");
        int marks = scanner.nextInt();

        String grade;

        // Determine grade using if-else
        if (marks >= 90 && marks <= 100) {
            grade = "A";
        } else if (marks >= 75 && marks < 90) {
            grade = "B";
        } else if (marks >= 60 && marks < 75) {
            grade = "C";
        } else if (marks >= 40 && marks < 60) {
            grade = "D";
        } else if (marks >= 0 && marks < 40) {
            grade = "F";
        } else {
            grade = "Invalid marks";
        }

        // Output
        System.out.println("Grade: " + grade);
```

```
        scanner.close();
    }}
```

10.Switch

```
package Day1Task;

import java.util.Scanner;

public class SimpleCalculator {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Input numbers and operation
        System.out.print("Enter Number1: ");
        double number1 = scanner.nextDouble();

        System.out.print("Enter Number2: ");
        double number2 = scanner.nextDouble();

        System.out.print("Enter Operation (+, -, *, /): ");
        char operation = scanner.next().charAt(0);

        double result;

        // Perform operation using switch
        switch (operation) {
            case '+':
                result = number1 + number2;
                System.out.println("Result: " + result);
                break;

            case '-':
                result = number1 - number2;
                System.out.println("Result: " + result);
                break;

            case '*':
                result = number1 * number2;
                System.out.println("Result: " + result);
                break;

            case '/':
                if (number2 != 0) {
                    result = number1 / number2;
```

```
            System.out.println("Result: " + result);
        } else {
            System.out.println("Error: Cannot divide by zero!");
        }
        break;

      default:
        System.out.println("Invalid operation!");
    }

    scanner.close();
  }
}
```

11.Loops and Branching

```
package Day1Task;

import java.util.Scanner;

public class EvenNumbers {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    // Input N
    System.out.print("Enter N: ");
    int n = scanner.nextInt();

    System.out.println("First " + n + " even numbers:");

    // Print first N even numbers using loop
    for (int i = 0; i < n; i++) {
      System.out.print((i * 2) + " ");
    }

    scanner.close();
  }
}
```

12.Arrays

```
package Day1Task;

import java.util.Scanner;

public class AverageCalculator {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);

      int[] numbers = new int[5];
      int sum = 0;

      // Input 5 numbers
      System.out.println("Enter 5 numbers:");
      for (int i = 0; i < 5; i++) {
         numbers[i] = scanner.nextInt();
         sum += numbers[i];
      }

      // Calculate average
      double average = sum / 5.0;

      // Output
      System.out.println("Average: " + average);

      scanner.close();
   }
}
```

12.Enum

```
package Day1Task;

import java.util.Scanner;

public class WeekdayMessageSimple {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);

      // Input day
      System.out.print("Enter a day (e.g., MONDAY): ");
      String day = sc.nextLine().toUpperCase();
```

```
        // Print message based on the input
        if (day.equals("MONDAY")) {
            System.out.println("Start of the work week!");
        } else if (day.equals("FRIDAY")) {
            System.out.println("Almost weekend!");
        } else if (day.equals("SATURDAY") || day.equals("SUNDAY")) {
            System.out.println("It's the weekend! Time to relax.");
        } else if (
            day.equals("TUESDAY") || day.equals("WEDNESDAY") || day.equals("THURSDAY")
        ) {
            System.out.println("Keep going, it's a weekday.");
        } else {
            System.out.println("Invalid day entered!");
        }

        sc.close();}}
```

13.OOPs Concepts

```
package Day1Task;

import java.util.Scanner;

//Student class with fields
class Student {
 String name;
 int marks;

 // Method to display student details
 void display() {
    System.out.println("Student Name: " + name);
    System.out.println("Marks: " + marks);
 }
}

public class StudentMain {
 public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);

    // Create Student object
    Student s1 = new Student();

    // Input student data
    System.out.print("Enter student name: ");
    s1.name = sc.nextLine();
```

```
    System.out.print("Enter marks: ");
    s1.marks = sc.nextInt();

    // Display data
    System.out.println();
    s1.display();

    sc.close();
 }
}
```

14.Inheritance

```
package Day1Task;

import java.util.Scanner;

//Superclass
class Employee {
 String name;
 double salary;

 void setEmployeeDetails(String name, double salary) {
    this.name = name;
    this.salary = salary;
 }
}

//Subclass
class Manager extends Employee {
 String department;

 void setDepartment(String department) {
    this.department = department;
 }

 void display() {
    System.out.println("Name: " + name);
    System.out.println("Salary: " + salary);
    System.out.println("Department: " + department);
 }
}

public class EmployeeMain {
 public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
```

```
        // Create Manager object
        Manager m = new Manager();

        // Input details
        System.out.print("Enter name: ");
        String name = sc.nextLine();

        System.out.print("Enter salary: ");
        double salary = sc.nextDouble();
        sc.nextLine(); // consume newline

        System.out.print("Enter department: ");
        String dept = sc.nextLine();

        // Set values
        m.setEmployeeDetails(name, salary);
        m.setDepartment(dept);

        // Display values
        System.out.println();
        m.display();

        sc.close();
    }
}
```