Informatics College Pokhara

Programming

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Individual Course Work5

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Submitted By:

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C1

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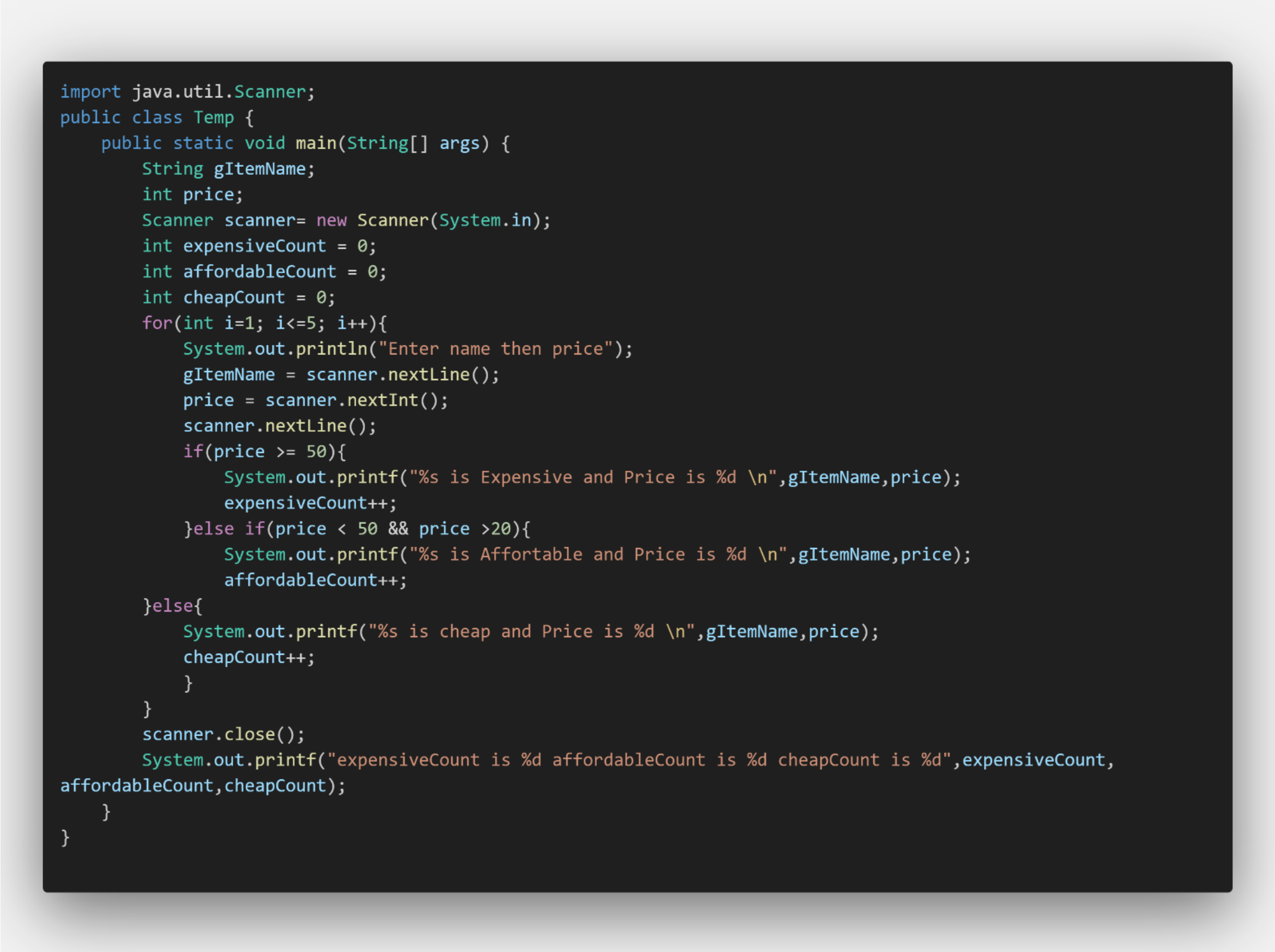
Code To categorize and count grocery items by taking user input



```
import java.util.Scanner;
public class Temp {
    public static void main(String[] args) {
        String gItemName;
        int price;
        Scanner scanner= new Scanner(System.in);
        int expensiveCount = 0;
        int affordableCount = 0;
        int cheapCount = 0;
        for(int i=1; i<=5; i++){
            System.out.println("Enter name then price");
            gItemName = scanner.nextLine();
            price = scanner.nextInt();
            scanner.nextLine();
            if(price >= 50){
                System.out.printf("%s is Expensive and Price is %d \n",gItemName,price);
                expensiveCount++;
            }else if(price < 50 && price >20){
                System.out.printf("%s is Affortable and Price is %d \n",gItemName,price);
                affordableCount++;
        }else{
            System.out.printf("%s is cheap and Price is %d \n",gItemName,price);
            cheapCount++;
            }
        }
        scanner.close();
        System.out.printf("expensiveCount is %d affordableCount is %d cheapCount is %d",expensiveCount,
affordableCount,cheapCount);
    }
}
```

