

Institute of Engineering & Management
Department of Computer Science & Engineering
Object Oriented Programming (IT) Lab for 3rd year 5th semester 2018
Code: CS594D

Date: 07/08/18

WEEK-5

Assignment-1

Problem Statement: A typical way to introduce oneself is "Hello, my name is xxx and my hobby is yyy". Arif is a CSE Student at IEM, who secretly moonlights as a hacker. Have Arif introduce himself

- (1) at a get-together for student leaders of various colleges in Salt Lake
- (2) at a closed-door Hacker Society meeting
- (3) at his cousin's birthday party where he meets a beautiful girl who is a Tagore fan.

Source code:

```
import java.util.Scanner;

class Person
{
    String name, hobby="Reading";
    Person(String n)
    {
        name=n;
    }
}
class Student extends Person
{
    Student(String n)
    {
        super(n);
        super.hobby="Facebook";
    }
}
class CSE_student extends Student
{
    CSE_student(String n)
    {
        super(n);
        super.hobby="Hacking";
    }
}

class Main
{
    public static void main(String args[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the following command:");
        System.out.println(" 1. In Birthday party");
        System.out.println(" 2. get-together");
        System.out.println(" 3. In closed doors");
        int p=sc.nextInt();
        System.out.println("Enter Name: ");
        switch(p)
        {
```

```

        case 1: Person ob1 = new Person(sc.next());
                System.out.println("Hello, my name is "+ob1.name+"
                                and my hobby is "+ob1.hobby+"."); break;
        case 2: Student ob2 = new Student(sc.next());
                System.out.println("Hello, my name is "+ob2.name+"
                                and my hobby is "+ob2.hobby+"."); break;
        case 3: CSE_student ob3 = new CSE_student(sc.next());
                System.out.println("Hello, my name is "+ob3.name+"
                                and my hobby is "+ob3.hobby+"."); break;
        default: System.out.println("Invalid input!");
    }
    sc.close();
}
}

```

Screen-Shot:

```

rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Introduction$ javac problem.java
rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Introduction$ java Main
Enter the following command:
  1. In Birthday party
  2. get-together
  3. In closed doors
2
Enter Name:
Ranajit
Hello, my name is Ranajit and my hobby is Facebook.
rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Introduction$ |

```

Fig: output one

```

rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Introduction$ javac problem.java
rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Introduction$ java Main
Enter the following command:
  1. In Birthday party
  2. get-together
  3. In closed doors
1
Enter Name:
Arnab
Hello, my name is Arnab and my hobby is Reading.
rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Introduction$ |

```

Fig output two

Assignment-2

Problem Statement: Create a class called time that has separate integer member data for hour, minute & second. One constructor should initialize dates to 0 and another should initialize it to fixed values. A main program should create 2 initialized time object and one that is not initialized. then it should add 2 initialized values to store in a third time type variable. finally, it should display the value of the third variable. Take input using Scanner class.

Source code:

```

import java.util.Scanner;

class Time
{
    int hour, min, sec;
    Time()
    {

```

```

        hour=0;
        min=0;
        sec=0;
    }
    Time(int n1, int n2, int n3)
    {
        hour=n1;
        min=n2;
        sec=n3;
    }
    Time add(Time t2)
    {
        Time t3 = new Time();
        t3.sec = (sec+t2.sec);
        t3.min = (min+t2.min+t3.sec/60);
        t3.hour = (hour+t2.hour+t3.min/60);
        t3.sec=t3.sec%60;
        t3.min=t3.min%60;
        t3.hour=t3.hour%60;
        return t3;
    }
}

class Main
{
    public static void main(String args[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter time(hour, min, sec) for 1st obj: ");
        Time t1 = new Time(sc.nextInt(),sc.nextInt(),sc.nextInt());
        System.out.println("Enter time(hour, min, sec) for 2nd obj: ");
        Time t2 = new Time(sc.nextInt(),sc.nextInt(),sc.nextInt());
        Time t3 = t1.add(t2);
        System.out.println("Resultant time: "+t3.hour+" hour, "+t3.min+"
                           min, "+t3.sec+" sec");

        sc.close();
    }
}

```

Screen-Shot:

```

rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Time$ javac problem.java
rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Time$ java Main
Enter time(hour, min, sec) for 1st obj:
2 59 59
Enter time(hour, min, sec) for 2nd obj:
3 1 1
Resultant time: 6 hour, 1 min, 0 sec
rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Time$ |

```

Fig: output one

```

rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Time$ javac problem.java
rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Time$ java Main
Enter time(hour, min, sec) for 1st obj:
3 6 25
Enter time(hour, min, sec) for 2nd obj:
5 57 25
Resultant time: 9 hour, 3 min, 50 sec
rana@rana:~/Git/College_programs/5th SEM/Java/Assignment 5/Time$ |

```

Fig: output two