Sample Program 12.1

About Objects

Problem statement. Write a program to manage one time-of-day object.

Solution.

```java
import java.io.*;
import java.text.*;

class TimeOfDay
{
  int hour;
  int minute;
  int second;
};

public class ChangeDue1
{
  static TimeOfDay getTimeOfDay() throws Exception
  {
    TimeOfDay result = new TimeOfDay();

    BufferedReader cin;
    cin = new BufferedReader(new InputStreamReader(System.in));

    System.out.print("Enter the hour ");
    result.hour = new Double(cin.readLine()).intValue();

    System.out.print("Enter the minute ");
    result.minute = new Double(cin.readLine()).intValue();

    System.out.print("Enter the second ");
    result.second = new Double(cin.readLine()).intValue();

    return result;
  }

  static void outputTimeOfDay(TimeOfDay t)
  {
    System.out.print(new DecimalFormat("00").format(t.hour));
    System.out.print(":" + new DecimalFormat("00").format(t.minute));
    System.out.println(":" + new DecimalFormat("00").format(t.second));
  }

  public static void main(String[] args) throws Exception
  {
    TimeOfDay a = getTimeOfDay();
    outputTimeOfDay(a);
  }
}
```

Problem statement. Write a program to manage 5 time-of-day objects.

Solution.

```java
import java.io.*;
import java.text.*;

class TimeOfDay
{
  int hour;
  int minute;
  int second;
};

public class ChangeDue1
{
  static TimeOfDay getTimeOfDay() throws Exception
  {
    TimeOfDay result = new TimeOfDay();

    BufferedReader cin;
    cin = new BufferedReader(new InputStreamReader(System.in));

    System.out.print("Enter the hour ");
    result.hour = new Double(cin.readLine()).intValue();

    System.out.print("Enter the minute ");
    result.minute = new Double(cin.readLine()).intValue();

    System.out.print("Enter the second ");
    result.second = new Double(cin.readLine()).intValue();

    return result;
  }

  static void outputTimeOfDay(TimeOfDay t)
  {
    System.out.print(new DecimalFormat("00").format(t.hour));
    System.out.print(":" + new DecimalFormat("00").format(t.minute));
    System.out.println(":" + new DecimalFormat("00").format(t.second));
  }

  public static void main(String[] args) throws Exception
  {
    TimeOfDay[] a = new TimeOfDay[5];

    for (int i = 0; i < a.length; i++)
      a[i] = getTimeOfDay();

    for (int i = 0; i < a.length; i++)
      outputTimeOfDay(a[i]);
  }
}
```

Problem statement. Write a program to manage 5 time-of-day objects.

Solution.

```java
import java.io.*;
import java.text.*;

class TimeOfDay
{
   int hour;
   int minute;
   int second;
};

public class ChangeDue1
{
   static TimeOfDay getTimeOfDay() throws Exception
   {
      TimeOfDay result = new TimeOfDay();

      BufferedReader cin;
      cin = new BufferedReader(new InputStreamReader(System.in));

      System.out.print("Enter the hour ");
      result.hour = new Double(cin.readLine()).intValue();

      System.out.print("Enter the minute ");
      result.minute = new Double(cin.readLine()).intValue();

      System.out.print("Enter the second ");
      result.second = new Double(cin.readLine()).intValue();

      return result;
   }

   static void outputTimeOfDay(TimeOfDay[] t)
   {
      for (int i = 0; i < t.length; i++)
      {
         System.out.print(new DecimalFormat("00").format(t[i].hour));
         System.out.print(":" + new DecimalFormat("00").format(t[i].minute));
         System.out.println(":" + new DecimalFormat("00").format(t[i].second));
      }
   }

   public static void main(String[] args) throws Exception
   {
      TimeOfDay[] a = new TimeOfDay[5];

      for (int i = 0; i < a.length; i++)
         a[i] = getTimeOfDay();

      outputTimeOfDay(a);
   }
}
```