Loop

A loop is a method to run a set of instructions or code for multiple times until condition is true. It is used to run repetitive tasks so it saves time and code.

Purpose

i. To iterate over array, list etc.
ii. To reduce code length.
iii. To make code simple.
iv. To handle large data.

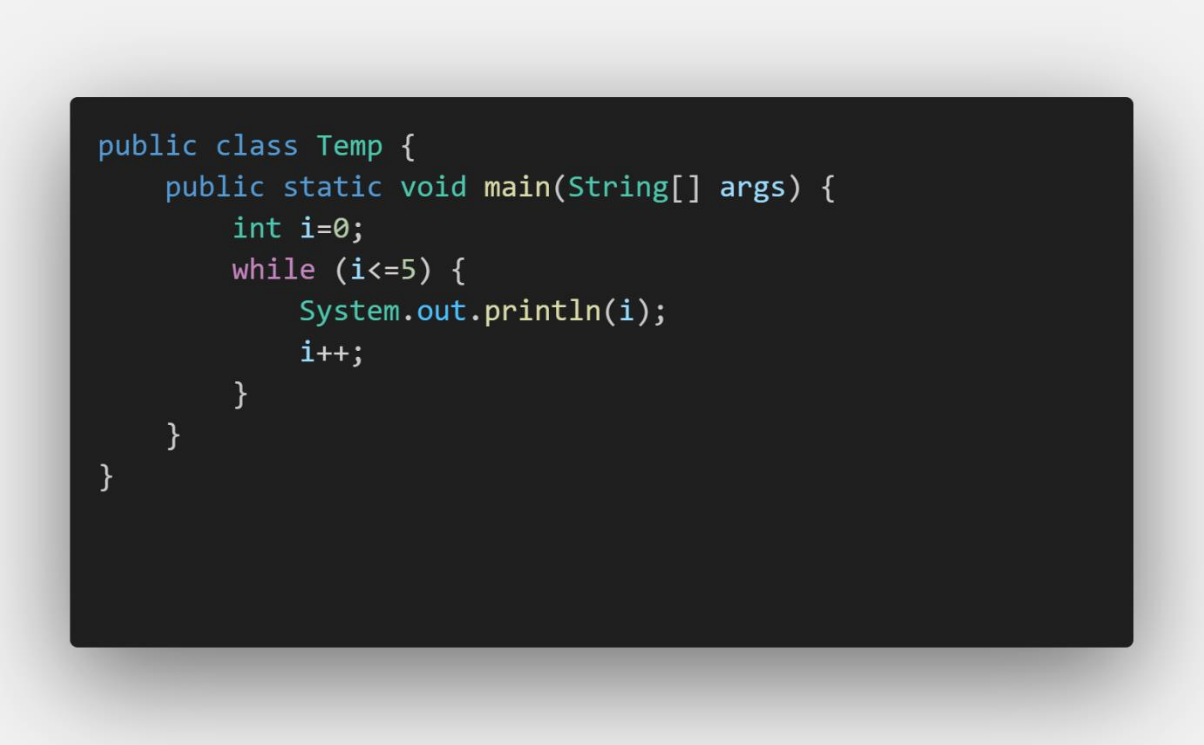
Types of Loops

1. For Loop

We use for loop when we know how many times you want to repeat a block of code. It is used for iterating to fixed range of numbers. We use to iterate over array by *array.length.*

