Usage of scanner class with more logical examples.

1. **Calculate Average of two numbers use double as a datatype.**

```
public class Exercise1 {
    public static void main(String[] args) {
            double sum = 23;
            double n = 7;
            double avg;
            avg = sum / n;
            System.out.println("Average = " + avg);
    }
}
```

2. **Understanding character datatype in java it prints ASCII code of a characters.**

```
public class Exercise2 {
    public static void main(String[] args) {
            int chr = 'Z';
            System.out.println("The ASCII value of Z is :" + chr);
    }
}
```

3. **Write a Java program to add two characters.**

```
public class Exercise3 {
    public static void main(String[] args) {
            int a = 10;
            char ch = 'h';
            int sum = a + ch;
            System.out.println(sum);
    }
}
```

4. **Write a Java program to find average of two numbers use double datatype not int.**

```
public class Exercise4 {
        public static void main(String[] args) {
                double sum =
                23;double n =
                7; double avg;
                avg = sum / n;
                System.out.println("Average = " +
                avg);
        }
}
```

5. **Write a Java program for perimeter of Rectangle**

```
public class Exercise5 {
    public static void main(String[] args) {
            int width = 11;
            int length = 10;
            int perimeter;
            System.out.println("first no (length): " + length);
            System.out.println("second no (width): " + width);
```

```
            perimeter = 2 * (length + width);
            System.out.println("Perimeter of a rectangle is " + perimeter);
    }
}
```

6. **Write a Java program to Calculate Area of Rectangle**

```
import java.util.Scanner;

public class Exercise6 {
    static Scanner sc = new Scanner(System.in);

    public static void main(String args[]) {
            double length = 4.5;
            double width = 8.0;
            double area = length * width;
            System.out.println("Area of Rectangle is:" + area);
    }

}
```

7. **Write a Java program to Calculate Area of Rectangle by scanner class**

```
import java.util.Scanner;

public class Exercise7 {
    public static void main(String[] args) {
            Scanner scanner = new Scanner(System.in);
            System.out.println("Enter the length of Rectangle:");
            double length = scanner.nextDouble();
            System.out.println("Enter the width of Rectangle:");
            double width = scanner.nextDouble();
            // Area = length*width;
            double area = length * width;
            System.out.println("Area of Rectangle is:" + area);
    }
}
```

8. Write a Java program to calculate area and circumference of circle

```
import java.util.Scanner;

public class Exercise8 {
    static Scanner sc = new Scanner(System.in);

    public static void main(String args[]) {
            System.out.print("Enter the radius: ");
            /*
             * We are storing the entered radius in double
             * because a user can enter radius
             * in decimals
             */
            double radius = sc.nextDouble();
            // Area = PI*radius*radius
            double area = Math.PI * (radius * radius);
            System.out.println("The area of circle is: " + area);
            // Circumference = 2*PI*radius
            double circumference = Math.PI * 2 * radius;
            System.out.println("The circumference of the circle        is:" +
circumference);
    }

}
```

9. Write a Java program calculate area of Square

```
public class Exercise9 {
    public static void main(String[] args) {
            // Value specified in the program itself
            double side = 4.5;
            // Area of Square = side*side
            double area = side * side;
            System.out.println("Area of Square is: " + area);

    }
}
```

10.Write a Java program calculate area of Square by scanner

```
import java.util.Scanner;

public class Exercise10 {
    public static void main(String[] args) {
            System.out.println("Enter Side of Square:");
            // Capture the user's input
            Scanner scanner = new Scanner(System.in);
            // Storing the captured value in a variable
            double side = scanner.nextDouble();
            // Area of Square = side*side
            double area = side * side;
            System.out.println("Area of Square is: " + area);
    }
}
```

Homework

1. Write a program to calculate cube of a number by scanner class
2. Write a program to calculate simple interest
3. Write a program to calculate compound interest
4. The marks obtained by a student in 5 different subjects are input through the keyboard. The student gets a division as per the following rules:
    a. Percentage above or equal to 60 - First division
    b. Percentage between 50 and 59 - Second division
    c. Percentage between 40 and 49 - Third division
    d. Percentage less than 40 - Fail
    e. Write a program to calculate the division obtained by the student.

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