2. While Loop

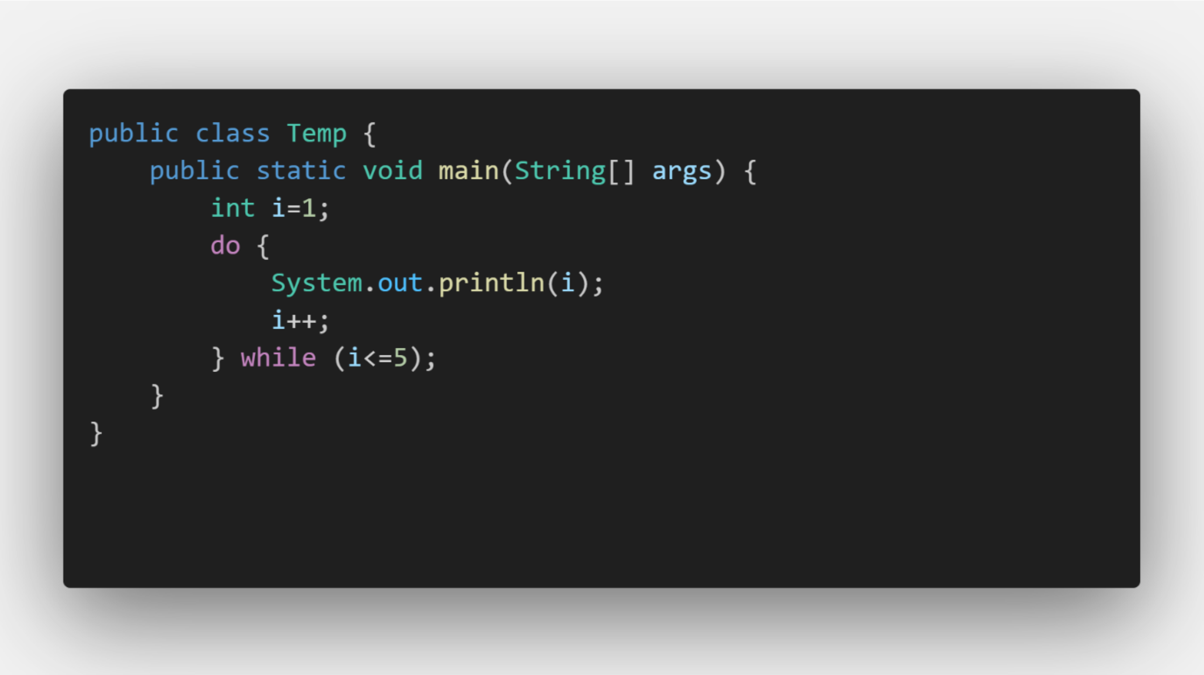
We use while loop when we don’t know how many time we need to run block of code.



```java
public class Temp {
    public static void main(String[] args) {
        int i=0;
        while (i<=5) {
            System.out.println(i);
            i++;
        }
    }
}
```

3. Do-While Loop

We use this loop when we want to run code minimum 1 time even if condition not met but if condition met it can run upto condition met.

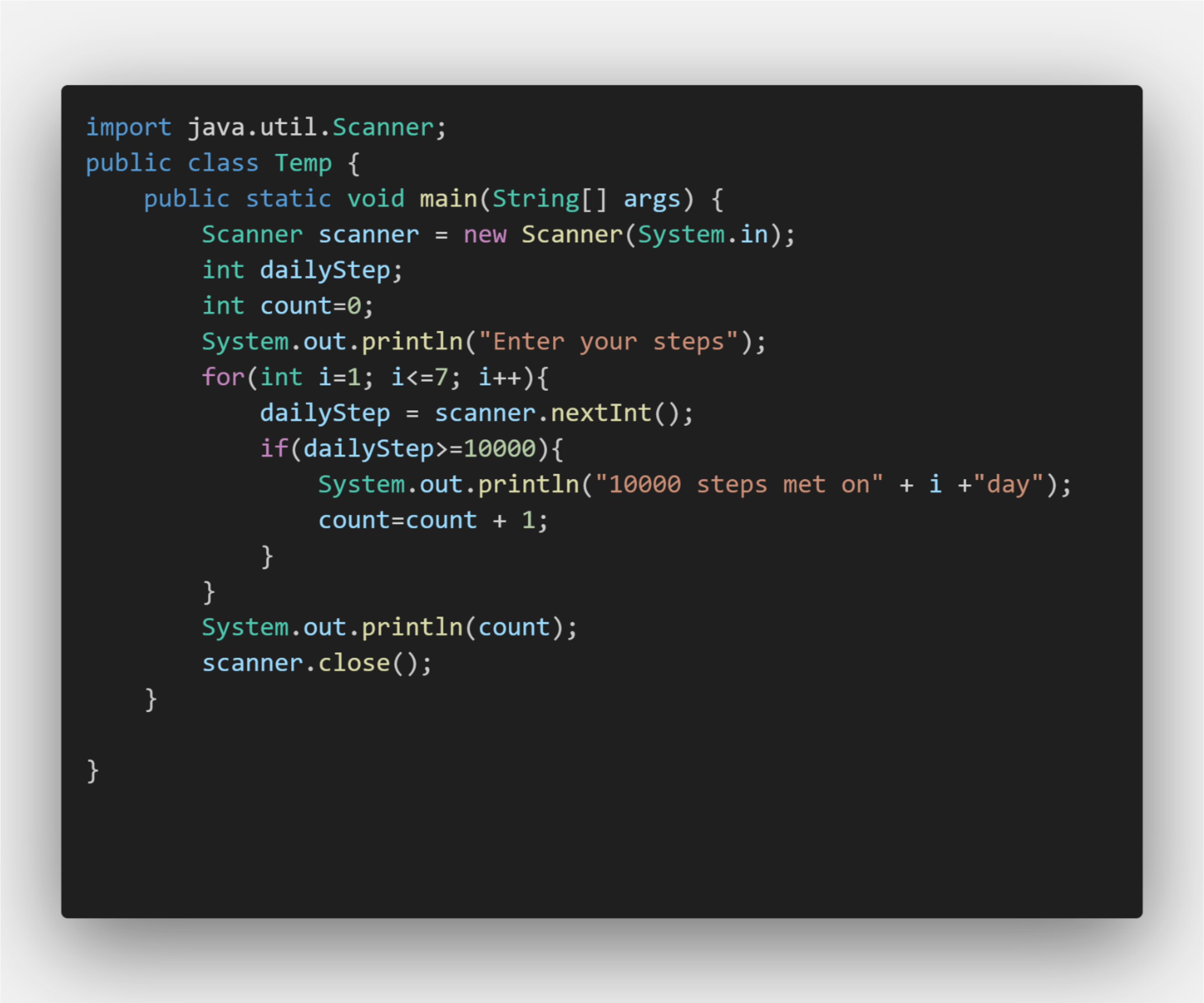


```java
public class Temp {
    public static void main(String[] args) {
        int i=1;
        do {
            System.out.println(i);
            i++;
        } while (i<=5);
    }
}
```

4. For-Each Loop

We use this loop when we don’t know to many time we need to iterate over an array. We should use this loop only on array and it return each element from array in 1 variable. It makes our work easier to iter65

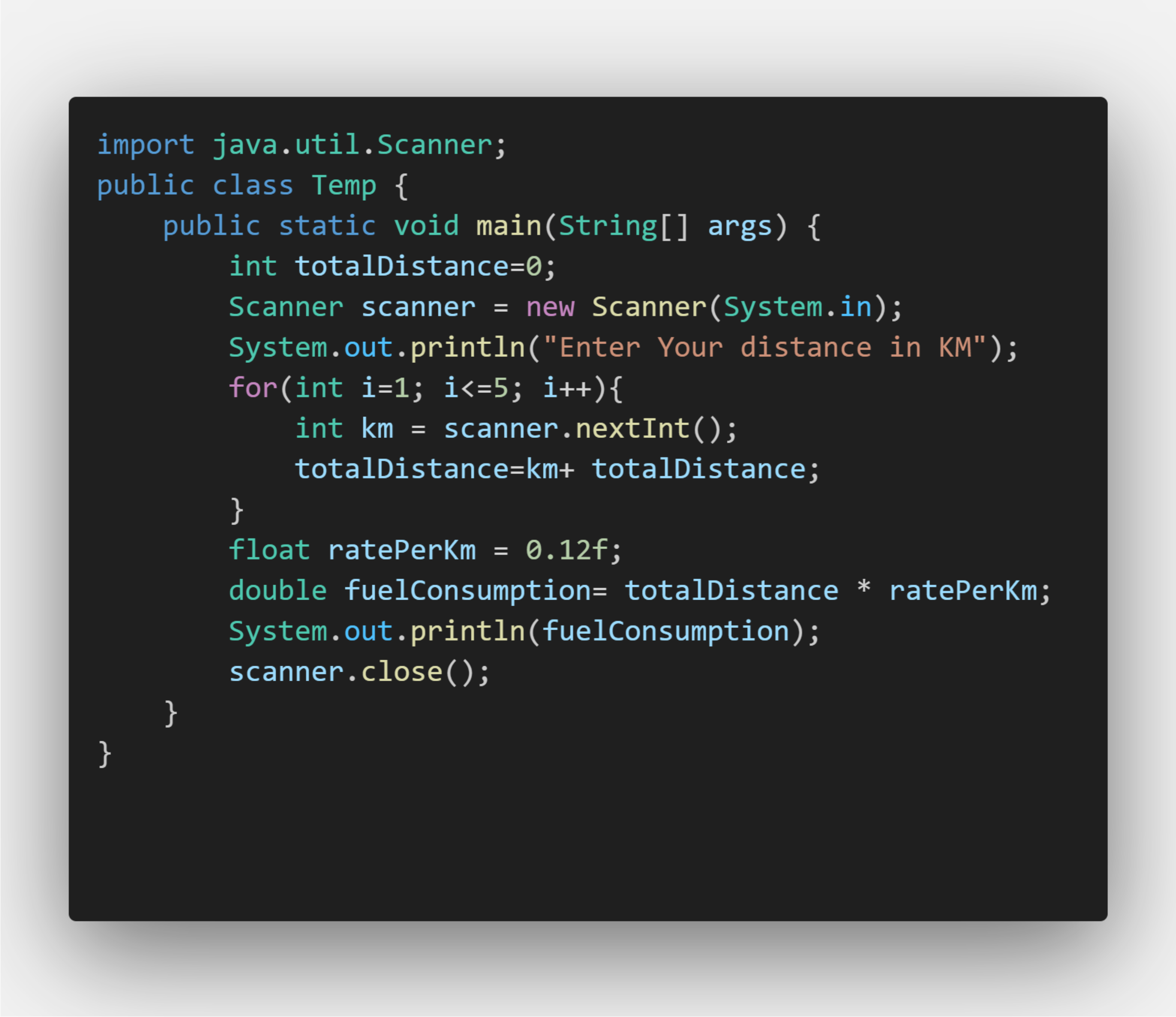
Code to check if daily 10000 steps reached or not



```java
import java.util.Scanner;
public class Temp {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int dailyStep;
        int count=0;
        System.out.println("Enter your steps");
        for(int i=1; i<=7; i++){
            dailyStep = scanner.nextInt();
            if(dailyStep>=10000){
                System.out.println("10000 steps met on" + i +"day");
                count=count + 1;
            }
        }
        System.out.println(count);
        scanner.close();
    }

}
```

Code to calculate total distance travelled and fuel cost



```java
import java.util.Scanner;
public class Temp {
    public static void main(String[] args) {
        int totalDistance=0;
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter Your distance in KM");
        for(int i=1; i<=5; i++){
            int km = scanner.nextInt();
            totalDistance=km+ totalDistance;
        }
        float ratePerKm = 0.12f;
        double fuelConsumption= totalDistance * ratePerKm;
        System.out.println(fuelConsumption);
        scanner.close();
    }
}
```